3rd INTERNATIONAL CONFERENCE OF ECOSYSTEMS

TIRANA _ ALBANIA, May 31 - June 5, 2013

ABSTRACT BOOK

Essays on Ecosystem and Environmental Research

ISBN: 978-9928-4068-6-6

ICE-2013,
Tirana, ALBANIA

Health and Environment Association, Tirana Albania
Agricultural University of Tirana, Albania
International Journal of Ecosystems and Ecology Science (IJEES)
Journal of International Environmental Application Science (JIEAS),
Selcuk University, Environmental Engineering Department, Konya-Turkey

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Support

ISBN: 978-9928-4068-6-6

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International Conference of Ecosystems ICE2013

Published with support of:
Health and Environment Association, Tirana Albania
Journal of International Environmental Aplication Science (JIEAS), Konya, Turkey
International Journal of Ecosystems and Ecology Science (IJEES), Albania

Web site:
http://www.jieas.com;
https://sites.google.com/site/injournalofecosystems/3rd-international-conference-of-ecosystems-ice2013-tirana-albania

Publisher
Printed in Health and Environment Association, Tirana Albania

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This book contains original authors abstract that reviewed and accepted by the ICE conference Scientific Committee, Tirana, Albania

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Contents of Abstracts

017	MARINE PROTECTED AREAS STRATEGY IN LEBANO FOR BIODIVERSITY CONSERVATION	Hany El Shaer
018	PRELIMINARY DATA REGARDING ECOLOGICAL AGRICULTURE IN TURKEY – CASE STUDY TEZEREN VILLAGE, AĞRI REGION	Raluca Kerkmann[1], Hysen Mankolli[2], Mustafa Aras[3]
019	WATER QUALITY AND FISH FAUNA IN LAKEWOOD, ZAMBOANGA DEL SUR, PHILIPPINES: BASIS FOR LAKE ECOSYSTEM CONSERVATION	JB Superales[*1] and MT Zafaralla[2]
020	MYCOTIC CONTAMINATION OF SWISS CHEESE IN MARKETS OF TIRANA CITY	Yllka Allaraj*[1], Anjeza Çoku [2], Nefail Biba [3], Valmira Uka[2], Silvana Mardhaja[2]
021	Aluminum (Al) and Iron (Fe) - key elements in wetland sustenance	O.O Ayeni[1], L.Kambizi[2], C.P. Laubscher[2] and O.S. Fatoki[3]
022	AIR POLLUTION IN ELBASAN	Alda Bicoku
023	EVALUATION OF RESOURCES FOR SUSTAINABLE DEVELOPMENT OF THE PRESPA AREA IN THE COUNTY OF KORÇA, ALBANIA	Edlira Menkshi[1], Diana Shehu[2]
024	COMPETITIVE INTERACTION OF BASMATI AND NON-BASMATI RICE (ORYZA SATIVA L.) CULTIVERS UNDER NACL SALT AND AQUEOUS TESTA EXTRACTS OF CASHEW-NUT (ANACARDIUM OCCIDENTALE L.)	Meera Indracanti, Siva Kumar ChV
025	CLEAN ENERGY: DIRECT ALCOHOL FUEL CELL CATALYSTS WITH CARBON SUPPORTED BINARY ANODE CATALYSTS	Hilal Kivrak[a], Ozlem Sahin[a], N. Ceyhun Demir[b]
026	A PHOTOCATALYTIC METHANOL OXIDATION STUDY OVER TiO2 FOR CLEAN ENVIRONMENT	Hilal Kivrak and Ozlem Sahin
027	MESAPOROUS SILICA SBA-15 SUPPORTED Pt-Co-Pb CATALYSTS FOR ENVİRONMETALLY FRIENDLY ETHANOL FUEL CELLS	Hilal Kivrak, Mukaddes Can, Ozlem Sahin
028	MORPHOLOGICAL DIFFERENCES FOR SOME QUANTITATIVE AND QUALITATIVE POTATO (Solanum tuberosum L) PARAMETERS GROWING IN KOSOVA	Imer Rusinovci, Sali Aliu, Salih Salihu, Shukri Fetahu, Dukagjin Zeka
029	GENETIC AGROBIODIVERSITY AT SOME LOCAL MAIZE (Zea mays l.) pOPULATIONS for QUALITATIVE TRAITS	Sali Aliu, Imer Rusinovci ,Shukri Fetahu, Salih Salihu, Arsim Sahiti
030	MORPHOLOGICAL AND PHYSIOLOGICAL CHARACTERIZATION IN SOME LOCAL MAIZE (Zea mays L.) POPULATIONS GROWING IN KOSOVA	Sali Aliu[1], Imer Rusinovci[1], Salih Salihu[1], Shukri Fetahu[1], Kemajl Bislimi[2] And Behar Krasniqi[1]
031	GLOBAL CLIMATE CHANGE IMPACTS AND ASSESİNG PUBLİC UNDERSTANDING OF GLOBAL WARMING	N. Ceyhun Demir[a], Hilal Kivrak[b], Ozlem Sahin[b]
032	THE ASSESMENT ON THE USE OF ENVIRONMENTALLY FRIENDLY CARS	N. Ceyhun Demir[a], Hilal Kivrak[b], Ozlem Sahin[b]
033	KNOWLEDGE OF 18 TO 21 YEAR OLD ALBANIAN STUDENTS REGARDING THE HUMAN PAPILLOMAVIRUS (HPV) INFECTION AND ITS RELATIONSHIP TO CERVICAL CANCER	Fjoralda Bakiri[1], Tefta Rexha[1], Anila Mitre[1]
034	ASSESSMENT OF THE SURFACE WATER QUALITY OF THE DRINI I BARDHE BASIN USING THE WATER QUALITY INDEX (WQI) METHOD	Hazir Çadraku[1],Besim Dobruna[1], Arjan Beqiraj[2,*]

035	ANTHRACENE-SUBSTİTUTED THİOPHENE DERİVATİVES AND THEİR APPLİCATİONS	Arif Kivrak[*,1] and Hilal Kivrak[2]
036	ANALYSIS OF TRACE METALS	Ozlem Sahin and Hilal Kivrak
037	CARBON NANOTUBE-BASED ELECTRODES FOR ELECTROCHEMICAL MEASUREMENTS OF HEAVY METALS	Ozlem Sahin and Hilal Kivrak
038	ELECTROCHEMICAL DETECTION OF METALS (CADMIUM, LEAD) AT CARBON ELECTRODES	Ozlem Sahin and Hilal Kivrak
039	VOLTAMMETRIC DETECTION OF HEAVY METALS AT MULTI-WALLED CARBON NANOTUBE MODIFIED ELECTRODES	Ozlem Sahin and Hilal Kivrak
040	MICROBIAL POLLUTION ASSESSMENT OF ALBANIAN LITTORAL WATERS IN OHRID LAKE	Mirela Lika (Çekani)[1], Hysen Mankolli[2], Selaudin Jakupi[3]
041	THE EFFECT OF FLORIBUNDA ROSE CULTIVARS 'AMBER QUEEN' IN URBAN LANDSCAPE DESIGN	Nexhat Balaj[1], Llazar Haxhinasto[2], Gjokë Vuksani[2], Fadil Hasani[1]
042	DISTRIBUTION OF MEDICINAL AND AROMATIC PLANTS IN THE REGION OF SHKODRA AND THEIR BIODIVERSITY CONSERVATION PROBLEMS	Ndoc Faslia[1], Agim Pepkolaj[2], Dallandyshe Koleci[3]
043	THE IMPACT OF CONCENTRATES USED AS FOOD FOR POULTRY IN THE AIR QUALITY IN POULTRY OF THE KORCA REGION	Sulltana Ajçe, Irena Kallço
044	SOME SYSTEMATICS AND ECOLOGICAL DATA FOR SEED BUGS (LYGAEIDAE HEMIPTERA) IN ECOSYSTEMS OF DURRESI	Eltjon Halimi[1*], Anila Paparisto[1], Dritan Topi[2], Kastriot Misja[1]
045	CLASSIFICATION OF THE RADIOACTIVE WASTE IN KOSOVO	Besire Cena[1] , Konstandin Dollani [2] , Ymer Halimi [3]
046	RADIAL GROWTH RESPONSES OF ALEPPO PINE (PINUS HALEPENSIS MILL.) AND STONE PINE (P. PINEA L.) FORESTS TO CLIMATE VARIABILITY IN WESTERN ALBANIA	Elvin Toromani[1*], Edmond Pasho[1], Arben Q. Alla[1],
047	SIGNIFICANCE OF SOKAL SCORE IN CHRONIC MYELOID LEUKEMIA PATIENTS TREATED WITH GLEEVEC IN CHRONIC PHASE	Dorina Roko[1], Anila Babameto - Laku[1]
048	THE IMPACT OF IRRIGATION ON THE PERIODICITY OF OLIVE PRODUCTION (OLEA EUROPAEA L. SSP SATIVA)	Hairi Ismaili[1], Petrit Cakirri[2]
049	INTEGRATED WATER MANAGEMENT IN ARID AND SEMIARID COUNTRIES – EXPERIENCES OF GIZ IS AND DORNIER CONSULTING IN THE MENA REGION	Heiko Dirks[1], Randolf Rausch[2], Tobias Fuest[1], Siegfried Holtkemper[3], Christoph Schüth[4]
050	SURVEY OF SOME RARE AND ENDANGERED PLANTS IN NORTH ALBANIA	Julian Shehu[1], Lirika Kupe[1], Alma Imeri[1], Alfred Mullaj[2]
051	INDOOR RADON LEVELS IN TIRANA SCHOOLS	Kozeta Bode (Tushe), Elida Bylyku, Brunilda Daci
052	GIS MAPPING AND IDENTIFICATION OF NOISE AND AIR POLLUTED ZONES OF ALBANIA	Arbi Shehu[1], Megi Rusi[2]
053	INFLUENCE OF ARTIFICIAL WATER RESERVOIRS IN THE FOOD HABITS AND DISTRIBUTION OF OTTERS (LUTRA LUTRA) ALONG THE DRINOS RIVER VALLEY	Ferdinand Bego[1], Etleva Hysaj[2]

054	THE CONTRIBUTION OF FORESTS IN EROSION PROTECTION AND SUSTAINABLE DEVELOPMENT	Malvina Shehi
055	STATE OF ENVIRONMENT HOTSPOTS FROM PESTICIDES AND FERTILISERS SECTOR IN KOSOVO	Nexhat Balaj[1], Isa Tahiri[2], Isuf Lushi[3]
056	POROUS BIRNESSITES AND BUSERITES AS HEAVY METAL CATION TRAPS AND ENVIRONMENTAL ANTI-POLLUTION MEDIUM	Kledi Xhaxhiu[1]*, Albana Bolani[1], Arjan Korpa[1], Altin Mele[1], Teodor Kota[2], Erjon Spahiu[2]
057	APPLICATION OF SIMPLE SELF-MADE PHOTO-SENSORS FOR ENERGY SAVING IN CITY ILLUMINATION	Kledi Xhaxhiu[1], Arjan Korpa[1], Arjan Xhelaj[2], Teodor Kota[2], Erjon Spahiu[2]
058	AIR DRIED HUMIDITY OF LUMBER IN OUTDOOR LOCATIONS IN ALBANIA	Entela Lato[1], Holta Cota[1], Doklea Quku[1]
059	EFFECT OF GROWTH RING ON BENDING STRENGTH IN BEECH (FAGUS SYLVATICA L)	Entela Lato[1], Saimir Beqo, Doklea Quku[1]
060	INDOOR RADON LEVELS IN PRIMARY SCHOOLS IN VLORA, ALBANIA	[1]Engjell Licaj, [1*]Silvana Mico, [1]Valbona Tahiri , [2]Kozeta Bode, [1]Jorgo Mandili, [1]Astrit Denaj
061	THE EXTRACTION OF AMINO ACIDS FROM SOYBEAN IN ORDER TO BE USED AS CORROSION INHIBITOR	Efrosini (Teli) Kokalari, Adelaida Andoni, Alketa Lame, Albana Jano
062	DATA ON THE PALYNOMORPHOLOGICAL CHARACTERISTICS OF FIVE PLANTS OF COMPOSITAE FAMILY IN THE REGION OF ELBASAN, ALBANIA	Blerina Pupuleku[1], Gëzim Kapidani[2], Peçi Naqellari[1], Nikoleta Kallajxhiu[1], Silvana Turku[1], Ermelinda Gjeta[1], Anxhela Dauti[1]
063	PALYNOLOGICAL STUDY OF POLLEN GRAINS OF ARTEMISIA VULGARIS PLANT	Nikoleta Kallajxhiu[1], Peçi Naqellari [1], Gëzim Kapidani [2], Blerina Pupuleku[1], Anxhela Dauti[1], Admir Jançe[1]
064	PTH-CALCIUM-VITAMIN D- CURVE IN PRIMARY AND SECONDARY HYPERPARATHYROIDISM	Merita Rumano[1], Anila Mitre[1], Elvisa Rumano[2], Jotilda Joti[3]
065	THE RESTORATION OF THE DANUBE FLOODPLAIN,A FUNDAMENTAL ECOLOGICAL ISSUE FOR ROMANIA	Olivia Cioboiu, Gh. Brezeanu
066	RESEARCH ON THE INFECTION OF THE CARP CYPRINUS CARPIO (CYPRINIDAE) WITH THE ACANTHOCEPHALUS POMPHORHYNCHUS LAEVIS (ACANTHOCEPHALA, PALAEACANTHOCEPHALA)	Ionelia Claudia Goga, Constanţa Tîmburescu
067	IMPACT TO THE ENVIRONMENTATAL POLLUTION OF THE HEAVY METALS, PRESENT TO THE FOSSIL FUELS, CONSUMED IN ALBANIA	Ismet Beqiraj[1*], Dritam Topi[1], Armela Mazreku[1], Lumturi Hoxha[1]
068	THE ROLE OF FOREST ROADS FOR MANY PURPOSES	Bashkim Thaçi, Ferim Gashi, Agron Bajraktari,
069	PATHOLOGICAL CHANGES IN LIVER MORPHOLOGY OF CRUCIAN CARP (CARASSIUS CARASSIUS) FROM AN AQUACULTURE FARM IN CËRRIKU TOWN	Sula Eldores[1], Aliko Valbona[2]
070	CLASTOGENIC EFFECTS OF TIRANA LAKE WATER ON PELOPHYLAX KURTMUELLERI RED BLOOD CELLS	Aliko Valbona[1], Biba Adiola, Sula Eldores

071	CURRENT AND POTENTIAL USES OF PLANT RESOURCES IN THE MIDDLE FLOW OF SHKUMBINI RIVER BASIN	Ermelinda Gjeta[1], Alfred Mullaj[2], Peçi Naqellari[1], Blerina Pupuleku[1].
072	PRELIMINARY DATA ON EXTRACTION, ISOLATION AND CHEMICAL ANALYSIS OF TUBERS OF GYMNOSPERMUM ALTAICUM SUBSP. SCIPETARUM WITH DICHLORMETHAN	E. Mehmeti[1], S. Abazi[2], D.Cela[2]
073	PRELIMINARY CONSIDERATIONS ON THE RAPALOCEROFAUNA (INSECTA: LEPIDOPTERA) OF SHARR MOUNTAIN AND ITS SURROUNDINGS (MACEDONIA)	Xhezair Abdija[1], Kastriot Misja[2]
074	MONITORING OF SULPHUR CONTENT IN DIESEL IMPORTED IN ALBANIA AND ENVIRONMENTAL IMPACT, DURING THE PERIOD 2007 – 2012	Belshaku, M.[1*], Xhemaj, E.[2], Beqiraj, I.[3]
075	POPULATION STRUCTURE OF ORNITOFAUNA IN THE DAJTI MOUNTAIN, ALBANIA	Gjergji Peja, Ferdinand Bego
076	MORPHOLOGICAL CHARACTERS OF GENTIANA LUTEA L. (GREAT YELLOW GENTIAN) AND DISTRIBUTION AT DIBRA REGION	Ndoc Faslia[1],. Agim Pepkolaj[2],Zyber Gjoni[3] Dallandyshe Koleci[3]
077	PHYSICO-CHEMICAL QUALITY ASSESSMENT OF THE DRINKING WATER IN THE WINTER SEASON IN TETOVA	Bujar H. Durmishi[1]*, Daut Vezi[2], Murtezan Ismaili[3], Agim Shabani[1] And Shemsedin Abduli[1]
078	SOME PALEOPALYNOLOGICAL DATA ABOUT THE PRESENCE OF FORAMINIFERA IN ELBASAN REGION	[1]Admir Jançe, [2]Gëzim Kapidani, [1]Sotir Mali
079	IMPACT OF FAT CONTENT ON MILK COAGULATION PROPERTIES	Migena Hoxha[1], Vlash Mara[2]
080	MONITORING OF QUALITY PARAMETERS FOR GASOLINE AND DIESEL FUEL MARKETED IN ALBANIA AND THEIR ENVIRONMENTAL IMPACT	Enkeleda Xhemaj [1], Mirela Sulaj [2]
081	EVALUATION OF THE WASTEWATER QUALITY OF POGRADEC CITY BEFORE ENTERING OHRID LAKE BASED ON SOME PHYSICO-CHEMICAL AND BACTEROLOGICAL PARAMETERS	Sotir Mali[1], Spase Shumka[2]
082	IMPACT OF SPECIES CHARACTERISTICS IN THE ROUGHNESS OF WOOD SURFACE	Hektor Thoma, Leonidha Peri, Entela Lato, Doklea Quku, Erald Kola
083	IMPACT OF POLLUTION FROM KOSOVA'S POWER PLANT IN OBILIQ ON HISTOPATHOLOGICAL CHANGES IN ALBUMEN GLAND OF THE LOCAL POPULATION OF GARDEN SNAIL (*Helix pomatia L.*)	[1*]Kemajl Bislimi, [3]Avni Behluli, [4]Fahri Osmani, [2]Jeton Halili, [1]Ilir Mazreku, [3]Shukri Fetahu, [1]Fetah Halili
084	RADON AND RESPIRATORY PARAMETERS OF SOME SECONDARY SCHOOL STUDENTS IN PRIZREN – KOSOVO	Kemajl Bislimi[1], Ilir Mazreku[1], Jeton Halili[2], Avni Behluli[3], Fahri Osmani[4], Fetah Halili[1]
085	POLICIES FOR LESSENING CLIMATE CHANGE IN AND FROM THE FORESTRY SECTOR IN KOSOVO	Jonka Ceka, Ferim Gashı,
086	BIO-MORPHOLOGICAL CHARACTERIZATION OF THE TABLE GRAPE CULTIVAR "CARDINAL" IN KOPLIK, MALËSIA E MADHE, ALBANIA	Lush Susaj[1*], Gjokë Duhanaj[2], Elisabeta Susaj[3], Mariol Novaku[4]
087	CONCENTRATION OF RADON AND THORON IN ENVIRONMENT OF SOME LOCATIONS IN INDOOR AIR IN PRIZREN, KOSOVO	Meleq Bahtijari[1], Sami Makolli[2], Gazmend Nafezi[3]

088	COMPARISON OF BIOMASS PRODUCTIVITY IN TWO DIFFERENT PLATATIONS OF FAST GROWT SPECIES.	Mirvjena Kellezi[1,2], Ylli Kortoçi[1]
089	NEW UTILIZATIN TECHNOLOGIES OF THE BEECH FORESTS IN ALBANIA	Ylli Kortoçi[1], Mirvjena Kellezi[1,2]
090	OPTIMIZING PRODUCTION PROCESSES ACCORDING TO CLEANER PRODUCTION PRINCIPLES LEADS TO BETTER ENVIRONMENTAL AND ECONOMIC PERFORMANCE	Halluni Enkleva,[1] Haxhimihali Dhimitër[2]
091	RANGELAND IMPROVEMENT METHODS IN ARID AREAS OF EASTERN MOROCCO	Youssef Chebli [1]
092	IMPACT OF FOREST ECOSYSTEM PROTECTION AS A FACTOR IN SUSTAINABLE DEVELOPMENT	Malvina Shehi, Denis Lushi
093	DETERMINE THE COMPOSITION OF WASTE IN PRIZREN AND PRISTINA	Valmire Havolli[1], Vlora Gashi[1], Florinda Nurqaj[1], Valon Sadiku[1]
094	STUDY OF COLORUING, AROMATIC STRENGTH AND BITTERNESS OF SAFFRON CULTIVATED IN KOSOVO	Valmire Havolli[1], Florinda Nurqaj[1], Defrime Berisha[1], Valon Sadiku[1], Bujar Neziraj[1]
095	EFFECTIVENESS OF SEVERAL FUNGICIDES FOR THE CONTROL OF WHEAT DISEASES IN ALBANIA	Zhaneta Shahini[1], Hekuran Vrapi [2], Skënder Varaku[2]
096	REAL-TIME PRECISE SPRAYING ROBOT FOR WEED CONTROL	Kadir Sabanci[1], Cevat Aydin[2]
097	THE INFLUENCE OF THE ECOLOGICAL CONDITIONS ON THE HEMATOLOGIC PROFILE OF AUTOCHTHONOUS SHEEP	*V. Dini, P. Zalla, E. Dimço, J. Abeshi, J. Mavromati, A. Çaushi
098	THE EFFECT OF DIFFERENT ENVIRONMENTAL FACTORS ON THE LEUKOCYTE FORMULA OF THE BOVINE	*V. Dini, P. Zalla, E. Dimço, J. Abeshi, J. Mavromati, E. Sotiri
099	ENVIRONMENTAL ASPECTS IN THE ECOSYSTEM OF LAKE SHKODRA	H. Mankolli[1], M. Lika (Çekani)[2], S. Dursun[3], M. Zucchetti[4] K. Gjino[5]
100	CLIMATE CHANGES AND THE ROLE OF HUMANS IN THEIR REDUCTION	H. Mankolli[1], M. Zucchetti[2], S. Dursun[3], K. Gjino[4]
101	STRUCTURAL CALCULATION OF WHITE FIR TIMBER TRUSSES AND STRUCTURAL TIMBER	Hektor Thoma, Leonidha Peri, Alketa Grepcka, Erald Kola
102	ASSESSMENT OF THE CONDITION OF BIODIVERSITY IN KOSOVO	Agim Asllani[12]
103	PLANT SPECIES, RARE AND ENDANGERED IN ECOSYSTEMS OF KOSOVO	Agim Asllani[12]
104	THE EAIS FRAMEWORK AS A TOOL TO ASSESS SUSTAINABILITY AND EXTERNALITIES AT FARM AND FIELD LEVEL: A CASE STUDY IN OLIVE PRODUCTION SYSTEMS IN APULIA REGION	Xhevaire Dulja[1]*, Jenny Calabrese[2], Cesare Pacini[2], Concetta Vazzana[3], Ferdi Braushi[4], Fatmira Allmuça[5]
105	ASPECTS REGARDING THE ROLE OF THE NATURAL FOREST RESERVATIONS FROM THE DANUBE'S BASIN (REPUBLIC OF MOLDOVA) IN THE BIOLOGICAL DIVERSITY'S CONSERVATION	Liogchii Nina, Begu Adam
106	ECOLOGICAL POTENTIALS OF BEEKEEPING IN ADAMAWA STATE, NIGERIA	Adeniran Adegboyega
107	EFFECTS OF PLANT GROWTH-PROMOTING RHIZOBACTERIA (PGPR) ON YIELD, YIELD COMPONENTS AND NUTRIENT	Musa Seymen, Önder Türkmen, Mustafa Paksoy

	CONTENTS OF PEPPER UNDER GREENHOUSE CONDITIONS	
108	ETERMINATION OF SALT (NACL) TOLERANCE LEVELS OF SOME LOCAL MELON GENOTYPES	B. Banu BATI, Mustafa PAKSOY, Önder TÜRKMEN
109	ETERMINATION OF THE SALT (NACL) TOLERANCE LEVELS OF SOME LOCAL FRESH BEAN GENOTYPES	Alper Koçak, Önder Türkmen, Mustafa Paksoy
110	EFFECT OF PROBIOTIC SUPPLEMENTATION ON LAYING HEN PERFORMANCE	Tahir Balevi[1], U.Sait Uçan[2], Behiç Coşkun[1], Varol Kurtoğlu[1], Sadi Çetingül[1]
111	THE HELMINTH PARASITES OF THE WILD RABBIT (*LEPUS EUROPAEUS*)	Uğur USLU*, Feyzullah GÜÇLÜ
112	IMPACT OF GLOBAL CLIMATE CHANGE BASED ON ANALYSIS OF BIOCLIMATIC INDICATORS: CASE STUDY	I. Topi[1*], H. Mankolli[1]
113	TOBACCO - A POWERFUL INDICATOR TO DETECT POLLUTION BY OZONE (O3)	Kadri Kyçyku Nikollaq Bardhi
114	IMPROVEMENTS IN TECHNIQUES AND METHODS OF AIR CURING OF TOBACCO OF TYPE ORIENTAL	Kadri Kyçyku Nikollaq Bardhi
115	AN OVERVIEW OF WATER QUALITY OF VJOSA RIVER IN ALBANIA BASED ON SOME BIOLOGICAL PARAMETERS	Etleva Hamzaraj[1], Pranvera Lazo[1], Anila Paparisto[1], Jani Mavromati[2], Dorina Topoviti[1], Orkida Dahriu[1]
116	ANALYSIS OF THE DIFFERENT LAND REALLOCATION RESULTS IN LAND CONSOLIDATION	Tayfun Cay[1], Yasar Inceyol[2]
117	IN VITRO PROPAGATION OF PLANTLETS OF WILD PEAR (PYRUS PYRASTER L.) USING SHOOT TIPS AS PRIMARY EXPLANTS	Valbona Sota (Mata)[1], Efigjeni Kongjika[2]
118	VACCINATION IMPACT IN PREVENTING MEALSES IN CHILDREN	Erida Nelaj[1], Mirela Lika (Cekani)[2], Alma Robo[1]
119	ENVIRONMENTAL RISK ASSESSMENT OF FERIZAJ REGION	Adem Musliu[1], Mynyr Koni[1], Imrane Thaqi[2], Milazim Shabani[3]
120	IMPROVEMENT OF THE STRENGTH OF SOILS WHICH COMPRISES GRANULAR PUMICE BY INJECTION OF CEMENT UNDER LOW-PRESSURE	Mustafa Yildiz[a], Ali Sinansoğanci[b*]
121	DISPOSAL AND TREATMENT OF URBAN SOLID WASTE - CAN ALBANIA AFFORD URBAN SOLID WASTE MANAGEMENT?	Konalsi Gjoka*[1], Gjergji Ikonomi[1], Scott Crossett[2], Teida Shehi[3]
122	WATER MITE (HYDRACHNIDIA: ACARI) FAUNA OF THE LAKES REGION (TURKEY)	Yunus Ömer Boyacı[1], Pınar Gülle[2*], Hakan Didinen[1], Mehmet Zeki Yıldırım[3]
123	LEGAL DİLEMMAS, SOCİOLOGİCAL AND ECOLOGİCAL PROBLEMS İN MANAGEMENT OF RAMSAR SİTE LAKE BURDUR	M. Zeki Yildirim[1*], İskender Gülle[2], Ümit Kebapçi[2]
124	EVALUATION HARVEST INDEX AND SPIKE TRAITS OF DIFFERENT WHEAT CULTIVARS FROM CROATIA UNDER AGRO ECOLOGICAL CONDITIONS OF KOSOVO	Shukri Sh. Fetahu[1], Imer Rusinovci[1], Sali Aliu[1], Salih Salihu[1], Refki Zogaj[1], Avni Beluli[1], Kemajl Bislimi[2], Hysen Mankolli[3]
125	THE STUDY OF SOME PHYSIOLOGICAL CORRELATIONS DURING DYNAMICS OF OLIVE FRUIT'S *(Olea europaea L.)* GROWTH	Erta Dodona[1], Hairi Ismaili[2]

126	THE ASSESSMENT OF THE POTENTIAL CHANGE IN CARBON FOOTPRINT FROM BIODEGRADABLE WASTE DISPOSAL IN 2012-2032PERIOD: A CASE STUDY FOR TURKEY	Gorkem Akinci[1], Gulden Gok[2], E. Duyusen Guven[1]
127	BUOYANT FİLTER REACTOR FOR THE ANAEROBİC TREATMENT OF PHARMACEUTİCAL WASTEWATER CONTAİNİNG TWO MACROLİDE ANTİBİOTİCS	Hakan Çelebi *[1]; Delia Teresa Sponza[2]
128	REMOVAL OF NICKEL (NI) IONS FROM AQUEOUS MEDIUM WITH PUMICE	Samet Özcan[1], Hasan Koçyiğit, Gülden Gök
129	EFFECTS OF RHAMNOLIPID (RD) BIOSURFACTANT ON THE REMOVAL OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) AND TOXICITY IN THE ANAEROBIC INVERSE TURBULENT BED REACTOR SYSTEM (ITBR)	Oğuzhan Gök[1], Delia Teresa Sponza[2]
130	REMOVAL OF CADMIUM (CD) IONS FROM AQUEOUS MEDIUM WITH CLINOPTILOLITE	Samet Özcan[1], Hasan Koçyiğit
131	NEW DATA ON ENDANGERED LEPIDOPTEROFAUNA OF NORTH-EASTERN ALBANIA	Ariana Striniqi Laçej
132	SOLID WASTE AND ENVIRONMENT POLLUTION CAUSED BY THEM: PROBLEMS AND OPTIONS TO REDUCE THIS POLLUTION	Majlinda Alcani, Altin Dorri, Angjelin Shtjefni
133	EXTENSION OF THE NATIONAL PARK "SHARRI" BOUNDARIES, IMPORTANCE FOR PRESERVATION OF NATURAL VALUE	Behxhet Mustafa[1], Avni Hajdari[1], Zeqir Veselaj[2], Ndriçim Mustafa[3]
134	CLIMATE CHANGE AND FOREST DISTURBANCES IN REPUBLIC OF ARMENIA	Vahe S. Martirosyan
135	METHYLENE BLUE ADSORPTION ONTO FORMALDEHYDE TREATED ELAEGNUS ANGUSTIFALIA SEEDS	A. Ceyhan[1], O. Baytar[1], D. Yilmaz[1], C. Mirad[1], Ö. Şahin[2]
136	CANINE BRUCELOSIS AND LISTERIOSISAS AN ENVIRONMENTAL HEALTH CONCERN IN KONYA, TURKEY	Uçkun Sait Uçan[1], Zeki Aras[2], Öznur Köylü[3], Şerife Yüksekkaya[3]
137	BIOLOGICAL AMMONIUM REMOVAL VIA NITRITE PATHWAY	Sukru Aslan*[1], Ayben Polat[1], Mustafa Öztürk[2]
138	EFFECT OF TEMPERATURE AND DISSOLVED OXYGEN CONCENTRATIONS ON THE NITRITATION IN A SUBMERGED BIOFILTER	Sukru Aslan*, Ugur Savas Topcu, Hasan Bayrak, Ramazan Aydın
139	VALUATION OF ECONOMIC INDICATORS IN PRESPA, ALBANIA	M. Hoxhalli[1], S. Apostoli[2], A.Mankolli[3]
140	GAS SENSING PROPERTIES OF DIFFERENT CALIXARENE DERIVATIVES	Farabi Temel*, Gulsevil Gok, Aysegul Ture, Mustafa Tabakci
141	EFFICIENCY OF ELECTROFISHING AS A SAMPLING METHOD FOR TRIBUTARIES OF THE MAJOR ALBANIN RIVERS	[1]Spase Shumka, [2]Arefi Cake, [1]Enkeleda Berberi
142	EFFECT OF PROHEXADIONE-CALCIUM(REGALIS) ON SHOOT GROWTH IN PEAR VAR. PASSE CRASSANE	Maxhun Shehaj[1], Petrit Rama[2], Bari Hodaj[2]
143	INTERACTION OF CYTOKININS (BAP) AND INDOL BUTIRIC ACID (IBA) ON ROOT INDUCTION IN OLEA EUROPEA L.	Adhurim Lazaj[1], Petrit Rama[2], Bari Hodaj[2], Edlira Kukali[2]
144	SPATIAL DISTRIBUTION AND MORPHOMETRIC PROPERTIES OF THE KARSTIC DEPRESSIONS IN THE VICINITY OF KARAPINAR,	Adnan Ozdemir,

	KONYA, TURKEY	
145	THE EFFECT OF STORAGE PERİOD AND TEMPERATURE ON WEİGHT LOSS İN QUAİL EGGS AND THE HATCHİNG WEİGHT OF QUAİL CHİCKS	Mustafa Garip Suleyman Dere
146	THE ANALYSIS OF METHYLENE BLUE ADSORPTION WITH USINGFACTORIAL DESIGN	A. Ceyhan[1], E. Özbay[1*], O. Baytar[1], M. Akaslan[1]
147	THE ENVIRONMENTAL PARAMETERS RESPONSIBLE OF THE CONSERVATION OF WOODEN MATERIALS IN POST-BYZANTINE CHURCHES IN REGION OF KORCHA	Laura Shumka
148	THE EFFECTS OF FISH DISEASE AND PARTICULARLY SPRING VIREMIA OF CARP ON COMMERCIAL FRESHWATER AQUACULTURE IN ALBANIA	Enkeleda Berberi
149	HEAT WAVES AFFECTING WEATHER AND CLIMATE OVER ALBANIA	Tanja Porja
150	VARIATION ON MEAN AND EXTREME VALUES OF AIR TEMPERATURES OVER SHKODRA AND TIRANA DURING A SIXTY YEARS PERIOD AND THEIR PROJECTIONS INTO THE NEAR FUTURE	Lajda Nunaj, Tanja Porja
151	COMPARING HEAVY METAL CONTENTS OF ROADSIDE SOILS WITH COASTAL AREA SOILS	Füsun Gülser[1], Ferit Sönmez[1], Arzu Çığ[2]
152	THE EFFECTS OF SOME ORGANIC FERTILIZERS ON NUTRIENT CONTENTS IN *GLADIOLUS* SP.	Ferit Sönmez[1], Arzu Çığ[2], Füsun Gülser[1], Gülçinay Başdoğan[3]
153	DOES THE TROPHY STATE OF POLLUTED AREAS HAVE IMPACT ON THE PRESENCE OF PICOPHYTOPLANKTON SPS ? – CASE STUDY IN MARINE COASTAL WATERS OF DURRES BAY , ALBANIA	Ariola Bacu[1], Fatbardha Babani[1]
154	STATISTICAL STUDY ABOUT THE LUNG CANCER IN REGIONAL HOSPITAL OF SHKODRA FOR 2008 - 2012	Zamira Shabani[1]. Lindita Dibra[2], Arlinda Ramaj[3]
155	THE STATISTICAL ANALYSIS OF THE METHYLENE BLUE REMOVAL FROM AQUEOUS SOLUTIONS BY USING CORE-SHELL OF MELON	A. A. Ceyhan[1*], M. E. Baysal[1], E. Özbay[1], O. Baytar[1], E. Demir[1], B. Akdeniz[1]
156	THE STATISTICAL ANALYSIS OF ADSORPTION BETWEEN METHYLEN BLUE AND CORE-SHELL OF THE WATERMELON	M. E. Baysal[1*], A. A. Ceyhan[1], E. Özbay[1], O. Baytar[1], S. Içyer[1], B. Emre[1]
157	APPLICATION OF THE METHOD OF BUDDING, DURING GRAFTING NEW TREES TO WALNUTS (*JUGLANS REGIA L.*)	Majlinda Kasmi[1], Petrit Rama[1], Edlira Kukali[1], Bari Hodaj[1], Albert Rabeta[1]
158	CONTROL OF APPLE SCAB (*VENTURIA INAEQUALIS* [CKE.] WINT.) IN ORGANIC APPLE PRODUCTIONIN ALBANIA	Leze Gjoni (Marku) [1]; Hekuran Vrapi [2]; Myzejen Hasani [2]
159	THE QUALITY OF "SHARRI" CHEESE IN MICROBIOLOGICAL AND PHYSICO-CHEMICAL ASPECT	Ilirjana Zymberaj[1], Shabani, L[2], Elshani, M.[1] Jashari, B.[1]
160	*ELODEA CANADENSIS* AS INVASIVE SPECIE IN LAKE OHRID	Alma Imeri[1], Sonja Trajanovska[2], Marina Talevska[2]
161	THE TIME DISTRIBUTION OF LAMBING THROUGHOUT A DAY IN AKKARAMAN EWES	Orhan Özçalik[1], Ayhan Öztürk[2]

162	MILK AND WOOL PRODUCTION TRAITS OF AKKARAMAN SHEEP RAISED UNDER SEMI INTENSIVE CONDITIONS	Birol DAĞ
163	HUMAN AND ENVIRONMENTAL HEALTH PROBLEMS DURING MECHANICAL PROCESSING OF WOOD IN ALBANIA	Arben Bejtja[1], Arben Bocari[2], Holta Çota[1]
164	RESULTS OF THE IMPACT OF THE TYPE OF COVERAGESCALE ON SEVERAL INDICATORS OF GROWTH AND SURVIVAL OF CARP (CYPRINUS CARPIO L.1758) CULTIVATED IN PLANT KLOS, ELBASAN, ALBANIA	Vasjar Shermadhi, Anila Hoda, Vladimir Spaho, Enkeleda Sallaku, Fidel Gjurgji
165	EFFECTS IN ENVIRONMENT OF NO_X AND DUSTS DISCHARGED FROM CEMENT MANUFACTURING IN CEMENT FACTORY - SHARRCEM IN HANI I ELEZIT	Besa Veseli[1], Ilir Kristo[2], Nexhat Balaj[3]
166	THE PALYNOMORPHOLOGICAL CHARACTERISTICS OF SOME PLANTS OF ASTERACEAE (COMPOSITAE) FAMILY IN ALBANIA	Anxhela Dauti[1], Gëzim Kapidani[2], Blerina Pupuleku[1], Nikoleta Kallajxhiu[1], Silvana Turku[1], Admir Jançe[1]
167	MICROFLORE OF BACTERIAL AND FUNGAL IN FRUITS AND VEGETABLES	Afrim Çela[1], Rozana Troja[2], Alush Musaj[1], Sabri Hajdini[3], Afete Musliu[1]
168	THE COMPOSITION OF THE FRUIT TREES IN A PROTECTED FOREST LANDSCAPE OF MOUNTAIN „KONJUH“	Noćajević Sead, Bajramović Đulsa, Ferhatović Džemail , Noćajević Mensur, Muhić Began, Muratović Hasan
169	ASSESSMENT OF ENVIRONMENT AND OPPORTUNITIES FOR SUSTAINABLE SOCIAL ECONOMIC DEVELOPMENT IN SHEBENIKU – JABLANICA NATIONAL PARK	Dorina Grazhdani
170	FACTORS LEADING TO IMPLEMENTATION OF AGRICULTURAL BEST MANAGEMENT PRACTICES ON THE AL-PRESPA BASIN	Dorina Grazhdani
171	YIELD, YIELD COMPONENTS AND PROTEIN CONTENT OF DURUM WHEAT AS AFFECTED BY DIFFERENT SEED RATES AND PLANTING TIME	Foto Kashta, Agim Canko, Pellumb Harizaj, Nikollaq Bardhi
172	ORGANIC SOLVENTS AND THEIR EFFECTS ON HUMAN AND THE ENVIRONMENT- A CASE STUDY	Hilal Kivrak[a], Mohammad Shahriari[b,c], Erol Pehlivan[a], Arif Kivrak[d]
173	THE SPREAD OF GEOMORPHOLOGIC RISKS IN ALBANIA, ENVIRONMENTAL EFFECTS AND THEIR MANAGEMENT	Qamil Lirëza[1], Linert Lirëza[2]
174	THE INCREASE OF THE EFFECTIVENESS OF A FARMER AND THE ROLE OF THE AGRICULTURAL PRICES ON ITS INCREASE	Jerina Vukaj[1], Jonila Brahimi[2]
175	A STUDY OF BASIL TYPES IN THE COASTAL PLAINS OF ALBANIA	Nefruz Çeliku[1], Nikollaq Bardhi[2], Zydi Teqja[2], Qatip Doda[3], Dilaman Nelaj[4], Agim Rameta[5]
176	THE IMPACT OF HARVEST WAY IN THE SAGE PRODUCTION AND ITS QUALITY	Qatip Doda[1], Nikoll Bardhi[2], Zydi Teqja[2], Dilaman Nelaj[3], Agim Rameta[4]
177	A STUDY OF SOME MAIZE HYBRIDS, IN THE WESTERN COASTAL PLAINS OF ALBANIA	Nikollaq Bardhi[1], Artan Sota[2], Ndoc Vata[3], Krenar Xhela[4], Agim Rameta[5], Dilaman Nelaj[6]
178	A STUDY ON THE IMPACT OF BASE DRESSING OF NEW ALFALFA PLOTS	Nikollaq Bardhi[1], Elda Pajo[2], Ndoc Vata[3], Artan Sota[4], Agim Rameta[5], Dilaman Nelaj[6.]

179	PRESENCE OF HEAVY METALS IN RIVERS SURROUNDING INDUSTRIAL ZONE IN MITROVICA TOWN	Afete Musliu[1], Seit Shallari[1], Mihone Kerolli[2], Alma Shehu[1]
180	INTERACTIONS AT METAL INTERFACES-A COMPARISON OF VARIOUS MODEL APROACHES	Mihone Kerolli-Mustafa[1], Afete Musliu[2]
181	THE EVALUATION OF FLORISTIC DIVERSITY OF NEMËRÇKA MOUNTAIN	Dhimiter Peci[1], Arsen Proko[2]
182	THE IMPLEMENTATION OF EUROPEAN UNION NATURE PROTECTION LEGISLATION IN MACEDONIA	Zoran Sapuric[1], Vulnet Zenki[2]
183	DISTRIBUTION OF *EDRAIANTHUS AUSTRALIS* (WETTST.) LAKUŠIĆ AND *E. HORVATII* LAKUŠIĆ IN ALBANIA	Sadik Malo[1] & Lulëzim Shuka[2]
184	ZOOLOGICAL AND ECOLOGICAL DATA OF ORDER POLYDESMIDA OF THE DIPLOPODA CLASS IN VLORA REGION	Hajdar Kiçaj[1], Mihallaq Qirjo[2]
185	THE EFFECT OF HEAVY METAL CONTAMINATION TO THE BIOLOGICAL AND CHEMICAL SOIL PROPERTIES IN MINING REGION OF MIDDLE SPIŠ (SLOVAKIA)	Lenka Angelovičová[1], Danica Fazekašová[2]
186	VERTİCAL PROFİLES OF SOİL PROPERTİES AND MİCROBİAL ACTİVİTİES İN THE PEATBOG SOİL İN SLOVAKİA	Lenka Bobuľská[1], Danica Fazekašová[2]
187	STUDY ON THE USE OF AGRICULTURAL BIOMASS COMPOSTED, AS ADDITIVE AND EVALUATION OF THEIR ENVIRONMENTAL IMPACTS	Rota Elison[1], Kopali Albert[1], Abazi Uran[1], Krasniqi Simir[2]
188	A NEW CONCEPTUAL FRAMEWORK RELATED TO NATURAL SELECTION, SEXUAL SELECTION AND CULTURAL SELECTION	Ani Bajrami, Zyri Bajrami
189	SELECTION AND SUGGESTIONS OF SITE TYPE FOR SOLID WASTE INCINERATION SYSTEMS IN TURKEY WITH BASIS AVAILABLE IN EUROPE	Ozgul Cimen[1], Sukru Dursun[1], Hysen Mankolli[2]
190	ENVIRONMENTAL POLLUTION LEVELS AND POLLUTION SOURCES IN TURKEY	Aysen Akay[1], Sukru Dursun[2]
191	USAGE OF SHRUB TREES TO PROVIDE AS BAIT PLANT AND IMPROVEMENT ACTIVITIES IN THE ARID AND DESERT AREAS	Ramazan Acar[1], Sukru Dursun[2]
192	NON-STARTER LACTIC ACID BACTERIA USED TO IMPROVE CHEESE QUALITY AND PROVIDE HEALTH BENEFITS	Nihat Akin[1], Mehtap Akin[2]
193	STUDY ON THE USE OF BIO INDICATORS FOR ASSESING THE ENVIRONMENT QUALITIES IN AGRO-ECOSYSTEMS	Albert Kopali[1], Elison Rota[1], Simir Krasniqi[2]
194	GIS-BASED EVALUATION OF GROUNDWATER VULNERABILITY IN ISTOG BASIN (DUKAGJINI REGION, KOSOVO)	Hazir Çadraku[1], Arjan Beqiraj[2,*]
195	U.S. DOLLAR AND ITS ROLE IN THE ECONOMY	Arjeta Hallunovi
196	USING OF ALTERNATIVE PLANT IN OUR ENVIRONMENT CHANGING WITHGLOBAL WARMING	Kübra Karaman Yazici[1], Bahriye Gülgün[1], Nilgün Yenil[2], Mustafa Bolca[3]

197	ANNUAL AND PERENNIAL HERBACEOUS ORNAMENTAL PLANTS USED FOR PHYTOREMEDIATION	Elif Bozdogan[1], Bahriye Gülgün[2], Sevgi Öztürk[3]
198	NATURAL PURIFICATION SYSTEMS, AQUATIC PLANTS AND THEIR RANGE OF USE	Fadim Yemiş, Nilgün Yenil, Selda Kuzu
199	ENVIRONMENTAL LAW, BASIC CONCEPTS AND PRINCIPLES GENERALLY; DEFINITION, PROTECTED JURAL PROFITS AND CONCEPTS	İlhami Güneş[1], Nilgün Yenil[2], Bahriye Gülgün[3]
200	STUDYING ENVIRONMENT FRIENDLY GEOTERMAL ENERGY WITH AN AEGEAN REGION EXAMPLE	Melek Balseven[1], Ali Kılıç[1], İlknur Demiralp[1], Serap Y. Turan[1], Özlem Sarı[1], Leyla D. Öner[1], Bahriye Gülgün[2], Nilgün Yenil[3]
201	CAPER; THE EVALUATION OF ITS EFFECTS ON HUMANITY AND ENVIRONMENT	Selda Kuzu[a], Nilgün Yenil[a], Fadim Yemiş[a], Pınar Özdemir[a], Bahriye Gülgün[b]
202	RESEARCHING FOR THE POSITIVE AND NEGATIVE EFFECTS OF RITHA ON NATURE AND LIVING BEINGS	Nilgün Yenil[a], Selda Kuzu[a], Bahriye Gülgün[b], Kübra Karaman Yazıcı[b]
203	A DRAINAGE BASIN MANAGEMENT PROPOSAL MODEL "CASE STUDY OF DEVREKANISTREAM SUB- BASIN"	Sevgi Öztürk[1], Bahriye Gülgün[2], Elif Bozdağ[3]
204	THE EFFECT OF LIFE QUALITY AND USER SATISFACTION ON URBAN DESIGN	Sevgi Öztürk[1], Zeynep Pınar Özdiğer[2]
205	NUTRIENT BALANCE AS AN IMPORTANT TOOL TO A BETTER PERFORMANCE OF DAIRY FARMS IN ALBANIA	Sokol Stafa, Enkeleda Sallaku
206	GLOBAL CLIMATE CHANGES AND EFFECTS ON URBAN CLIMATE OF URBAN GREEN SPACES	Serpi Onder[1], Sukru Dursun[2]
207	EVALUATION OF CADASTRE RENOVATION STUDIES IN TURKEY	Fazıl Nacar[1], Hakan Karabörk[2],Tayfun Çay[3]
208	THERMO-FLUID DYNAMIC BEHAVIOR OF AN AIR SUPPLY CEILING DIFFUSER UNDER DIFFERENT CONDITION	Altin Dorri, Albert Shira, Majlinda Alcani
209	INSURANCE SERVICE ON PROPERTIES – INUNDATES IN SHKODRA	Suela Shpuza[1], Elidiana Bashi[2]
210	THE EFFECT OF MAIZE PLANTS' DENSITY IN THE EFFICIENCY OF THE DRY BEAN YIELD IN AN INTERCROPPING SYSTEM	A. Canko[1], F. Kashta[1], I. Kaziu[2]
211	FOURIER TRANSFORM INFRARED METHOD OF DATA PROCESSING FOR THE CHARACTERIZATION OF HYDRATION PRODUCTS IN CEMENT BASED MATERIALS	E. Spahiu[1], A. Korpa[2], E. Xhaferri[2], T. Kota[1], A. Xhelaj[1]
212	FLORISTIC ANALYSES OF THE AREAL OF *PUNICA GRANATUM* L. IN ALBANIA	Arselida Koçi
213	ANIMAL WELFARE IN ALBANIA	Ylli Biçoku
214	FAILURE OF REINFORCED CONCRETE BUILDINGS DURING A RECENT EARTHQUAKE WITH A MODERATE MAGNITUDE IN TURKEY	Ali Köken[1], Mehmet Alpaslan Köroğlu[2]
215	AN EXPERIMENTAL STUDY ON THE BEHAVIOR OF INFILLED FRAMES UNDER HORIZONTAL LOADING	Adnan Karaduman[1], Mehmet Alpaslan Köroğlu[2]

216	STRENGTHENING OF RC FRAMES BY EXTERIOR PREFABRICATED PANELS	Nebi Özdöner[1], Nail Kara[2]
217	INVESTIGATION OF THE DRINKING WATER QUALITY IN THE SOURCES OF HATUNSARAY TOWN OF KONYA CITY	Sukru Dursun[1],*Ali Kahraman[2], Hysen Mankolli[3], Aysenur Tufekci[1],
218	PROMOTION OF ECOTOURISM IN PROTECTED AREAS OF THE REPUBLIC OF MACEDONIA	Besnik Rexhepi[1], Behxhet Mustafa[1], Xhezair Abdiu[2], Fahrije Iseni[2]
219	QR CODE APPLICATIONS IN ENVIRONMENTAL ENGINEERING LABORATORIES	Ertugrul Esmeray
220	AEROGEL DRYING METHOD OF CEMENT PASTE THAT COMBINES SOXHLET EXTRACTION WITH SUPERCRITICAL EVACUATION	Arjan Korpa[1]; Argena Buzi[1]; Enera Xhaferri[1]; Arjan Xhelaj[2]; Kledi Xhaxhiu[1]
221	ON THE PROPERTIES OF CONCRETES PRODUCED WITH BLENDED CEMENTS THAT INCORPORATE LOCAL INDUSTRIAL SOLID WASTE	Arjan Korpa[1]; Enera Xhaferri[1]; Argena Buzi[1]; Altin Mele[1]; Gani Kastrati[2]
222	DETERMINATION OF SOME PHYSICO-CHEMICAL PARAMETERS IN OSUMI RIVER	Gentiana Shegani[1], Anila Kala[2], Aida Bendo[3]
223	IMPACT ASSESSMENT OF NUTRITION INDICATORS IN COW MILK PRODUCTION USING THE BACKWARD REGRESSION METHOD	E. Sallaku[1], A. Boçari[2], M. Tafaj[1]
224	ENVIRONMENTAL EDUCATION IN THE ELECTRONIC MEDIA IN KOSOVA	Florije Tahiri[1], Ardian Maçi[2], Valbona Tahiri[3], Kushtrim Tahiri[4], Valmira Gashi[5]
225	BIO- ECOLOGICAL DATA ON THE HABITATS OF *VIPERA URSINII GRAECA* (NILSON & ANDRÈN 1988) IN ALBANIA	Selfo Oruçi, Sadik Malo
226	THE LEVEL OF DETECTION OF THE PRESENCE OF POLLUTANTS AND THEIR EFFECT ON AQUATIC ORGANISMS IN THE LAKE OHRID	Sheqibe Beadini[1], Nexhbedin Beadini[1], Gazmend Iseni[1], Hesat Aliu[1]
227	PREVENTIVE MEASURES FOR THE LONG-TERM MANAGEMENT OF THE ENVIRONMENTAL STABILITY OF THE ECOSYSTEM OF LAKE OHRID	Nexhbedin Beadini[1], Sheqibe Beadini[1], Gazmend Iseni[1], Hesat Aliu[1]
228	THE EFFECT OF DIETARY COMPOSITION AND FEED INTAKE ON LACTATING COW PERFORMANCE AND METHANE EMISSION	E. Sallaku[1], Y. Biçoku[1], A. Kumaraku[1], A Boçari[2] A. Nepravishta[1]
229	NATURAL RADIOACTIVITY IN CHEMICAL FERTILIZERS USED IN ALBANIA INVESTIGATED WITH A FULLY AUTOMATED GAMMA-RAY SPECTROMETER	Gerti Xhixha[1,2,3], Alma Ahmeti[3], GianPietro Bezzon[1], Marsela Bitri[3], Carlo Broggini[4], GianPaolo Buso[1], Antonio Caciolli[1,4], Ivan Callegari[5], Florinda Cfarku[6], Tommaso Colonna[5], Giovanni Fiorentini[1,2,7], Enrico Guastaldi[5], Fabio Mantovani[2,7], Giovanni Massa[5], Roberto Menegazzo[4], Liliana Mou[1], Carlos Rossi Alvarez[4], Dhurata Sadiraj Kuqi[8], Manjola Shyti[2,7], Virginia Strati[2], Merita Xhixha Kaçeli[9], Adriana Zyfi[3]
230	MANAGMENT AND MICROBIAL QUALITY OF THE WATER OF DRINO AND VJOSA'S RIVERS	Çiljeta Piro[1], Klementina Puto[2], Rexhep Shkurti[3], Marsela Alikaj[4]
231	THE ECONOMIC EFFECT OF ACCESIBILITY MANNERS ON TOURISTIC EXPLOITATION OF DAJTI PARK	Ina Vejsiu[1]

232	BODY CONDITION SCORE AND NUTRITION IN DAIRY COWS	Ilir Dova*, Ana Kapaj, Enkeleda Ozuni, Elenica Dimco, Albana Munga, Dardan Shedula, Smoqi Hamdi
233	ANNUAL VARIATION OF ZOOPLANKTON OF ARTIFICIAL LAKE OF TIRANA	Entela Çobani[1], Ledia Aleksi[1], Tania Floqi[1]
234	POTENTIAL USE OF LOW-NOISE ROAD PAVEMENT IN URBAN ROADS OF TIRANA MUNICIPALITY	Ledia Aleksi[1], Entela Çobani[1], Oltion Marko[1]
235	MORTGAGE LOAN AND THE CONSUMER ON THE ALBANIAN BANKING MARKET	Besnik Çina, Rexhep Çuko
236	SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES BASED ECOSYSTEMS	Ilir Myteberi[1], Hasan Cani[2], Arsen Proko[2],
237	HOSPITAL SOLID WASTES AND ITS EFFECT ON ENVIRONMENT	Ayse Cebe[*], Sukru Dursun
238	CREDIT PROBLEMS IN ALBANIA'S AGRICULTURE SECTOR	Gerta Gogo, Dori Risilia, Ines Dika, Orkida Totojani
239	SOLVENT RECOVERY AND CONCENTRATE PAİNT PRODUCTİON FROM WASTE PAİNT OF PACKAGİNG INDUSTRY	Fatma Kunt, Sukru Dursun
240	HIRSUTISM AND ITS RELATION WITH HYPERANDROGENISM AND PCOS IN A ALBANIAN FEMALE POPULATION	Armida Koçi[1], Tefta Rexha[2]
241	THE IPMACT OF ALBANIAN LOCAL BOVINE RACES AS PART OF CONSERVATION BIODIVERSITY IN THE ALBANIAN POPULATION HEALTH	Odeta Laknori, Tefta Rexha, Anila Mitre
242	REVIEW OF INFORMATION ON EMISSION ON PUBLIC HEALTH ABOUT MUNICIPAL SOLID WASTE AND "SIMILAR WASTE"	Miranda Deda[1], Marco Massabo[1,2]
243	GENETIC RESOURCES OF MEDICINAL AND AROMATIC PLANTS, SURVEYING AND CONSERVING IN ALBANIA	Alban Ibraliu[1,*], Ndoc Faslia[1], Alfred Mullaj[3], Fetah Elezi[2]
244	DIVERSITY OF WILD POPULATIONS OF S*ALVIA OFFICINALIS* L. IN NORTH OF ALBANIA, BASED ON MORPHO-BIOMETRIC TRAITS	Alban Ibraliu[1], Ndoc Faslia[1], Najada Kadiasi[1] and Fetah Elezi[2]
245	DIVERSITY AND STRUCTURE OF NATURAL POPULATIONS OF HYPERICUM PERFORATUM L. IN NORTH EAST OF ALBANIA	Alban Ibraliu[1], Najada Kadiasi[1], Fetah Elezi[2]
246	CARBON SEQUESTRATION PROJECT IN ALBANIA: A TOOL TO GET INCOMES FROM DEGRADED FOREST LANDS	Nehat Çollaku[1], Diana Shehu[2], Erion Istrefi[3], Valbona Simixhiu[4]
247	FAECAL CONTAMINATION INDICATORS OF THE BUTRINTI LAGOON ECOSYSTEM AND SHELLFISH SAFETY	Elvira Beli[1], Renis Maçi[2], Sonila Çoçoli[1], Halit Memoçi[2]
248	EVALUATION OF COMPLEMENT FIXATION TEST AND IMMUNOFLUORESCENCE FOR DETECTION OF *MYCOPLASMA PNEUMONIAE* ANTIBODIES	Blerta Laze[1], Anila Mitre[2], Hysnela Marra[3]
249	THE IMPACT OF MULCHING IN YIELD EARLINESS OF TOMATO (*Solanum lycopersicum L.*) CULTIVARS IN SUN GREENHOUSES	Isuf Lushi[1], Llazar Haxhinasto[2], Nexhat Balaj[3]
250	OLIVE GENETIC RESOURCES IN ALBANIA;	Dh. Panajoti[1], A. Cimato[2], A. Lazaj[1], L. Lazaj[1]

251	MORPHOLOGY AND PHYSIOLOGICAL CHARACTERISTICS OF OLIVE OIL IN ALBANIA	Dh. Panajoti[1], A.Cimato[2], A. Llambro[1], L. Lazaj[1].
252	PRELIMINARY CHARACTERIZATION OF MONOVARIETAL EXTRA-VIRGIN OLIVE OIL OBTENED FROM DIFFERENT ALBANIAN CULTIVARS.	A. Veizi[1], C. Pattara[2], A. Cichelli[2], A. Cimato[3], R. Merkohitaj[1]
253	ORGANOLEPTIC CHARACTERISTICS OF MONOVARIETAL EXTRA-VIRGIN OLIVE OILS OBTAINED FROM DIFFERENT CULTIVARS IN ALBANIA	A.Veizi[1], A. Cichelli[2], F. Allmuca[2], E. Spahiu[1]
254	PROBLEMS AND ACCOUNTING ASPECTS OF AGRICULTURAL COMPANIES IN TERMS OF GLOBAL FINANCIAL CRISIS	Albana Gjoni (Karameta)
255	COMPARATIVE STUDY OF PESTICIDE RESIDUE LEVELS IN WATER FROM IRIGATION CANAL WITH LC-MS/MS AND BIOLOGICAL METHODS	Vojislava Bursić[1], Sonja Gvozdenac[1], Gorica Vuković[2], Magdalena Cara[3], Sanja Lazić[1], Mira Pucarević[4], Slavica Vuković[1], Dušanka Inđić[1]
256	VALIDATION OF MULTIRESIDUE METHOD FOR DETERMINATION OF PERSISTENCE HERBICIDES IN SURFACE WATER BY LC-MS/MS	Gorica Vuković[1], Vojislava Bursić[2], Bojana Špirović[3]
257	EVALUATION OF FAO – 56 PENMAN-MONTEITH IN ESTIMATING REFERENCE EVAPOTRANSPIRATION AND REAL EVAPOTRANSPIRATION BY SOME MODEL, APPLICATION IN ALBANIA	Aferdita Laska Merkoci[1], Irena Ymeti[1], Alma Ahmeti[2], Magdalena Cara[2]
258	STUDY OF DEGRADATION OF POLYETHYLENE DURING RECYCLING PROCESS BY USING FT-IR AND RAMAN SPECTROSCOPY	Eldi Liço[1], Spiro Drushku[1], Elias Chatzitheodoridis[2]
259	STUDY PALINOLOGYC OF POLLEN GRAINS, *GYMNOSPERMIUM MALOI* (KIT-TAN & SHUKA) THE ENDEMIC SPECIES IN ALBANIA	Kapidani G[1]., Dauti A[2]., Pupuleku B [2]., Kallajxhiu N[2]., Jançe A [2]., Turku S[2]
260	THE HARMONIZATION OF ALBANIAN FOREST LAWS WITH THE EU STANDARDS AND THE ALBANIAN REALITY	Ariola B. Feraj
261	HEMATOLOGIC STUDIES OF HUMANS EXPOSED TO SULPHUR DIOXIDE	Etleva Beliu[1], Shpetim Leka
262	SOIL ECOSYSTEM MANAGEMENT FOR FOOD SECURITY IN THE MEDITERRANEAN	Pandi Zdruli
263	COMPOSTING: A PROCESS TO REPLACE LANDFILLING IN KOSOVO	Bekim Selimi[1]*, Edmond Rexhepi[1], Vehbi Sofiu[1]
264	STUDY OF REPAIR ALTERNATIVE TECHNIQUES OF RAFTER-TIE BEAM IN CONVENTIONAL TIMBER TRUSSES	Hektor Thoma, Leonidha Peri, Ilir Myteberi, Erald Kola, Denisa Hajnaj
265	MONITORING AND EVALUATION OF NATURAL RECOURSES OF PRESPA LAKE BASIN WITH EMPHASIS ON SPATIAL DISTRIBUTION AND IMPACT FROM NATURAL AND ANTHROPOGENIC FACTORS	Fiorentina Jorgji[1]; Lirika Kupe[1]
266	DYNAMICS OF NITROGEN (N) AND PHOSPHORUS (P) DISCHARGE BY THE RIVER SHKUMBINI IN DIFFERENT PERIODS	Elvin Çomo,[1] Elmaz Shehu,[2] Bledar Murtaj[2], Afërditan Laska Merkoçi[1]
267	HUMAN HEALTH IN MOUNTAIN AREAS, CASE STUDY IN ALBANIA	Bilal Draci

268	THE INFLUENCE OF WOOD TEXTURE IN SURFACE QUALITY	Saimir Beqo
269	AGRICULTURE DIRECT GOVERNMENT SUPPORT	Safet Myftari, Stilian Apostoli, Edmond Kadiu, Irma Tabaku (Qinami), Erdit Nesturi
270	THE METHODOLOGY OF THE CARBON FOOTPRINT TO THE OLIVE SECTOR: POTENTIAL APPLICATION IN ITALIAN AND ALBANIAN REGIONS	Pattara Claudio[1], Veizi Aulona[2], Attilio Cristina[3], Cimato Antonio[3], Cichelli Angelo[1]
271	THE MAIN CHANGES BETWEEN WESTERN MODEL OF COOPERATIVES AND SOCIALIST MODEL APPLIED IN ALBANIA	Bislim Ahmetaj[1]*, Fatmira Allmuçaj[1]
272	TRENDS OF LIVESTOCK FARMS DEVELOPMENT AND EVALUATION OF BIOGAS PRODUCTION	Valdete Vorpsi [1]* & Etleva Jojic[1*], Enkelejda Sallaku[2], Erta Dodona[1]
273	CULTIVATION AND NUTRIENT ANALYSIS OF THE MUSHROOM *PLEUROTUS SP*	Magdalena Cara[1], Jordan Merkuri[1], Vojislava Bursic[2], Aferdita Laska-Merkoci[3], Bora Qesja[4], Enri Shkoza[5]
274	YIELD FORECASTING OF OLIVE TREE BY METEOROLOGICAL FACTORS AND POLLEN EMISSION	Magdalena Cara[1], Aferdita Laska-Merkoci[2], Bora Qesja[3], Mirela Dvorani[2]
275	URBAN AIR QUALITY, A COMPARATIVE STUDY IN MAJOR ALBANIAN CITIES	Robert Damo, Pirro Icka
276	TRACE ELEMENTS IN LIGNITE OF THE KOSOVA BASIN AND ENVIRONMENTAL SIGNIFICANCE	Naser Peci[1], Përparim Hoxha[2], Halime Hajra[3]
277	THE RESULTS OF MINT CULTIVATION IN GREENHOUSES AND FIELDS	Bardhi.N[1]; Teqja. Z[1]; Lazri. V[2]; Rameta. A[2]; Doda. Q[3]; Nelaj. D[4].
278	STUDY OF THE PHYSICO- CHEMICAL CHARACTERISTICS OF THE HAZELNUT FRUIT (*CORYLUS AVELLANA* L.) CULTIVATED IN KRUJA REGION	Vorpsi, V[1]*, Osmani-Lataj, L[1], Topi, D[2]
279	BIOASSESSMENT OF WATER QUALITY OF OSUMI, DEVOLLI AND SHKUMBINI RIVER USING SOME DIFFERENT BIOTIC INDEX OF BENTHIC MACROINVERTEBRATES ON SPRING 2012	Bledar Pepa[1] , Anila Paparisto[1], Erjola Keçi[1]
280	NATIONAL PARK "BJESHKËT E NEMUNA" THE BIGGEST DEVELOPMENT IN NATURE CONSERVATION IN KOSOVO	Zeqir Veselaj[1], Behxhet Mustafa[2], Avni Hajdari[2], Zenel Krasniqi[1],
281	MUTAGENIC POTENCY ASSESMENT OF NICKEL SHORT-TERM EXPOSURE ON *Allium cepa* L.	Ditika Kopliku [1], Anila Mesi (Dizdari) [2]
282	INVESTIGATION OF CYTO-PHYSIOLOGICAL REACTION OF *Allium cepa* L. TO ROUNDUP	Anila Mesi (Dizdari) [1], Ditika Kopliku [2]
283	THE IMPACT OF POPULATION GROWTH ON THE ENVIRONMENT	Florinda Dema, Stilian Apostoli, Natasha Hodaj, Edmond Kadiu
284	MONUMENTS OF NATURE OF DRENICA RIVER BASIN	Fadil Bajraktari[1], Sami Behrami[1], Merita Dollma[2], Ramiz Krasniqi[3]
285	CHEMICAL PROPERTIES OF COAL IN KOSOVA BASIN AND ENVIRONMENTAL ASPECTS OF MINING	Halime Hajra[1], Naser Peci[2], Përparim Hoxha[3]
286	GENETIC DIVERSITY ASSESMENT OF PEA (*PISUM SATIVUM* L.) GERMPLASM BASED ON QUANTITATIVE MORPHOLOGICAL AND	Belul Gixhari[1]; Valbona Hobdari[1]; Fetah Elezi[1]; Majlinda Belegu[2];

	QUALITATIVE TRAITS	Suzana Papadhopulli[3]
287	DATA ON MALACOFAUNA OF THE RADHIMA COAST, VLORA BAY, ALBANIA	Denada Kasemi
288	EVALUATION OF THE PROTECTION EFFIECIENCY OF VITAMINE C AND B6 IN THE CORROSION OF 36CrMo STEEL IN ACID ENVIRONMENT	A. Zekaj[1], K. Xhanari[1]*, B. Seiti[1], A. Alinj[1], Z. Gaçe[1], A. Lame[1], R. Veseli[1]
289	EVALUATION OF THE PROTECTION EFFICIENCY OF 1-DECYL-3-METHYLIMIDAZOLIUM CHLORIDE IN THE CORROSION OF 36CrMo STEEL IN ACID SOLUTION (HCl)	A. Alinj1*, B. Seiti1, K. Xhanari1, E. Andoni1, Z. Gaçe1, A. Lame1, R. Veseli1, A. Zekaj1
290	EVALUATION OF THE CORROSION STABILITY OF 36CrMo STEEL IN ACID ENVIRONMENT IN THE PRESENCE OF VITAMIN B1	R. Veseli1, B. Seiti1, K. Xhanari1, A. Alinj1, Z. Gaçe1, A. Lame1, A. Zekaj1
291	THE STUDY OF ORGANO CHLORINE PESTICIDES IN BREAST MILK AND THE IMPACT IN HEALTH, IN TIRANA ALBANIA	Blerina Xhaferaj[1], Jonida Canaj[1], Arben Luzati[2,] Kozeta Vaso[2], Ardit Gjyli[3], Sokol Kociaj[3], Liri Miho[4]
292	EVALUATION OF WATER QUALITY TRENDS USING WATER DISCHARGE NORMALIZTION	Bledar Murtaj *, Elvin Çomo **
293	WOOD-BASED BOARDS AS ECOLOGICAL PRODUCTS- THEIR QUALITY CONTROL	Armond Halebi, Dritan Ajdinaj
294	BIODIVERSITY AND PROTECTED AREAS IN KOSOVO	Qenan Maxhuni[1], Ilir Morina[1], Rifat Morina[1], Rrahman Ferizi[2], Zeqir Hashani[3]
295	OXYGEN IN THE BOTTLE NECK	Arsim Elshani[1], Renata Kongoli[2]
296	EVALUATION OF DURUM WHEAT GENOTYPES UNDER DIFFERENT ENVIRONMENTS FOR TESTING STABILITY AND RANGE OF ADAPTATIONS	Foto Kashta
297	INTRODUCING RECYCLING PLASTICS IN PRIMARY SCHOOL CHILDREN	Lady Farah Fatmawati[1], Andraditta Safitri[2]
298	COMPARISON OF DEKOKCIONIT AND INFUSION METHODS TO BEER PRODUCTION	Kastriot Pehlivani [1], Donika Prifti [2]
299	BIOREGULATOR INFLUENCE IN SHAPING OF THE "KNIP" APPLE TREE NURSERY	Vahid Avdiu[1], Fadil Thomaj[2], Sylë Sylanaj[3], Endrit Kullaj
300	ON PERFORMANCE IMPROVEMENT AND POLLUTION DEGREE OF USED VEHICLES THROUGH MAGNETIC TREATMENT OF FUEL	Asllan Hajdëri[1] Dhimitër Sotja[2]
301	INSECTICIDE EVALUATIONS AGAINST APHIDS IN PEPPER CROP CULTIVATED IN GREENHOUSE	Gyrner Murati[1], Fadil Musa[2], Bedri Dragusha[2], Skender Ramadani[1], Saranda Musa[2]
302	INVESTIGATING OF CORRELATION BETWEEN YIELD AND NDVI IN CORNFIELD WITH A BASIC KITE SYSTEM	Nurettin Kayahan[1], Taner Üstüntaş[2], Cevat Aydın[3]
303	ECOTURISTIC DEVELOPMENT IN DISTRICT OF DELVINA AND IT' S IMPACT ON SOCIO – ECONOMIC LIFE	Brisilda Shtino (Begaj)
304	DETERMINING OPTIMAL CONDITIONS FOR THE INSTALLATION OF A PLANT FOR PRODUCTION BIOGAS	V. Vorpsi, E. Jojic, E. Sallaku, E. Dodona

305	OVERVIEW OF FUNGI SPECIES IN PRESPA NATIONAL PARK (ALBANIA)	Boris Ivancevic[1], Mitko Karadelev[2]
306	THE Cu MICROELEMENT AND ITS FRACTIONS	Dhurata Feta[1], Mira Karajani[2], Marjola Malo[3]
307	ASSESSING GENETIC VARIATION FOR MORPHOLOGICAL TRAITS OF WHEAT (*Triticum aestivum* L.), IN BASE COLLECTIONS	Fetah Elezi[1*], Belul Gixhari[1], Alban Ibraliu[2]
308	GENETIC DIVERSITY OF OREGANO (Origanum vulgare L.) POPULATIONS IN NORTH ALBANIA	Fetah Elezi[1*], Fatbardh Plaku[2]
309	GENERAL DATA ON ASTER ALBANICUS, SHKOPET AREAL IN MAT REGION	Turku, S[1]., Zekaj (Trojani), Zh[2]., Naqellari, P[1]., Pupuleku, B[1]
310	THE ROLE OF NUTRIENT LOADINGS IN WATER QUALITY	Hoxha, B[1]., Cane, F[1]., Gega, N[1]., Osmani, M[1].
311	EFFICIENCY OF PHOTOSYNTHETIC APPARATUS IN POLLUTION CONDITIONS OF METALLURGICAL FACTORY	Eriola (Zhuri) Hida, Fatbardha Babani, Theodhor Karaja
312	STUDY OF BACTERIA CAUSING URINARY TRACT INFECTIONS AT HEALTH DIRECTORY, DURRËS, ALBANIA	Aurora Bakaj (Çizmja).[a*], Entela Ruçi (Kulla)[b], Mirela Lika (Çekani)[c]
313	WEAKNESSES IN SKADAR/SHKODRA LAKE WATERSHED ASSESSMENT AND MANAGEMENT	Slavoljub Mijovic[1], Goran Sekulic[2]
314	INFLUENCE OF DIFFERENT SUBSTRATES AND CONTAINER CELL CAPACITY ON THE DEVELOPMENT OF PEPPER SEEDLINGS (CAPSICUM ANNUUM L.)	Skender Ramadani[1],Thoma Nasto[2], Besim Sahiti[1] Gyrner Murati[1]
315	FORMALDEHYDES RELEASE FROM UREA-FORMALDEHYDE ADHESIVES PROBLEM (CONCERN)	Armond Halebi, Mandi Marku
316	SOME RESULTANTS OF STUDY OF CIRCADIAN FEEDING RHYTHMS AND FEED UTILIZATION EFFICIENCY BY TROUT *ONCORHYNCHUS MYKISS* WALBAUM,1792 IN CASES OF SELF-FEEDERS USE	Spaho Enton[1], Sadikaj Rigerta[2], Arapi Dritan[3]
317	RISE OF THE ENVIRONMENTAL EDUCATION THROUGH THE EDUCATION LECTURES AT THE EEMENTARY SCHOOLS FOR A SUSTAINABLE DEVELOPEMENT IN KOSOVO DURING THE PERIOD 2008-2013	Zymer Mrasori[1*], Albert Kopali[2], Iliriana Orana[3] , Bajram Kadriu[4]
318	STUDY OF VARIOUS ENVIRONMENTAL CHANGES IMPACT ON PACKAGED FOOD SAFETY	Violeta Lajqi Makolli[1], Ilirian Malollari[2], Mirela Lika (Cekani)[2]
319	THE STUDY OF THE EAR CHARACTERISTICS OF SOME AEGILOPS ACCESSIONS COLLECTED IN THE TERRITORY OF ALBANIA	Ibro, V.; M. Prebibaj; B. Lamo; Sh. Alla
320	EFFICACY EVALUATION OF SOME INSECTICIDES AGAINST APHIDS IN PEPPER CROP CULTIVATED IN GREENHOUSE	Gyrner Murati[1], Saranda Musa[2], Skender Ramadani[1], Fadil Musa[2]
321	PRELIMINARY DATA ON ZOOPLANKTON ON BELSHI LAKE.	Enkeleda Nikleka, Spase Shumka

ABSTRACTS

001 BIOLOGICAL AND SANITARY EFFECTS OF THE EXPOSURES TO NON IONIZING ELECTROMAGNETIC FIELDS (EMF) AND THE MUOS CASE

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ABSTRACT

Recent and very recent scientific literature shows that both biological and sanitary effects of EMF radiations – from the extremely low frequency magnetic fields (ELF/EMF) to the high and very high radiofrequencies (RF/EMF) – are clearly established and occur even at very low exposure levels. Overall, there are now almost 4.000 experimental studies that report a variety of short and medium-term effects of EMF, which support the biological plausibility of the increased risks of their long-term genotoxic, carcinogenic and neurodegenerative consequences on exposed human populations. For instance, EMF exposures of cultured mammaliant cells, experimental animals and human subjects may induce genetic and epigenetic effects, such as single and double strand DNA damages, chromosomal aberrations, micronuclei, sister-chromatid exchanges, alteration or loss of the DNA damage repair processes, abnormal DNA transcription and protein functions, etc.; stimulation of heat-shock protein synthesis; inhibition of apoptosis (programmed cell death); damages to cellular macromolecules due to the impairment of the inactivation of free radicals and the consequent oxidative stress on account of the inhibition of melatonin syntesis and the stimulation of the Fenton's reaction; modification of the cell membrane permeability and the consequent alteration of the flow of biologically important ions such as Calcium; alteration of the function of the immune system; serious impacts on sperm morphology and functional with consequent effects on the offspring; alterations of the brain functions as a consequence of the interference of a EMF on cerebral frequencies, etc. Many of these bioeffects can reasonably be presumed to result in adverse health effects if the exposures are prolonged or chronic. This is because they interfere with normal body processes (disrupt homeostasis), prevent the body from healing damaged DNA, produce immune system imbalances, metabolic disruption and lower resilience to disease across multiple pathways. Essential body processes can eventually be disabled by incessant external stresses (from system-wide electrophysiological interference) and lead to pervasive impairment of behavioural metabolic and reproductive functions. There is good evidence to suggest that many toxic exposures to the fetus and very young child have especially detrimental consequences depending on when they occur during critical phases of growth and development (time windows of critical development), or where such exposures may lay the seeds of health harm that develops even decades later. Existing FCC and ICNIRP public safety limits are not sufficiently protective of public health, in particular for the young subjects - embryos, fetuses, neonates, very young childs – and for those which are exposed to extremely high ELF and RF/EMF levels. Sufficient evidence comes from epidemiological studies of an increased risk from exposure to EMF of adverse acute effects and even long-term carcinogenic effects that cannot be attributed to chance, bias or confounding. Therefore, according to the rules of IARC, such exposures can be classified at least as Group 2 "probable carcinogenic agents for humans". The MUOS (Mobile User Objective System) is a military radio-transmission system that is proposed for installation close to the small village of Niscemi (Sicily, Italy). Ours study presents the results of electromagnetic radiation models in that area and documents the scientific sanitary reasons why the MUOS system should not be installed in Niscemi.

Keywords: biological and sanitary effects, exposures, ionizing electromagnetic fields (emf), MUOS

002 CLİMATE CHANGE AND THE CHANGES İN REGİONAL PRECİPİTATİON

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ABSTRACT

The amount and time period of precipitation by region were affected with occurring global climate change. Similar negative effects have been occurred in Konya closed basin, as well as all over the world. In this study, firstly types of precipitation are discussed. Afterwards, the study was focused on the precipitation types and occurring rain in the region. Also acid rain formation and dry/wet deposition are being discussed as very important environmental problems happening with Global Environmental Change. Importance of precipitation cleaning air pollution is also as a place to answer the question air pollution problem. Increasing urbanization of rural and urban comparison of information on rainfall in this period has been scanned. Why are there different amounts of precipitation in the same place where the two settlements to answer the question. Most recently, several studies have revealed the parameters to be monitored by examining the rain water and the measurement of these parameters / results to be obtained by discussing.

Keywords: precipitation, rain, global climate change, Konya, Turkey

003 EVALUATING THE EFFECST OF SOIL pH AND MOISTURE ON THE PLANT SPECIES OF CHANGA MANGA FOREST USING VAN DOBBEN CIRCLES

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ABSTRACT

Diversity entails variation in the species having large number. There always a difficulty in the interpretation of the data yielded by the community samples because of the noisy data. And magnificent means are provided by the Multivariate methods for structuring such data. Changa manga forest was divided into four zones. Total 200 quadrats of 1m x 1m were laid down in whole of the forest. Species richness/abundance response to environmental gradients was investigated by using Van Dobben circles for a selected variable i.e. soil moisture and soil pH. Result shows that *Rumex crispis, Sonchus oleoraceous, Prosopis cineraria, Desmostachya bipinnata , cynodon dactylon, Malvastrum coromendialinum, Ageratum conyzoid, Sonchus arvensis* and *Conyza Canadensis* hold high positive response towards the positive circle of moisture while *Conyza bonariensis, Mentha spicata, Parthenium hysterophorous, Suaeda fruiticosa, Prosopis cineraria, Chenopodium album, Ranunculas muricatus, Stelleria media* and *Taraxacum officinale* show negative response toward the soil moisture. *Prosopis cineraria. Conyza bonariensis* shows the higher response towards the pH. *Mentha spicata* and *Parthenium hysterophorus, Suaeda fruiticosa, Tarxacum officinale, Cenchrus agrimonioides, Convolulus arensis* and *Cirsium arvense, Oxalis cornuculata* shows high negative response towards the pH variable. pH does not produce greatly effect on the plant present in the Zone-I and zone-III. The specie richness and pH relationship is monotonic positive. many species remain uneffected by the pH 3-7. That is why pH not showing much effect towards the species abundance as CMF pH lies in the range of 7.

Keywords: Soil, pH, Moisture, Van Dobben, Changa Manga Forest, Pakistan.

004 TERRITORIAL VULNERABILITY ASSESSMENT METHODOLOGY FOR AGRICULTURE: CASE STUDY OF PANEVĖŽYS DISTRICT, LITHUANIA

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ABSTRACT

Agri-ecosystems are very much vulnerable and, possibly, have most potential adapting to climate change challenges. The Baltic Sea Region programme 2007–2013 project "BalticClimate – Baltic Challenges and Chances for regional and development generated by Climate Change" is helping region municipalities to deal with the climate change issue in a cooperative, integrated and sustainable way. Within the project the complex methodology of adaptation to climate change was created. One of the most important steps of methodology was development of the brand new attitude to territorial vulnerability assessment. Methodological approach based on GIS layers intersections and simple classification of vulnerability categories. The methodology was tested in Panevėžys district, one of the most agrarian areas in Lithuania. 4 general layers sensitive to climate change (typical to all municipalities) were identified: landscape elements, soil typologies, relief slopes and hydrological network; and subject to the municipal peculiarities, specific layers were identified (in this case soil fertility). The following 30-year time periods were identified to assess the municipal territorial vulnerability to climate change: 2011–2040, 2041–2070 and 2071–2100. It was found that Panevėžys district municipality is expected to be the most vulnerable in the time period of 2070– 2100.

Keywords: Territorial vulnerability, BalticClimate project, adaptation to climate change, spatial planning, GIS

005 NETWORKING APPROACH TO THE SUSTAINABLE DEVELOPMENT OF EUROPEAN REGIONS BORDERING MAJOR RIVERS

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ABSTRACT

The paper proposes a systemic approach called Networking to the model of major rivers in Europe – assets which bring together multiple organizations and combine economic, social and environmental elements – to address changes aimed at sustainable development. The paper focuses on the lower basins of major European rivers. The ultimate aims of this new 'networking' approach are: (a) to implement a model of territorial planning and governance from a European perspective and (b) to improve the socio-economic knowledge base for a sustainable development. European major rivers, despite their relevance as commercial transport routes, divide the territory into two parts, one on each bank of the river, with different levels of economic and social integration. The banks of major rivers are more or less urbanized and populated, with a variety of economic structures, business dimensions, cultural heritage and tourism all items to combine to produce a sustainable territorial management. One obvious reason for this separation is material: the inadequacy of infrastructure for moving people from one side of the river to the other. Less obvious are the immaterial reasons, related to the absence of a truly integrated system which crystallizes the riparian regions on each side into a single economic district which would be better structured to attract people, investors and ideas. The paper discusses initiatives under way to implement this culture and the networking methodology for an

integrated territorial planning and management.

Keywords: river governance, networking, sustainable development.

006 EMPOWERING LIVELIHOODS THROUGH NWFP CERTIFICATION IN INDIA

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ABSTRACT

With the liberalization of economies, broader implications of setting standards for Non Wood Forest Products, (NWFP) for industry, governments, communities and small producers is increasingly being felt in India. The paper proposes group certification regime for NWFP suggesting global-local linkages diminishing vulnerability of biodiversity-derived products creating better marketing opportunities for national/international trade. Compliant certification standards for industry, governments, communities' small producers and applicability of relevant trade-related instruments can facilitate export of biodiversity-derived NWFP products, improvising local institutions contributing towards rural well-being. Commercialisation of NWFP is complex and many times poorly understood and when associated with biology and ecology may also result in vulnerability of the NWFP resource. The proposed NWFP certification regime answers under what conditions certification can be a useful tool for NWFP collectors and further lays foundations for management and harvesting standards, involving consumers and local institutions. Characterisation of NWFP with proposed certification initiative can reduce cost of certification and help overcome seasonal employment with management oriented certification of medicinal plants and biodiversity related NWFP Products resulting in improving livelihoods, strengthening multilateral collaboration improving economy leading to human well being of the Country. Rural Consumers through proposed innovative group certification scheme can empower people and promote sustainable livelihoods in India.

Key words: Non Wood Forest Products; Group Certification; Certification standards; Vulnerability

007 OVICIDAL AND ANTI-OVIPOSITIONAL ACTIVITIES OF SOME PLANT EXTRACTS ON THE EURYGASTER MAURA L. (HETEROPTERA: SCUTELLARIDAE)

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ABSTRACT

The Sunn pest, Eurygaster maura L. (Heteroptera: Scutellaridae) is the most economically important pest of wheat and other graminae in Middle Anatolia, Southeast Anatolia and Thrace in Turkey. In this study, the methanol extracts of Foeniculum vulgare Miller (Umbelliferae), Lavandula angustifolia Miller (Lamiaceae), Cuminum cyminum L. (Umbelliferae), Thymus vulgaris L. (Lamiaceae), Achillea millefolium L. (Asteraceae), Artemisia absinthium L. (Asteraceae), Hypericum perforatum L. (Hypericaceae) and Pimpinella anisum L. (Umbelliferae) were tested for ovicidal and anti-ovipositional properties against E. maura L. under laboratory condititons. Extracts were applied in 2.5%, 5% and 10% (w/w) concentrations. One-to three-day old eggs were dipped in to treatments. As a result, except A. millefolium and T. vulgaris, in the other extracts hatching of treated eggs decreased compared with control. According to the extract concentrations the percentage of kill of egg masses increased mostly. At a concentration of 10%, F. vulgare extract was found effective in causing 76.22% egg mortality followed by P. anisum and C. cyminum (53.93% and 51.74%

respectively). Achillea millefolium extract was the most active in reducing egglaying with result of 40.28 percent in comparison to other extracts. These results showed that A. millefolium, F. vulgare, P. anisum and C. cyminum extracts may be used in integrated sunn pest management, however should be evaluated for field efficacy.

Key words: Ovicidal activity, oviposition deterrent, plant extracts, Eurygaster maura L.

008 STUDY ON SOME AREAS OF RARE PLANTS SPECIES FROM THE MIDDLE SECTOR OF NISTRU RIVER BASIN (THE REPUBLIC OF MOLDOVA)

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ABSTRACT

The study included researches in the natural areas protected by state (NAPS), during 2010-2013, in the middle of the Nistru River basin, located on the border with Ukraine, in order to delimit the habitats of rare plants species, with national and international protection status, in the existing areas across Europe and identify new habitats (in the study area) for the most threatened species of flora in the region. Physical and geographical particularities of the surveyed region have conditioned a varied floristic diversity, which included and species found on the limit of their area of distribution. Thus, some plants are at North limit (Galanthus nivalis, Trifolium pannonicum), at South limit (Hepatica nobilis, Poa versicolor, Dryopteris carthusiana) and at East limit of distribution (Doronicum hungaricum, Melittis sarmatica) for Republic of Moldova, other – at limit in Ukraine (Lilium martagon, Allium rotundum, Lathyrus venetus, Cephalanthera damasonium) or in Romania (Pulsatilla grandis, Veratrum nigrum, Staphylea pinnata). These species are listed in different Annexes of Environmental Conventions (Bern, 1979, Washington, 1973, Appendix IUCN, 2008, Red Book of neighboring countries) and require additional measures for improving and preserving habitats.

Keywords: natural areas protected by state, rare plants, environmental conventions.

009 MONITORING OF EXTREME RAIN AND SNOW EVENTS FROM SATELLITE REMOTE SENSING OBSERVATIONS

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ABSTRACT

Extreme hydrometerological events triggered by heavy rain or snowfall are becoming more common as heavy precipitation combined with expanding populations and development aggravate already vulnerable areas. Accurate monitoring of these events is vital to understanding their impacts and predicting their future behavior with respect to natural and anthropogenic climate signals. Space-based monitoring is especially valuable in regions where ground-based weather stations are not available or unreliable, yet extreme meteorological events frequently contribute to significant social and economic losses. Most current meteorological satellite instruments collect observations which are used to estimate rain and snow parameters. Optically-based sensors on board geostationary satellites collect measurements at a high spatial and temporal

resolution that are ideal for tracking rapidly evolving synoptic weather events. Microwave-based measurements on board polar orbiting satellites, on the other hand, provide less frequent measurements and at a coarser spatial resolution, but they are more physically related to precipitating cloud properties. For snow cover monitoring, microwave measurements at specific frequencies penetrate clouds and thus are capable of monitoring snow on the ground in near all-weather conditions. In this paper, NOAA/NESDIS's main operational satellite products for real time monitoring of rain, falling snow and snow on the ground will be presented. Applications of these products in the monitoring of recent extreme events in North America and Europe will be also presented and discussed.

Key Words: Satellite Remote Sensing, Snow and Ice, Rain, Extreme Hydrometeorological Events

010 ANALYSIS OF ECOTOURISM DEVELOPMENT IN SANT'ANTIOCO ISLAND, SOUTHERN SARDINIA, ITALY

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ABSTRACT

Recently, ecotourism has flourished and attracts eco-tourists who visit the ecological and cultural resources of the rural landscape, country parks and marine parks. This study was conducted in Sant'antioco Island, southern Sardinia, Italy. The study aimed at analysis suitability of the Island for ecotourism and formulate recommendation for sustainable development of ecotourism This research integrates three characteristics of ecotourism criteria that are environmental factors, recreation factors and sub- structure factors to identify and prioritize the suitable ecotourism sites in the Sant'antioco Island using a Geographic Information System (GIS) and followed FAO (1976) land suitability evaluation framework. The variables used for generating various indices were temperature, slope (%), elevation, land use/land cover, vegetation diversity, mountain sides (prevailing exposure) , rock out crop and the infrastructure accessibility by either road and/or trekking routes in the island such distance from sea and city. The mentioned variables were used for both hard and soft tourists i.e. in this context, hard tourist are those who enjoy tough recreation way for example, rock climbing, and mountaineering and soft tourists are those who relatively like smooth environment for visiting. The suitability result endorsed that 37.28 %(41km2), 58.78 %(65 km2) and 3.94 %(4 km2) of the study area were highly suitable, moderately suitable and marginally suitable respectively for the soft tourist. Here the non-existence of none-suitable class exhibited due to the study area beingsmall in size as well as the major part of the area is moderate slopes. Besides the suitability for hard tourists were 25.49 %(28km2), 55.60 %(61 km2), 17.45% (19 km2) and1.46% (1km2) highly suitable, moderately suitable, marginally suitable and non suitable, respectively. In conclusion the result indicated that the high suitable and moderately suitable area accounted for 96.60% and 81.09%of the total area for soft and hard tourist respectively, which suggested that the eco-tourism resource in the study area is relatively abundant. The study area is suitable foreco-tourism development. Therefore sustainable ecotourism is an advocate-able investment area in the study Island. The ecotourism development of the study area should be community based. This strategy will have positive social implication; hence this is a form of ecotourism where the local community has substantial control over and involvement in, its development and management, and a major proportion of the benefits remain within the community.

Keywords: ecotourism, development, ecological and cultural resources, Geographic Information System (GIS).

011 TECTONO-STRATİGRAPHY OF THE TIMRAC SİNKHOLE AND SURROUNDİNG (CUMRA-KONYA: SOUTHERN TURKEY)

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ABSTRACT

Tımraş sinkhole is situated road of Konya-Karaman, and 50 km to Konya. It is found within Upper Miocene-Lower Pliocene, thick bedded clayey limestone, with oncoliths. The sinkhole contains ground water, 51 m below the land surface, with 36 m maximum depth. It has a slightly ellipsoid shape with dimension of 300*250 m. The karstic processes in the area was intensified by a North dipping gravity fault with EW trend that forming a boundary between Mesozoic and Neogene limestones at south of the sink, low-level topographic code of the lacustrine limestone along Çumra plain, and feeding of ground waters by Çarsamba river with some geological processes. Consequently, the underground karstic systems in the area have been developed very well, leading to the formation of various cavities. Then, the thinning of the cavities ceiling caused the development of the sinkhole. The stratighraphic sequence starts with autochthonous Bolkardagı unit, continues allochtonous Bozkir unit and Neoautochthonous lithostratigraphic unit in/around Gokhuyuk town, in where Timraş sinkhole is situated. The Bolkardagı unit contains Jura-Cretaceous, shallow platform carbonates (Lorasdagı limestone), which is grey-colored, thick-bedded and slightly crystallized, with rare fossil. It is overlied conformably by Midostepe formation, which is composed of deep shelf deposits, namely, argillaceous plaquette limestone with chert nodule at the bottom, alternations of various colored marl, shale, argillaceous and siliceous limestone at the middle, and argillaceous, siliceous marl and limestone, with intercalations of siltstone, sandstone and fine-grained gravel stone at the top. There are plentiful Globotruncana and Radiolaria fossils in marl levels, and silicious plaquette limestones. Allochtonous Bozkır unit is represented by Late Cretaceous ophiolitic melange (Hatip melange), which is made up of altered andesitic and spilitic volcanics observed only/partly at Konya-Karaman road cutting. The complex obducted onto the Lorasdagi and Midostepe formations, and become thin by erosion, highly altered, and finally forming a small clippe. Neoatochtonous units the area is represented by Late Miocene-Early Pliocene Ulumuhsine Formations, including beige coloured thick bedded clayey limestone with oncolith , and alluvium. Lacustrine Ulumuhsine formation underlies all Mesozoic units with angular disconformity, and overlied disconformably by Quaternary alluvium of Çumra- plain.

Keywords: Sinkhole, tecton-stratigraphy, karst, Çumra

012 PERFORMANCE OF BROWN SWISS BREED IN ALBANIA-PRELIMINARY DATA

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ABSTRACT

The Brown Swiss breed started to be imported in Albania after the year 2000. through the importation of heifers and biological material, mainly from Germany and Austria. The farmers are interested in this breed for some foundamental traits such as calving ease, udder health and very good feet and legs as well for the good performance of fattening bulls. The aim of our study was to analyze the milk production and its relations with miilk fat, protein, and freezing point produced by cows imported from Austria in 2008, and bred on private farms in Peqin and Tepelena districts. For the period July 2010 – April 2011 was analyzed the milk of 20 cows in both farms.The milk production during the first lactation (2008-2009) was 4154 liter milk/cow noticed that these herds have produced 50% more milk than average milk production in Albania. While the

milk production of the 20 cows analyzed, for lactation 2010-2011, was 5.078 liters/cow/year.The milk fat and protein percentage are lower compare with the results taken in Germany and Austria which could be explained with the management and nutrition conditions that are not in the same level as the country of origin. There is statistically significant relationship between milk production and milk fat, protein and freezing point at the 95.0% or higher confidence level.Statistical data processing was done with Statgraphics Centurion XVI.

Key words: breed, milk fat, protein. freezing point, milk production

013 SUSTAINABLE DEVELOPMENT OF COMMUNE NDROQ OF TIRANA IN ALBANIA

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ABSTRACT

Albania is yet today an agricultural country where about 50% of the population lives in rural areas and agricultural production takes about 23% of GDP. (Gross Domestic Product). This article will make an economic and social diagnosis of the commune, based on indicators for sustainable development. For this diagnosis are used the data obtained from the Institute of Statistics and Directory of Agriculture of the district, surveys, interviews. Agriculture and livestock are developed in this commune. Although this is a commune not far from national road and not far from the capital of Tirana, some of the people are poor. We will analize the source of their economic income, the investments that have been made by the farmers of this commune. Another issue will be how much they have benefited from the policies of government for the development of this commune. From surveys and interviews with farmers and commune's leader result that while farmers work hard, their economic situation is not very good. Conclusions and recommendations will be drawn at the end of the study connected with strategies and policies to be followed for the future.

Key words: commune, sustainable development, strategy, diagnosis

014 COORDINATION OF AN INTERNAL DONOR (ETHYL BENZOATE) TO SUPPORTED ZIEGLER-NATTA CATALYST: AN ATR-IR STUDY

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ABSTRACT

The internal donor is an important component in supported Ziegler-Natta catalysts for propylene polymerization, as it is a major factor determining the stereospecificity of the catalyst. Internal donors bind strongly to the $MgCl_2$ support. It is believed that the internal donor blocks particular sites on the $MgCl_2$ surface which otherwise, upon coordination with $TiCl_4$, would generate precursors of non-stereospecific active sites. Infrared spectroscopy is one of the most useful research tools for the study of surface species in solid catalysts. It can be applied to probe the state of carbonyl groups in ester internal donors, since the $\nu_{C=O}$ absorption band is very sensitive to coordination with a Lewis acid. IR spectroscopy has been extensively

applied to Ziegler-Natta catalysts. With regard to propylene polymerization catalysts, most of the work has focused on the spectral changes in the $\nu_{C=O}$ of the internal aromatic ester in various stages of catalyst preparation. In the present work the coordination of ethyl benzoate ester onto $MgCl_2$ support is studied by attenuated total reflectance infrared spectroscopy (ATR-IR).

Keywords: Ziegler-Natta catalyst, IR spectroscopy, coordination of ethyl benzoate

015 A GENERAL ROUTE FOR SYNTHESIS OF 2-OXO-CROWN ETHERS FOR THE POLYMERIZATION OF HYDROPHILIC ESTERS

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ABSTRACT

Aliphatic polyesters are attractive biomaterials due to their degradability, biocompatibility, and potential in a large variety of biomedical applications. Oxo-crown-ethers represent a highly interesting class of monomers for the synthesis of hydrophilic polyesters. The present work aims the synthesis of crown ethers containing an ester function (2-oxo crown ethers), which can be used in a lipase catalyzed ring opening polymerization-reaction to produce hydrophilic polyesters. 2-oxo crown ethers can be good monomers to make well-defined not only hydrophilic polyesters but block copolymers with hydrophobic/hydrophilic blocks as well. We have tested a general synthesis route to produce 2-oxo-crown-4-ethers. The desired monomer is synthesized in several-steps reaction path.

Key words: Oxo-crown ethers, synthetic route, hydrophilic polyesters

016 MORPHO-ANATOMICAL ANALYZE IN DIFFERENT SPECIES OF PRIMULA GENUS

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ABSTRACT

Genus of Primula are herbaceous plants of the family Primulaceae (with about 1000 species). Have distribution in Europe, Asia, and North America. Some of them could cultivate successful..Flora of Balkan Islands is rich with Primula, among of which there are also endemic plants.There are early spring plants which have usually yellow flowers. Leaves are collected in rosette near the stem base, but mostly flowers regular, hermaphrodite double pen tamer perianth. Are characteristics that the whole body is covered with hair (trichomes). Is expressed heterostyly that prevents autogamy and favors allogamy. Are analyses morpho-anatomical variables to three species of Primula: 1.Primula vulgaris 2.P.elatior 3.P.veris that grow in Kosovo. Are analyzed these characters: heterostyle, parts of flower, number of trichomas, number and thickness of vascular bundles, number and diameter of stomas, thickness of mesophyl etc..

Key words: Primula, heterostyly, trichomes, stomas, epidermis, mesophyl.

017 MARINE PROTECTED AREAS STRATEGY IN LEBANO FOR BIODIVERSITY CONSERVATION

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ABSTRACT

Marine protected areas (MPAs) have gained world recognition as effective tools to protect the marine environment, and are much in favour in the Mediterranean, where about a hundred of them have been declared during recent decades to grant special protection to sites perceived to contain the most valuable marine habitats and species. Embattled by the complexities of saving their sea as a whole, the Mediterranean nations have resolved to carve out their remaining crown jewels from the sea, and struggle to conserve them through MPA designations. In Lebanon, there are two legally declared marine protected areas: the Palm Islands Nature Reserve in North Lebanon and the Tyre Coast Nature Reserve in South Lebanon. By this strategy, the Ministry of Environment in Lebanon can achieve a healthy, productive, and biologically diverse marine environment. To achieve this aim, it is important to enhance the consistency between marine and land-based policies and to create a well-managed, ecologically coherent network of marine protected areas (MPAs) in Lebanese waters. The Strategy sets out how the policy related to the marine environment fits within the Government's wider policy framework and what can be achieved by creating the network, how the available tools can be used and how collaboration with various organizations must be achieved to create this network. The benefits of a network of marine protected areas are numerous, diverse and include ecological, social, economic and cultural elements. The drive for a National Marine Protected Areas Strategy is derived from the need for a cooperative and collaborative approach to the development of a network of national marine protected areas in Lebanon as a means to help address the declining health of our sea. The intent of this Strategy is to set the national priority actions needed for the establishment of new marine protected areas in Lebanon and for the proper management of existing and new MPAs, and to define the type of interventions needed at technical, research, regulatory, policy, institutional, financial, educational, capacity building, communication and promotion levels.
This Strategy defines the following goal: The establishment of a network of marine protected areas, established and managed within an integrated marine management framework, that contributes to the health of Lebanon's sea and marine environment.
To achieve this goal, this Strategy aims to fulfill the following objectives:

- To establish a more systematic approach to marine protected areas planning and establishment;
- To enhance collaboration for management and monitoring of marine protected areas;
- To increase awareness, understanding and participation of the local community in the marine protected areas network; and
- To link Lebanon's network of marine protected areas to Mediterranean networks.

Keywords: biodiversity, marine conservation, MPA strategy, marine protected areas, Lebanon

018 PRELIMINARY DATA REGARDING ECOLOGICAL AGRICULTURE IN TURKEY – CASE STUDY TEZEREN VILLAGE, AĞRI REGION

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ABSTRACT

Turkey is certainly a country following the adequate path towards the adhesion to the European Union; what makes it special is the harmonious and well-balanced merge between traditionalism and modernity in all fields of activity, including agriculture. Engaged in the Southeastern Anatolia Regional Project, national programs for combating desertification and soil erosion, Turkey still maintains ecological agriculture in some remote areas of its territory. The present paper (which certainly emphasizes originality) presents the results of field investigations performed in Tezeren village, Ağrı Region. The main crops covering a total surface of 8,551.842 ha (the plots of the inhabitants varying between 0.5 and 1,391 ha) are barley, wheat, fescue, vetch, celery, sugar beet and clover. Crop rotation as well as the ratio between pasture lands and arable plots is made according to the agricultural experience accumulated during time; manure is used as a natural fertilizer. The region frequently confronts itself with drought, but, recently, a modern irrigation system became functional.

Key words: agriculture, traditional, ecology, region,Turkey

019 WATER QUALITY AND FISH FAUNA IN LAKEWOOD, ZAMBOANGA DEL SUR, PHILIPPINES: BASIS FOR LAKE ECOSYSTEM CONSERVATION

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ABSTRACT

The physico-chemical characteristics and fish fauna diversity of Lakewood were assessed as basis to understand the nature of the freshwater environment. The data obtained from the study serves as an aid to formulate policy in the conservation of this type of ecosystem. This investigation was a pioneering attempt undertaken in Lakewood. The freshwater characteristics that were investigated include vertical variations of temperature, dissolved oxygen profile, TDS, pH, Conductivity and Chlorophyll a at a varying level of depths; 1-2, 2-3, 3-5, and 5-10 meters from the water surface. The depth-integrated grab sampling method was used. Measurement of water quality properties were done in situ using appropriate probe/digital instruments except for the water samples for BOD and Chlor a which were brought to the laboratory for analyses. All fish species reportedly inhabited in the lake were collected as samples for species and taxonomic identification. The results of vertical measurements of water temperature ranged from 26.61 – 28.84 ^{0}C, the dissolved oxygen was observed between 5.96 – 7.79 mg.L^{-1}, the indicated TDS was 57.44 – 65.11 mg.L^{-1}, pH ranged from 7.90 - 8.84, conductivity ranged between 0.07 - 0.09 µS/cm, and the amount of chlor a ranged from 0.57 -2.31 mg.L$^{-1.}$ The recorded BOD ranged from 0.37 – 4.30 ml.L^{-1} which showed significant difference between stations. No spatial and temporal significant variations in the vertical measurements of the physico-chemical parameters have been observed. However, variations of chlor a amounts between sampling periods exhibit significant difference. There were 11 freshwater fish fauna that currently inhabiting in the lake. Three of these species belonged to Cyprinidae family, and the other eight species were under the families of Clariidae, Osphronemidae, Channidae, Anguillidae, Cichlidae, Hemiramphidae, Anabantidae and Gobiidae. One species under the Cyprinidae family, locally known as Porang is endemic in the lake. There were four shellfishes recorded which belonged to the families of Pomacea, Lymnaeidae and Corbiculidae and Viviparidae. This study was the first formal documentation of the baseline information on the water quality properties and fish fauna present in the lake which serve as the basis in the formulation of conservation policies for this body of water and identification of management strategies applicable in the locality and nearby communities.

Key words: conservation, fish fauna, Lakewood, lake ecosystem, water quality

020 MYCOTIC CONTAMINATION OF SWISS CHEESE IN MARKETS OF TIRANA CITY

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Abstract

Swiss cheese, referring nutritional values that it contains is one kind of cheese most sought after by consumers. For the composition that it has, especially good non seasoned cheese is predisposed to mold contamination. Because of this we focused on making a study on the testing of Swiss cheese produced in our country in traditional and industrial craft, traded in five main trading points of the city of Tirana, in order to determine the presence of mold and identification of pathogenic mold in this type of cheese. We analyzed 140 samples of non-seasoned and seasoned Swiss cheeses for the period of time July 2011 - November 2012. Results show that in 78 cases, or (55.8%) of them, the presence of mold resulted in rate $<10^4$ cfu/gr, in 38 cases, or 27.1% of their the presence of mold resulted in rate $<10^5$ cfu /gr acceptable level, and in 24 cases or 17.1% of mold presence resulted in rate $> 10^6$ cfu/gr which are considered potentially dangerous. Present mold which are identified in cheese sampleswere Aspergillus spp, Penicillium spp, Mucor, Fusarium. We tested 24 samples of Swiss cheese which are considered as samples with high potential risk for presence of mold, rate has been very high $> 10^6$ cfu/gr and for this we have made the identification of pathogenic mold. In 9 analyzed samples or 37.5% of them is found increased gender Aspergillus spp, in 7 samples or 29.1% of them is found Penicillium spp, in 6 samples was present Mucor gender and in 2 samples Fusarium gender. Genders of pathogenic mold referred Swiss cheese taken in our study were found more particularly in the areas No.1, No.3 and No.4 and in non- seasoned good cheese and produced in the traditional craft.

Key words: Molds, Swiss cheese, Aspergillus spp, Penicillium spp, Mucor and Fusarium.

021 Aluminum (Al) and Iron (Fe) - key elements in wetland sustenance

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ABSTRACT

Aluminum (Al) even though recognized as micronutrients, its metabolism interferes with cell divisions in root tips and lateral roots, increases cell wall rigidity, maintaining proper cellular redox state and various other biochemical, physiological and growth responses. Al is one of the most abundant elements in the earth's crust, and toxic for many plants when the concentration is greater than 2-3ppm with the soil pH<5.5. Iron (Fe), is equally an important element, whose toxicity poses constraint primarily on wetland plants grown on acidic soils that are rich in reducible iron. This review article encompasses all aspect of both Al and Fe in the anoxic biochemical processes that are common to wetland ecosystem. The impact of metal toxicity (Al and Fe) requires an understanding of the aspects related to Al, and Fe uptake, transport and distribution in wetland ecosystem. This paper provides an overview of the fact that the environmental risk associated with remobilization of metal contaminant and the recycling to the food chain, particularly by the infiltration into

ground water. The main aim of this review is to document the challenges, barriers and constraints facing wetlands due to population growth. As found that in today's World, technological advancement is at fast rate, it is necessary to reduce the global loss of wetland area to maximize the accrue benefit. While, the objective is to highlight the management tools to use to achieve maximum use, that is sustainable and ecological wetland ecosystem.

Key words: Aluminium (Al), Cyperus species, Iron (Fe), micronutrients, toxicity, wetland ecosystems, and wetland plants.

022 AIR POLLUTION IN ELBASAN

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ABSTRACT

Air Pollution in Elbasan is an issue concerning the environment and health. Air pollution derives not only from industry but also from the urban transport infrastructure damaged roads, burning of solid waste, the construction sector, the burning of propane butane gas for heating and cooking, cleaning existing mode squares, sidewalks and roads etc.Among the industrial factors some companies are mentioned Kurum International, former Darfo ACR today (ferrochromium), ECF, etc.. Monitoring is conducted for SO2, NO2, CO, CO2 and solid matter. Despite the potential improvements in emission rates, yet in areas such as. Chimney etc..The values of some of the indicators remain much higher than the allowed norms. Urban air monitoring is done through measurements at 3 points of the city and performed for LGP, PM10, SO2, NO2, ozone, and Pb. Measurements show that the values caused by urban air industries generally have a sort of decline, however, in general the values of PM10 inhaled dust remain several times higher than the allowed norms. Suspended particulate matter and the particular inhaled dust, are considered too dangerous for the health because being easily transported by the wind and atmospheric agents, they don't only reduce the viewership and increase the impurity in the building, but are deposited in the airways by damaging especially the lungs. Regarding the monitoring of contaminants in the air as a result of the uncontrolled burning of waste, there is little data. However it is known that this process emits high values of pollutants and should be entirely eliminated.

Keywords: air pollution, indicators, environment, health, Elbasan

023 EVALUATION OF RESOURCES FOR SUSTAINABLE DEVELOPMENT OF THE PRESPA AREA IN THE COUNTY OF KORÇA, ALBANIA

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ABSTRACT

Prespa, well-known as the area of Prespa Lake and the largest national park in Albania, having the same name, contains in itself important natural, cultural, material and spiritual values that make an area with real development abilities and promises. This area is part of Liqenas municipal territory of Korça region and is inhabited by a Macedonian minority full of rich traditions and customs and a high level of integration in Albanian society. The research evaluates the resources of this area through the analyses of the indicators of

sustainable development, environment, population, economic activity etc. Of high importance are presented concrete projects carried out by national and international organizations, especially the projects for the transformation of Prespa Park into a park with contemporary management and touristic offer. To fulfill the research, have been exploited written records, information provided by Liqenas municipal from interviews, surveys with area's officials, farmer and managers of projects. After the analysis of different problems, at the end of research will be given conclusions and recommendations in terms of policies and strategies that should be followed in the future for the sustainable development of Prespa area.

Key words: sustainable development, national park, cultural values, management

024 COMPETITIVE INTERACTION OF BASMATI AND NON-BASMATI RICE (ORYZA SATIVA L.) CULTIVERS UNDER NACL SALT AND AQUEOUS TESTA EXTRACTS OF CASHEW-NUT (ANACARDIUM OCCIDENTALE L.)

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ABSTRACT

Competitive interaction of basmati (cv. Kasturi) and non-basmati (cv. Pant Dhan 11) mixed culture of rice (Oryza sativa L.) in presence of aqueous extracts of testa of cashew-nut (*Anacardium occidentale* L.) under NaCl salinity during seedling stage was studied in laboratory conditions. Basmati and non-basmati seeds were sown at 0, 0.5, 1.0% (w/v) NaCl concentrations along with 2.5 and 5% aqueous testa extracts (TE=1.5gm/100mL) at 29±2°C under dark for 10 days. Results showed that, significant competitive interaction in mixed-culture of rice cultivars under salinity stress in presence of aqueous testa extracts. In 0.5% salinity+TE treatments of basmati/non-basmati mixed cultures, AS indicates sensitivity to germination in basmati and stimulation in non-basmati cultivars. SVI values showed mixed culture had positive impact on basmati and negative impact on non-basmati during early days of seedling emergence. RCI values for root length, seedling height under 1.0% (w/v) salinity+5% TE treatment showed competitive facilitation in basmati and competitive inhibition in non-basmati and for seedling dry weight competitive facilitation in both the cultivers. CR values suggest under 0.5% (w/v) NaCl+2.5% TE and 1.0% (w/v) NaCl+5% TE treatments basmati was better competitor for root length, seedling height and dry weight than non-basmati cultiver. RII showed competitive interaction for accumulating both shoot and root biomass. Root and shoot biomass increased under 0.5% (w/v) NaCl+TE and 0.5% NaCl + 5% TE respectively in basmati and decreased in non-basmati. Shoot biomass increased in 1.0% (w/v) NaCl + 5%TE in both the cultivars. Presence of allelochemical (TE), competitive ability of basmati improved under salinity stress.

Key words: cultiver, interaction, mixed, salinity, stress, testa,

025 CLEAN ENERGY: DIRECT ALCOHOL FUEL CELL CATALYSTS WITH CARBON SUPPORTED BINARY ANODE CATALYSTS

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ABSTRACT

The extensive use of fossil fuels also causes environmental pollution and global warming problems. Fuel cells are promising alternatives for solving energy and pollution problems [1]. Use of alcohols as fuel is getting popular due to easily stored and handled. Methanol and ethanol have been considered for use in DAFCs. The most common fuel is methanol. On the other hand, ethanol is also preferable fuel because of its non-toxicity, biological availability, and high specific energy. Platinum is the best known catalyst for alcohol electrooxidation reaction. Pt polycrystalline electrodes presents many different crystal faces carrying a different charge. Pt has a cubo-octahedral crystal structure. Pt is not a very good catalyst due to CO poisoning effect. Recent researches indicate that Pt based bi-metallic Pt-Pd [1], Pt-W [1], Pt-Re [2], Pt-Rh [3], Pt-Pb [4], Pt_3Te_x [5], Pt-Sb [6], Pt-CeO_2 [7], Pt-ZrO_2, Pt-MgO [8], e.t.c. catalysts have enhanced alcohol electro-oxidation activity. One reported that Pt-Ru and Pt-Sn catalysts were better than Pt-Pd and Pt-W catalysts for ethanol electro-oxidation reaction [1]. At present, Pt and Pt-M (M=Ag, Ca, Cd, Cs, Cu, Fe, Ir, Mg, Pd, Ru, Zr) bimetallic nanocatalysts were prepared by polyol method for hydrogen electrooxidation reaction. It was observed that Pt-Ru catalyst is the best catalyst for methanol electro-oxidation reaction. In order to explore the reaction mechanism, electrochemical impedance measurments were performed on Pt-Ru electro-catalyst. Results on these measurements will be presented.

Key words: Alcohol electrooxidation; Pt bimetallic catalysts; direct alcohol fuel cells.

026 A PHOTOCATALYTIC METHANOL OXIDATION STUDY OVER TiO2 FOR CLEAN ENVIRONMENT

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ABSTRACT

Direct Alcohol Fuel Cells (DAFC) are promising power sources for portable electronic devices because alcohols are readily available, relatively easy to store, transport, handle. Alcohols commonly have high energy densities and also do not require a reformer. Methanol and ethanol have been considered for use in DAFCs. The most common fuel is methanol. On the other hand, ethanol is also preferable fuel because of its non-toxicity, biological availability, and high specific energy. Platinum is the best known catalyst for alcohol electrooxidation reaction [1-8]. Several strategies have been explored in an attempt to improve the overall efficiency of DMFCs. For example, efforts have been made to minimize the use of Pt in the catalyst either by increasing the electrode surface area or by exploring alternative catalyst materials [1]. On the other hand, several groups have looked into ways of incorporating photocatalysts such as TiO_2 on the anode side of the DMFC to further improve device performance and reduce the amount of precious metals in the catalyst. Titanium dioxide (TiO_2) is a widely used as photo-catalyst because of its relative superior efficiency, stability, cheapness and non-toxicity. The electronic structure of a TiO_2 semiconductor plays an important role in photo-catalysis. In the present study, we performed a detailed methanol electro-oxidation kinetic study on Pt-TiO_2/C electro-catalysts. Results will be presented.

Keywords: photocatalysis, methanol electrooxidation, fuel cells

027 MESAPOROUS SILICA SBA-15 SUPPORTED Pt-Co-Pb CATALYSTS FOR ENVİRONMETALLY FRIENDLY ETHANOL FUEL CELLS

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ABSTRACT

The direct ethanol fuel cells (DEFC) are advantageous devices due to the easy transportation and storage of ethanol, reduced system weight, and high energy efficiency. Furthermore, ethanol is less toxic compared to methanol and produced in great quantity by fermentation of biomass. Platinum has been extensively investigated as the electro-catalyst for ethanol electro-oxidation [1-3]. Recent research on ethanol electrooxidation is centered on the development of appropriated catalysts. It has been reported that carbon supported Pt-Ru, Pt-Sn, and Pt-Co, and Pt-Pb catalysts of different compositions lower the onset of ethanol oxidation [10] . there is considerable amount of research reported in literature for different carbon supports such as multi walled CNTs, and single walled CNTs, carbon nanospheres. Mesaporous SBA 15 have high surface area, leading to high metal dispersion. SBA 15 support was prepared by sol gel method. Pt-Co and Pt-Pb catalysts were prepared by incipient wetness impregantion methaod. Futhermore, we investigated the effect of SBA15 as a support for DEFCS. Results indicated that by the addition of Co and Pb, the ethanol electro-oxidation increased. The results and kinetic study will be presented.

Keywords: Pt-Co catalyst, Pt-Pb catalyst, direct ethanol fuel cell, SBA-15

028 MORPHOLOGICAL DIFFERENCES FOR SOME QUANTITATIVE AND QUALITATIVE POTATO (Solanum tuberosum L) PARAMETERS GROWING IN KOSOVA

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ABSTRACT

Collection, inventory, characterization, conservation and utilization of potato genetic resources are necessary due to the risk of extinction. The potato plant (Solanum tuberosum L.) is a perennial herb, but in agriculture it is used as an annual crop, about 30 to 100 cm tall and is vegetatively propagated through tubers. Potato (Solanum tuberosum L.) is important in human food, food industry and agricultural cultivation due to cultivation area and production capacity per unit area. The aim of our research was the investigation of the influence of landraces in the quality of potato tubers in agro-ecological conditions of Pristina, and the formation of the chemical composition of surveyed potato landraces. Working method for this kind of work was based according to the standards. During vegetation were four irrigations. Planting of landraces was made during April, after harvests were done measurement and chemical analysis of tubers. The design of experimental plots (EP) was randomized complete block design (RCBD) with three replications. Distances between rows and plants were 70 x 30 cm, or expressed in number of plants per hectare was 47 500. Even though the landraces were planted and cultivated under same agro-ecological conditions showed different genetic variability for morphological parameters of tubers and chemical content, because they were with different origins. The Draw Matter (DM) was with variabile values which ranged from 23.85 till 15.80%. Also, for the chemical content values were significantly different for level of probability LSD= 0.01 and LSD=0.05.

Keywords: Potato, landraces, draw matter, chemical content.

029 GENETIC AGROBIODIVERSITY AT SOME LOCAL MAIZE (Zea mays l.) pOPULATIONS for QUALITATIVE TRAITS

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ABSTRACT

Maize, the American Indian word for corn, literally means "that which sustains life." After wheat and rice, it is the most important cereal grain in the world, providing nutrients for humans and animals. It also serves as a basic raw material for the production of starch, oil, protein, alcoholic beverages, food sweeteners, and fuel. Maize constitutes an important source of carbohydrates, protein, vitamin B, and minerals. Furthermore, it is an excellent source of carbohydrate and is complete in nutrients compared to other cereals. However, of the three major cereal grains (wheat, maize, and rice), maize has the lowest concentration of protein, calcium, and niacin. The aim of this research was the evaluation of food grain quality-related traits in a collection of Local maize populations (LMP's) of different origins collected in Kosova. A total 12 LMP's was evaluated for qualitative traits include; Protein Content (PC), Oil Content (OC), Cellulose Content (CC) and for mineral content include: Fe, Ca, Zn, Na and K. The experimental design was completely randomized block with three replicates (RCBD). The chemical analyses included protein content (PC), starch content (SC) and oil content (OC). The analyses were based on standard methods: PC was determined by the Kjeldahl, while OC was determined by extraction using Soxhlet method (using petroleum ether at boiling point 40-60 °C). Ash contents of each sample were determined by the dried of sample at 550 °C. The protein and oil contents ranged between 8.6 to 11.9 % and 3.1 to 4.71 % respectively. The cellulose content varied from 6.01 to 6.41 %. There were also big differences regarding phenotypic correlations. Variability in the presence and concentration of quality content in pepper LMP's can be a factor affecting the selection of maize for breeding programs.

Keywords: maize, populations, protein, oil, cellulose, mineral content.

030 MORPHOLOGICAL AND PHYSIOLOGICAL CHARACTERIZATION IN SOME LOCAL MAIZE (Zea mays L.) POPULATIONS GROWING IN KOSOVA

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ABSTRACT

In the maize breeding programs the local maize populations shows a particular interest, especially as useful sources for adapting capacities, physiological, agronomic and valuable quality traits. Genetic erosion and habitat destruction by modern agriculture has increased the importance of germplasm characterization of plant materials. Therefore, it is imperative to rationalize conservation and use of genetic resources to guide in the establishment of strategies that ensure the maintenance of genetic variability that is essential in plant breeding. World collections of maize comprise about 12,000 accessions that are represented in 256 races, of which about 30 are in the process of extermination. A morpho-physiological evaluation of main germplasm genepool represented by 12 local maize populations was achieved through a collected during the year 2012 in different localities in Kosova. Characterization of maize local populations was done in an appropriate experimental system based on morpho-physiological descriptors edited by the International Institute of International Plant Genetic Resources located in Rome (www.bioversityinternational.org). The experimental design was completely randomized block with three replicates (RCBD). The populations were grown during year 2012 at the Agricultural Research Farm (ARF) of University of Prishtina and were evaluated for plant height, ear height, Leaf area (LA), Leaf area index (LAI), Leaf area Ratio (LAR), Biological dry matter (BDM), ear elements, and grain Yield per ear. Significant amount of variability was observed among these populations for all the traits. The LMP's coded on number 11 attained maximum plant heights (129.83 cm) while LMP's -8 attained minimum plant height (79.16 cm). The ear height ranged from (86.44 cm) in LMP's

-11 to (41.33 cm) in LMP's-8. For LA the maximum values was characterized the LMP's -8 on average values 5402.35 cm^2 while on minimum (2269.560 cm^2) at LMP's-8. For higher GY (279.44 g) was determined LMP's-2, while with lower GY (137.77 g) is LMP;s-5. Diversity observed among the tested populations could be utilized in breeding programs for further manipulation and improvement of maize populations.

Keywords: maize, populations, yield, LA, LAI, LAR.

031 GLOBAL CLIMATE CHANGE IMPACTS AND ASSESİNG PUBLİC UNDERSTANDING OF GLOBAL WARMING

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ABSTRACT

Nowadays, world's energy need currently depends on the fossil fuels, such as coal, oil, and natural gas. The extraction and burning of these fossil fuels cause global warming. Global warming is the rise in the average temperature of Earth's atmosphere. The temperature rise will lead to a climate change, the rise of the ocean levels, acid rains etc. Hence, these factors emerges a global concern. Recently, resarchers concentrated on the alternative energy sources such as wind, solar, hydrothermal, nuclear, hydrogen energy, and fuel cells. These alternative energy sources are environmentally friendly energy sources and do not affect in a way to increase global warming. In the present study, our aim is to examine public understanding on global warming. Thus, we prepared questionaries and these questionaries were applied to a group of people to evaluate and to develop public understanding. Results will be presented.

Keywords: Global warming, environment, public understanding

032 THE ASSESMENT ON THE USE OF ENVIRONMENTALLY FRIENDLY CARS

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ABSTRACT

In recent years, there seems to be a lot of air pollution due to the exhaust gases of the cars. There are many campains that encourage people to use public transportation or environmentally friendly vehicles in order to reduce or keep stable the pollution. Therefore some researchers and manufacturers have realized this problem and environmentally friendly cars have been produced. An environmentally friendly car (green vehicle) harms the environment far less than an internal combustion engine vehicle which uses gasoline or diesel as fuel. Green vehicles operate with advanced technologies such as hybrid electric motors , plug in hybrid electric motors, battery electric motors, compressed air motors, hydrogen and fuel cell motors etc. Some cars even use biodiesel , ethanol fuel or gasohol. Instead of using petroleum based fuels , these green cars use electricity or natural gases which have almost no harm for the environment, and help to reduce the air pollution. Along with the reducing carbon emissions and greenhouse emissions, these green cars would reduce the dependence on the petroleum and therefore high fuel economy would be prevented. So by increasing the use of green vehicles, energy independence can be mostly achieved by reducing oil imports ,

air pollution can be prevented and green house gas emissions , therefore global warming, can be reduced immediately. The use of environmentally friendly cars is very important in terms of reducing green house gas emissions and decreasing global warming effect. Thus, in the present study, we studied on the use of environmentally friendly cars in the Konya City, Turkey. Results of risk evaluation will be presented.

Key words: risk, evaluation, environment, Green vehicle

033 KNOWLEDGE OF 18 TO 21 YEAR OLD ALBANIAN STUDENTS REGARDING THE HUMAN PAPILLOMAVIRUS (HPV) INFECTION AND ITS RELATIONSHIP TO CERVICAL CANCER

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ABSTRACT

The aim of our study was to evaluate knowledge of female student of 18 to 21 years old, about human papillomavirus (HPV) and its relationship to cervical cancer. We conducted a questionnaire survey of the students (N=419), aged 18 to 21 years, in Faculty of Natural Sciences, Tirana, Albania during December 2012-January 2013. Approximately half of students, 48.2%, thought that sexual activity is associated with cervical cancer. Only 35.6 % correctly identified HPV as the leading factor of cervical cancer. The risk factors, like, 'smoking', 'having multiple sex partners', 'genital warts', 'early onset of sexual intercourse', 'birth control pills' were recognized by 27.9%, 66.8%, 29.8%, 47.9% and 16.9%, respectively. The detection of cervical cancer with 'Pap test' had been heard by 54.2% of the students. 31.5% of the students had heard about protective vaccination and 65% of the students desired to have the vaccine. Although a third of these Albanian students had heard of HPV, they had limited knowledge about the virus and prevention strategies. Education is needed, particularly for those who are not yet sexually active and could benefit from receiving the HPV vaccination. Further research in Albanian students is needed to explain the variations in HPV knowledge to create appropriate health education programs.

Keywords: Risk factors, HPV, Cervical cancer, Albanian students, vaccine

034 ASSESSMENT OF THE SURFACE WATER QUALITY OF THE DRINI I BARDHE BASIN USING THE WATER QUALITY INDEX (WQI) METHOD

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ABSTRACT

The water quality index (WQI) method (Oram et al., 1970) was used to assess the quality of surface waters in Drini i Bardhe basin. The purpose of this paper was to analyze and present the results for the quality of surface waters in the river basin Drini i Bardhe based on the data for the period (2005-2011, KHMI 2012). The annual average values of nine physic-chemical parameters for each hydrometric station were taken into consideration for the calculation of the WQI. From the obtained results it is observed that the quality of surface waters in the Drini i Bardhe watershed range from 50 to 70. According to the WQI categorization the water quality of the Drini i Bardhe basin belongs to the middle class.

Keywords: Index, water quality, basin, surface water.

035 ANTHRACENE-SUBSTİTUTED THİOPHENE DERİVATİVES AND THEİR APPLİCATİONS

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ABSTRACT

Design and synthesis of novel thiophene based organic structures have gained considerable interest owing to their important optical and electrochemical properties [1]. Recent studies exhibit that conjugated heteroaromatics such as substituted thiophenes, terthiophenes, fullarene, carbazoles have mostly studied and used as the components of modern electronic and optoelectronic devices including organic thin film transistors (OTFTs), dye-sensitized solar cells (DSSC), organic light emitting diodes (OLEDs), organic solar cells (OSCs) [2]. In the present study, anthracene-substituted thiophene derivatives will be discussed for advantages. They could be a new class organic structures for solar cells applications to produce the clean energy from sun. Electrochemical properties of these anthracene-substituted thiophene derivatives will be presented.

Keywords: novel thiophene, organic structures, optical and electrochemical properties.

036 ANALYSIS OF TRACE METALS

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ABSTRACT

The pollution of water with toxic metals lead serious environmental problem and cause potential dangers to plants, animals, and human being. Governments have arranged environmental regulations to determine amount of heavy metals ion in drainage in order to protect the environment. However, conventional chemical methods used for the analysis of heavy metals in water require specialized techniques, long time and high cost [1]. Electrochemical methods like voltammetry can be used as simple, cheap and powerful techniques for measuring trace metals. Mercury based electrodes have long been used for voltammetric measurements with high sensitivity and reproducibility [2]. However, handling, storage, and disposal of mercury are toxic and difficult. Therefore, it is necessary to develop environmentally friendly electrode materials like gold, silver, graphite and carbon nanotube, etc. In this study, various trace metal detection methods and electrode materials were presented.

Keywords: analysis of trace metals, detection methods, voltammetry.

037 CARBON NANOTUBE-BASED ELECTRODES FOR ELECTROCHEMICAL MEASUREMENTS OF HEAVY METALS

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ABSTRACT

Carbon nanotubes (CNTs) are known as new adsorbents for the removal of heavy metals [1-3]. They have good chemical and structural properties better than conventional materials (graphite and activated carbon). CNT-based processes are also more efficient than most of the methods (liquid–liquid extraction, atomic-absorption spectroscopy, flame photometry), because they can enable rapid, sensitive, simple, and low-cost detection. The analysis process depends on adsorption of the metal on the CNT surface by applying an electrical potential or under open-circuit conditions, and then quantification. Application of different types of commercial multiwalled CNTs having different BET surface areas and their novel properties to the adsorption and detection of heavy metals was examined and discussed in this study. Results on these measurements will be presented.

Keywords: Carbon nanotubes, electrochemical detection, heavy metals

038 ELECTROCHEMICAL DETECTION OF METALS (CADMIUM, LEAD) AT CARBON ELECTRODES

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ABSTRACT

The environmental pollution with heavy metals causes global problems, giving threat to the humanity. Coal, natural gas, paper and textile industries are the main sources of heavy metal pollution. Cadmium, chromium, copper and lead are most known toxic ions to human and have adverse effects on metabolism [1]. Environmental regulations have been implemented to protect the humanity from heavy metal pollution [2]. Therefore, environmental monitoring of heavy metals has been attracted a ***great*** deal of ***attention*** worldwide. Electrochemical methods have been applied for trace level detection of heavy metal ions due to its simplicity, sensitivity, and high stability [2]. Stripping voltammetry (SV) has been widely used electrochemical technique for measuring trace metals. At present, we prepared carbon modified electrode to determine the lead and cadmium in water. Measurements were performed at different lead and cadmium concentration and at different pH of the working solution. Results indicated that there is an optimum pH and optimum concentration of lead and cadmium adsorption. These results will be presented.

Keywords: heavy metal detection, lead, cadmium, carbon, anodic stripping voltammetry

039 VOLTAMMETRIC DETECTION OF HEAVY METALS AT MULTI-WALLED CARBON NANOTUBE MODIFIED ELECTRODES

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ABSTRACT

Heavy metals may have negative effect on both human health and the environment. Therefore, it is important to monitor the heavy metals at various places (i.e. in natural water, on agricultural and industrial areas, etc.). Several methods (atomic absorption spectrometry, UV–vis spectroscopy, colorimetric analysis, ion

chromatography) have been employed for the determination of heavy metals [1]. However, these conventional methods are expensive and time consuming. Therefore, it is necessary to develop simple and cheap methods. Electrochemical techniques have some advantages such as simplicity, low-cost, sensitivity and high stability [2]. Stripping voltammetry (SV) has been widely used electrochemical technique for measuring trace metals. In this work, we develop carbon nanotube modified electrode to sensitively determine lead and cadmium in water. Some important operational parameters such as accumulation potential and accumulation time were optimized. Various experimental parameters, which influenced the response of MWCNTs/Nafion/GC to target metals, were optimized.

Keywords: CNTs, heavy metal detection, lead, and cadmium

040 MICROBIAL POLLUTION ASSESSMENT OF ALBANIAN LITTORAL WATERS IN OHRID LAKE

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ABSTRACT

Water is essential to life. Traditionally, the lake pollution has been extensively studied with regard to physical and chemical characteristics. However, lately microbiological quality of the lake has come under greater focus owing to deleterious effects of pollution on human health. In this article a general characterization of the most important bacterial diseases transmitted through water is presented, focusing on the biology and ecology of the causal agents and on the diseases' characteristics and their life cycles in the environment. With this intent, the paper presents pollution aspects of Lake Ohrid at Pogradec. Out of large number of microbial parameters linked with human health, some significant contaminating indicators, namely, total Coli form (MPN/100ml), Fecal coliform (MPN/100ml), Streptococcus feacalis (MPN/100ml) have been identified and measured.Eight sampling locations (bridge sites) were selected, three of them in Pogradec city area, (three different bands in each sampling locations) and total of samples sets were collected over a period of three months from June to September. The results taken by the analyses show that the bacterial pollution of the littoral waters of Lake Ohrid, surpasses the UNEP/WHO standards for the microbiological quality of bathing waters (100-1000 E.coli/100ml) in most of the sampling locations.

Key words: pollution, microbiological quality, total coliform, E. coli.

041 THE EFFECT OF FLORIBUNDA ROSE CULTIVARS 'AMBER QUEEN' IN URBAN LANDSCAPE DESIGN

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ABSTRACT

The purpose of our work was the study of characteristics of flowering stage, ornamental values and used Floribunda varieties of roses (Rosa hybrida L.), as integral components in landscape architecture and urban design in Kosovo. Roses, the "Queen of the Flowers" have been enjoyed for thousands of years. Cultivating

of roses dates back to at least Greek and Roman times, and many varieties are descendents from ancient garden plants in China, Persia or Turkey. Garden roses are predominantly hybrid roses that are grown as ornamental plants in private or public gardens. They are one of the most popular and widely cultivated groups of flowering plants, especially in temperate climates. While most garden roses are grown for their flowers, some are also valued for other reasons, such as having ornamental fruit, providing ground cover, or for hedging. Floribunda varieties of roses are a cross between Hybrid Teas and Polyantha roses. Flowers are produced in large clusters like Polyanthas but with bigger flowers. Plants are usually compact, 50-80 cm high, and can be upright or spreading.The growth period and flowering stage of the cultivar 'Amber Queen' were studied from May to November under Kosovo climate conditions. The experiment was conducted during 2011-2012. During the vegetation these parameters were measured: flowering period, length of flower stems, diameter of structural shoots, number of flowers, etc. Rose cultivar 'Amber Queen' has manifested high decorative values in urban landscapes under the Kosovo climate condition.

Key words: Floribunda roses, landscape, flowering period, garden plants.

042 DISTRIBUTION OF MEDICINAL AND AROMATIC PLANTS IN THE REGION OF SHKODRA AND THEIR BIODIVERSITY CONSERVATION PROBLEMS

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ABSTRACT

District of Shkodra is considered one of the most important parts of Albania due to the presence of wild and cultivated medicinal and aromatic plants. However, for many reasons these plant species are facing serious problems such as: a) genetic erosion, b) loss of the habitat, c) increased number of endangered plant species d) loss of yield, etc. The zone shows the great diversity of natural plants and great potential opportunities for cultivation of several plants (medicinal/aromatic), where the suitable conditions for cultivation are present. The present study has been carried out to assess the distribution of medicinal and aromatic plants at the district of Shkoder and to address the problems for maintaining their diversity. The method used for calculation of area in hectare was made regarding the botanist Brown-Blaquet. This method is used to survey the large area. Results showed that the interest for this sector is going to be higher, mainly for the cultivation of several plants such as , Salvia officinalis, Thymus sp, Lavandula etc. These species have high potentials in terms of cultivation and profits. The cultivation has great opportunity to be developed and on the other side to reduce the over collection on natural habitat of medicinal and aromatic plants. This study contributes not only for identification of problems related with conservation of diversity, but for further development of this sector too, which has great economic interests for the people which actually live in these areas.

Key words: medicinal and aromatic plants, biodiversity, habitat, genetic erosion, endangered plant species

043 THE IMPACT OF CONCENTRATES USED AS FOOD FOR POULTRY IN THE AIR QUALITY IN POULTRY OF THE KORCA REGION

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ABSTRACT

Concentrates are food for poultry and chicks used in poultry plants. The food prepared crushed. It contains: corn, wheat, soybean, vegetable oil, $Ca_3(PO_4)_2$, $CaCO_3$, NaCl, aminoacids and all kinds of vitamins. During preparation, concentrate passes a variety of processes such as: milling, mixing, distribution in broiler (with hands). These processes may contaminate the product which is a substrate suitable for the development of microorganisms. The study consists in determining general and pathogen microflora in concentrates. This product may affect in air microflora in poultry sectors and microflora of poultry products. Were counted a large number of mold on the Capek terrain and what was hazardous was the large number of E. coli microorganisms on Endo terrain. Mold that dominated were Penicillium, but were identified and Aspergillus mold. Measurements show that concentrates microflora affects in air quality and quality of poultry products.

Key words: Concentrates, microflora, pathogen microorganisms, selective terrain

044 SOME SYSTEMATICS AND ECOLOGICAL DATA FOR SEED BUGS (LYGAEIDAE HEMIPTERA) IN ECOSYSTEMS OF DURRESI

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ABSTRACT

Study of the ecological and systematical aspects for the families Lygaeidae in ecosystems Durresi Region is presented in that paper. The biological material was collected during the period of time 2010-2012. In our study, we determined 85 individuals for this family. The family Lygaeidae was presented by 12 generea and 16 species.The systematical analysis to the Lygaeidae resulted that the genera represented by the highest number of speies was Lygaeus by 3 species, and frecuency 18.75%. By analyzing the material the station with more species, is Shkozet, with 12 species or frequency 75.00%, while with less species, is Sukth with with 5 species or frequency 31.25%.

Key words: Hemiptera, Lygaeidae, ekosystems

045 CLASSIFICATION OF THE RADIOACTIVE WASTE IN KOSOVO

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ABSTRACT

Radioactive waste is any radioactive source or any object contaminated with radionuclide's, which is not foreseen for further use. This waste arises from a number of activities involving the use of radioactive material. The classification of the radioactive waste as general rule is based in their long term safe management. From the other part classification of the radioactive waste is necessary to provide a common base for development of the different aspects related with its conceptual and operational level, technical management, communication and other issues. The classification scheme is mainly based on safety considerations for the lifetime of the waste and can be applied for all waste management practices such as

segregation, treatment, conditioning, interim storage and final disposal. A conceptual illustration of the waste classification scheme we presented in figure, and shows the waste classes into which different types of sealed radioactive sources described in Table, the criteria for exempted radioactive materials are defined in IAEA Basic Safety Standards. The radioactive waste that is generated into mentioned practices varied in form, activity concentration and type of contamination as it is in type of generating action.

Key words: radioactive waste, treatment, radionuclide's, management etc.

046 RADIAL GROWTH RESPONSES OF ALEPPO PINE (PINUS HALEPENSIS MILL.) AND STONE PINE (P. PINEA L.) FORESTS TO CLIMATE VARIABILITY IN WESTERN ALBANIA

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ABSTRACT

Mediterranean forest growth is constrained by drought and high temperatures during summer. Our objective was to investigate the effect of climate on radial growth in two Mediterranean pines (P. halepensis and P. pinea) from western Albania. Forty healthy dominant pine trees were cored at breast height and their tree-ring width (TRW), earlywood (EW) and latewood (LW) were measured. In addition, we compared TRW chronologies of both pine species with those developed in other Mediterranean countries to figure out if their response to climate was site specific or not. Climate-growth relationship was investigated using bootstrap correlations, temporal stability and pointer year analysis. The radial growth of both pine species was influenced positively from the winter and spring precipitation of the current growing year. The favourable winter climate conditions induce an earlier and longer growing season for both pine species. Moreover, wet conditions in earlier autumn after summer drought have stimulated LW growth at both pine species. Temporal stability analysis showed that P. pinea growth was positively affected by temperatures (PET) over the period 1960-1984, but a more unstable growth pattern was noted for precipitation (water deficit) over two periods. In case of P. halepensis growth patterns were unstable with climate for both periods. The pointer's year analysis showed that pine's radial growth was controlled by spring and autumn drought associated with low spring and high summer temperatures. In addition, wet winter and spring conditions combined with warm winter temperatures favoured pine's growth. The investigation of the relationships between the local climate and the radial growth of P. halepensis and P. pinea trees in the Divjaka region could be the basis for a detailed and thorough research of conifer tree's growth under future climate projections in Mediterranean basin.

Key words: Pinus halepensis Mill, Pinus pinea L, radial growth, water deficit, PET.

047 SIGNIFICANCE OF SOKAL SCORE IN CHRONIC MYELOID LEUKEMIA PATIENTS TREATED WITH GLEEVEC IN CHRONIC PHASE

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ABSTRACT

Evaluation study of Imatinib mesylate responses in chronic phase of chronic myeloid leukemia and the significance of Sokal score was performed in Tirana at the Haematological Service and the Genetic Service in University Hospital Center ¨Mother Theresa'' on a sample of 86 CML patient's with average age at the time

of diagnosis 44 years old (range, 18-70 years old). This study was conducted from April 2010 to April 2012. Hematologic and cytogenetic responses were assessed according to defined criteria. At the end of the study, responses were overall analyzed according to Sokal score. (Baccarani, 2005). Complete hematologic responses were seen in 82% of patients while complete and major cytogenetic responses were observed in 56% and 70% of cases respectively. Responses were found to be higher in patients who had low Sokal score at the time of presentation. The results of our study show that Imatinib mesylate has a substantial activity in the chronic phase of CML. A low Sokal score predicts a higher hematologic as well as cytogenetic response in patients during chronic phase.

Key words: Imatinib mesylate, cytogenetic response, hematological response, Sokal score, chronic myeloid leukemia.

048 THE IMPACT OF IRRIGATION ON THE PERIODICITY OF OLIVE PRODUCTION (OLEA EUROPAEA L. SSP SATIVA)

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ABSTRACT

The Kaninjot cv olive is characterized for its production on a periodic basis. It has therefore been the object of study for influence of biological factors on this phenomenon. The experiment was carried out in two parcels with centennial trees (Vlorë), during five years. The experimental scheme (tree/repetition) includes ten trees with irrigation and ten trees without irrigation. Irrigation period: June 10, July 10, and August 10. Irrigation norm 2m³/tree/irrigation. The technology of homogeneous trees. Statistical analysis has confirmed the variance between treatments, for progressive vegetative growth, inflorescence and the dynamics of fruiting, the average fruit weight and percentage of oil within the fruit (fresh matter). Irrigation has resulted into a better performance of trees. The fruit productivity under water was 216%. (Control=100). According to the Scatterplot Matrix, Correlations by REML method, there is evidence of a strong relation between productivity-irrigation r^2=0.92, control-productivity r^2=0.31. According to the Dobersek-Urbank method, the constant of production was improved in the trees with irrigation CP=0.27, whereas in the trees without irrigation CP=0.73 and cv=36%. Irrigation has also increased tree vegetation cv=53.5%, the biological basis of inflorescence 54%, fruiting 0.53% or cv=34%, average fruit weight 0.56 g cv=18%. Irrigation hasn't increased the percentage of oil in the fruit, but has increased the total quantity of oil per tree due to the increase of productivity per tree. According to Diagnostics Cox-Snell Plot, analysis the effect of irrigation on the periodicity of production has resulted 36%. Control or trees without irrigation, resulted into weak performance for all the biological indicators. The improvement of the periodicity coefficient was due to the improvement of vegetative growth and inflorescence induction.

Key Words: cultivar; periodicity; olea europaea; inflorescence; productivity;

049 INTEGRATED WATER MANAGEMENT IN ARID AND SEMIARID COUNTRIES – EXPERIENCES OF GIZ IS AND DORNIER CONSULTING IN THE MENA REGION

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ABSTRACT

Renewable water resources are limited in arid and semiarid countries. The lack of surface waters and groundwater recharge makes the use of non-renewable groundwater resources inevitable. In many countries in the MENA Region (Middle East/North Africa), non-renewable groundwater is the major resource for both municipal and agricultural water demand. Integrated Management of non-renewable groundwater resources has to cope with the fact, that the resources are dwindling, and sustainability in terms of a balanced water budget cannot be achieved. Hence, focus must be set on the economic and social welfare resulting from the use of these limited resources. Long-term water management plans are needed to overcome economic inefficiencies within the water sector and to ensure a safe water supply for the present and future generations.
In the MENA region, the technical development and rapid population growth lead to an overexploitation of the non-renewable groundwater resources, mainly by agricultural users, resulting in water quality deterioration, local water shortage, and establishment of expensive long-distance water supply systems. Here, todays major challenges of Integrated Water Management are: (1) to mitigate the user conflict between municipal and agricultural users, (2) to protect the dwindling resources, and (3) to implement an economic view on the water sector. Facing these challenges ensures the best use of the non-renewable resources, turning them into economic and social welfare for the population.

Key words: water resources, water management, renewable,

050 SURVEY OF SOME RARE AND ENDANGERED PLANTS IN NORTH ALBANIA

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ABSTRACT

The distribution of some threatened and endemic taxa in north Albania based on field research and literature data is presented. The following taxa were analyzed; *Ranunculus hayekii* Doerfl, *Viola kosaninii* (Deg.) Hayek, *Ramonda serbica* Panc., *Geranium dalmaticum* (G. Beck) Rech, *Rhamnus intermedius* Steud. & Hochst, *Teucrium arduini* L. , *Petteria ramentacea* (Sieber) C. Presl. (Grill, Karth), *Asperula scutellaris* Vis., *Omalotheca pichleri* (Murb.) Holub., *Minuartia velenovski* (Rohlena) Hayek, *Micromeria parviflora* (Vis.) Reichenb.The taxonomic status, ecological features as well as the estimated IUCN threatened status is given. The study of the ecology and distribution in north Albania provides useful information for plant protection management in this region.

Key words: Endangered plants, data, IUCN.

051 INDOOR RADON LEVELS IN TIRANA SCHOOLS

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ABSTRACT

Radon is a naturally occurring radioactive gas; it is everywhere, soil, water, building materials. Indoor Radon is the main natural source of radiation creating about 50% of the human exposure from natural radiation (1.2mSv/year). Because it is chemically inert, most inhaled radon is rapidly exhaled, but the inhaled decay products readily deposit in the lung, where they irradiate sensitive cells in the airways, thereby enhancing the risk of lung cancer. The main purpose of this paper is to assess the exposure to radon concentration in a specific population or certain critical groups. For this reason, in this article, we have included the results of the indoor radon concentration of 60 schools in Tirana. The study was performed with passive detector gamma data, which were placed in the school environment for an exposure time of three months during the spring season. Detectors were placed mainly on the first floors of the schools and in some cases were placed in basement where radon levels exceed the limit value of 400 Bq/m^3 for old dwellings. Passive radon monitoring devices are based on alpha etched tracks detectors where counting is performed with digital microscope. The results of this study represent a variation of radon concentration, which gives rise to more detailed studies of the area's geological composition and construction materials.

Keywords: indoor radon concentration, environmental radioactivity, passive detectors

052 GIS MAPPING AND IDENTIFICATION OF NOISE AND AIR POLLUTED ZONES OF ALBANIA

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ABSTRACT

During the last two decades Albania has developed a contemporary concept of environmental protection, which can be evidenced through the various studies. In these years, measurements were carried out from State institutions, environmental organizations or private companies for the purpose of studying the environmental elements in different cities, among these the most effective were those of the Institute of Public Health. The latter are reported on a regular basis only in the format of statements and tables and never became known to the public.
With the development of the technologies, the identification of environmental problems and the transfer of this information to the public have become simpler and simpler. The use of graphic images for the information distribution is seen as one of the best and most effective ways of informing the public. For this purpose, through this article we will try to show how GIS software and digital mapping methods help to identify the polluted areas. To achieve this, environmental elements such as noise and air are taken into consideration, which affect resident's private lives. The identification of polluted areas represents a great help for the residents in the aspect of different decisions or assessments. While the interpretation and graphical presentation of the level of pollution in residential areas brings an easy understanding of the problem from a higher number of inhabitants. For this purpose the presentation of this paper will be accompanied with a series of digital maps, a GIS compilation of all contaminated areas of Albania.

Keywords: Environment, GIS Mapping, Noise Pollution, Air Pollution, Albania.

053 INFLUENCE OF ARTIFICIAL WATER RESERVOIRS IN THE FOOD HABITS AND DISTRIBUTION OF OTTERS (LUTRA LUTRA) ALONG THE DRINOS RIVER VALLEY

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ABSTRACT

The influence and importance of the water reservoirs located along the Drinos river valley in the otter (Lutra lutra) distribution and food habits has been studied during the period 2010-2011. The water reservoirs of Peshkëpi, Viroi, Mingul-Nokovë, Dhoksat, Dofti and Dritë were included in the study. All water reservoirs were surveyed in three diferent periods, in relation with river flow regime in the main Drinos river and/or their closest stream: maximum river flow, minimum river flow and complete draught period. Importance of the water reservoir for otters' food habits has been measured based on the marking intensity: number of sprainting points, and number of spraintings. The obtained results show strong relations of the otter marking intensity in the water reservoirs with the water regime in the main Drinos river and streams, as well as with specific environmental characterisitcs of each water reservoir and lake (size, distance from the closest river or stream, and vegetation coverage). During the maximum river flow period, the otter's marking intensity in all the water reservoirs was low, while during the minimum river flow period otter's marking intensity remarkablly increased (2 to 3 times). However, during the draught period, when streams and upper section of main Drinos river dried out, although the water level in the reservoirs was still high and food was abundant, no marking activity was observed in the reservoirs. Water regime and food abundance in the main Drinos river and streams were the main factors that determined otter' frequentation of water reservoirs, as well its distribution and food habits in the Drinos river valley.

Key words: water reservoirs, River Drino, otter, marking intensity, distristribution and food habits

054 THE CONTRIBUTION OF FORESTS IN EROSION PROTECTION AND SUSTAINABLE DEVELOPMENT

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ABSTRACT

Forests can be considered as a node in relation to ecosystem sustainability and protection of land. Cutting and the exploitation of the forest encounters led to the phenomenon of corrosion and sliding Soil to became embodied in an area considerably. Our recent century's environmental behavior is distinctly different from other European countries. The irony lies in the fact that two very important advantages such as geographical location and natural conditions are constantly turning disadvantages. Beautiful nature is revenge and coming back often threatening the phenomena of erosion, landslides and drowning. To curb the Phenomenon of erosion, farmers who use forest area make times Protection. But despite the fact that their work has more effect on ecosystem protection, yet there is no study which shows how much is the value of this contribution by farmers to protect forests in ecosystem compared with different types of vegetation. In this connection we micro basin of Ulza are built 48 sample completeness sloping land with 3 categories, in 6 different types of forest and degraded lands to test for 1 year, the material deposited for 1 year in a row after every fall rain. This process started in October and we have received the results of the first measurements. At the end of the monitoring we have to come up with a conclusion Regarding the contribution dry forest in curbing erosion and whether to assess or contribution you make people in the protection of the ecosystem.

Key words: forests, erosion protection, sustainable development, ecosystem

055 STATE OF ENVIRONMENT HOTSPOTS FROM PESTICIDES AND FERTILISERS SECTOR IN KOSOVO

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ABSTRACT

The main purpose of this study is to present the current situation and the level of the risks by uncontrolled use of pesticides and fertilizers in the Republic of Kosovo, the negative effects of their use for human health and environment.The term "hotspots" is now becoming a common definition in the field of environmental protection. Environmentalists usually use the term "hot-spot" when referring to the negative change, and environmental deterioration in a particular area, or to describe the contaminated areas that remained uncontrolled or unmonitored for a short or longer period of time, and that have harmful effects on the environment and humans. Environmental hot-spots were mainly created as a result of past industrial activities, caused by mining activities, unmanaged old landfills, stored chemicals, waste oils, expired pesticides, and so on. After the latest war, the agricultural sector is found in difficult development situation, with abandoned farms, dysfunctional public enterprises, and damaged infrastructure. Some of the buildings that were not destroyed were transformed in the storages of chemical waste and expired fertilizers. Data for preparation of the study were collected from site visits, meetings, and contacts with various governmental and non-governmental institutions, during the year, 2009-2011.These residues such as pesticides, herbicides, insecticides and fertilizers that were intended for use in agriculture, following the expiration of the use, were turned into unusable waste, and hazardous to the environment. Also, the premises where they are stored, and the environment around presents a contaminated area, which is considered an environmental hotspot.The premises where the agricultural waste is stored has an area of 0.04 ha. The infrastructure of this facility is old, and does not meet the criteria and standards for the safe storage of waste from agriculture.

Key words: Hotspots, Kosovo, Agriculture, pesticides, environment.

056 POROUS BIRNESSITES AND BUSERITES AS HEAVY METAL CATION TRAPS AND ENVIRONMENTAL ANTI-POLLUTION MEDIUM

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ABSTRACT

Microporous Na-birnessite-type manganese oxides were synthesized by oxidation of $Mn(OH)_2$ with $K_2S_2O_8$ in aqueous NaOH. Subsequent ion-exchange reactions in aqueous solutions of salts containing of divalent cations, such as Sr, Ba promoted their incorporation into the layered structural frameworks. The structural inclusion of these ions in combination with some hydration converted the as-prepared Na-Birnessites to the respective layered Buserites. The chemical composition and the surface structure of all these compounds were assessed using X-ray powder diffraction, nitrogen- and argon- sorptiometry. A good crystallinity was observed for Na-birnessites and Sr-buserites. The relative high level of noise in the diffraction pattern of Ba-buserites is related to the presence of nanocrystals in it. N_2 adsorption-desorption isotherms of all compounds resembled a IV-type isotherm, typical for porous materials. Their respective integral and differential pore distribution curves obtained N_2-sorptiometric data exhibited the presence of out-of-layers pores in the range 4-5 nm followed by mezo-pores with mean radius 10-20 nm. The inaccessibility of the inner layers by N_2 molecule in case of Na-birnessites, Sr- and Ba-buserites yielded an external B.E.T surface of 75.6, 49.2 and 93.6 m^2/g respectively. Further Ar-adsorption isotherms of Na-birnessites and Ba-buserites displayed high level of adsorption at low relative pressures ($P/P^0 < 0.005$) and considerable adsorption volumes of 14, 17

cm^3/g respectively corresponding to $P/P^0 = 0.05$. The presence of inner-layers micropores with mean diameter ranging from 5 to 7 Å confirmed by the differential pore distribution exhibited a B.E.T specific area dwelled in micropores of 76.2 m^2/g for Na-birnessites and 51.8 m^2/g for Ba-buserites. Na-birnessites and Sr-, Ba-buserites possess a strong ionic exchanging capacity and molecule adsorptive properties. Their composition in combination to their porous structure make them a "sink" for heavy metal cations such as Fe^{2+}, Fe^{3+}, Co^{2+}, Ni^{2+}, As^{3+}. Significant contribution of them in the retention of U, Cs and Sr radioisotopes and other trace elements unfolds their potential environmental anti-pollution medium for soil and subwater ecosystems.

Keywords: Na-birnessites, Sr-, Ba-buserites, two-dimensional layers, porous media, adsorption properties, heavy metal cation trap

057 APPLICATION OF SIMPLE SELF-MADE PHOTO-SENSORS FOR ENERGY SAVING IN CITY ILLUMINATION

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ABSTRACT
Our measurements focusing on the photo-sensorial properties of $In_5SS_{45}Cl$ revealed interesting results. Preliminary photo-sensorial measurements of single needle-shaped crystals fixed on gold pads structured in silicon chips revealed a significant increase of conductivity upon illumination. The application of three irradiance levels: 0.08 mW/cm^2; 0.20 mW/cm^2; 0.45 mW/cm^2 on the self-made single-needle sensors at a bias varying from -2 to 2 V exhibited a conductivity variation from 1.4×10^{-13} S to 4.9×10^{-11} S. The increase of the applied voltage range increased the photo-sensitivity of the sensors. On-off light switches upon the same irradiance levels were associated by reversible current jumps of 1.5, 2 and 2.5 orders of magnitude respectively. Later photo-sensorial measurements of double needle-shaped crystals fixed on cooper pads of PVC-chips, demonstrated a clear dependence of the photo-current from the white-light (5500 K) irradiation power and the applied bias. A current increase of up to 2.2 nA was recorded at a bias of 3 V. Consequent on-off switching for 8 levels of irradiation power (0.35 mW/cm^2 – 140 mW/cm^2) at a constant bias of 3 V showed significant photosensitivity even at very low irradiation power. The incorporation of these simple sensors to the city illumination system in combination to an appropriate current evaluator/modulator ensures a self-adjusting, area-dependent constant illumination over time and considerable amounts of electrical energy savings.
Keywords: Self-made photo-sensors, irradiance level, illumination system, energy saving

058 AIR DRIED HUMIDITY OF LUMBER IN OUTDOOR LOCATIONS IN ALBANIA

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ABSTRACT

This study is focused on giving useful information on equilibrium moisture content (EMC) of wood based on relative humidity and temperature data. Relative humidity and temperature data from about 30 main forestall and wood industries location, was available from the Institute of Meteorology in Tirana, Most of the relative humidity and temperature data are based on at least 30 years of observation. After the calculation of the means for monthly temperature and relative humidity are calculated the respective EMC. The EMC values for every month of the year, for every chosen location, give important information on air drying of lumber and the final humidity of wood products used in outside locations.

Keywords: Equilibrium moisture content, lumber, air drying

059 EFFECT OF GROWTH RING ON BENDING STRENGTH IN BEECH (FAGUS SYLVATICA L)

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ABSTRACT

The beech wood (Fagus sylvatica L) is the most widespread deciduous wood in our forests. It is one of the most widely spread materials not only in the Wood processing Industry but also in construction, chemistry and paper industry. This study focuses on the effect of the growth rings on the mechanical properties of beech and more specifically on the static bending. The tests were carried out in the Wood study laboratory in the Faculty of Forest Sciences. The samples 240, in sizes 2x2x32 were prepared, following the UNI ISO standard 31-33 prerequisites, which were classified according to the number of rings in the transversal section and according to the angle formed by the force direction with the annual growth ring in the transversal section. After carrying out the tests in the static bending, it resulted that the maximum tension value was represented by the samples where the direction of the growth rings is the same with the force direction of a mean value of 144N/mm^2. This value diminishes by 4% for the group of samples whose force direction and growth rings form an angle of 0-45 degrees and by 7% for the samples whose force direction and growth rings form an angle of 45 degrees. It is notised that acording to the number of the annual rings in the transversal section the maximum tension is present in the samples that have a small number of rings in the transversal section (4-5 rings) a value which is 3% higher than the group of samples that have 6-7 rings in the transversal section and 10% higher than the group of samples which have 8- 11 rings in the transversal section .

Key words: beech, bending strength, growth ring, transversal section

060 INDOOR RADON LEVELS IN PRIMARY SCHOOLS IN VLORA, ALBANIA

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ABSTRACT

Indoor radon concentrations of the present study were performed in primary schools of the prefecture of Vlora in south of Albania using passive radon detectors (type CR-39). 25 indoor radon detectors were placed at the ground floor of primary schools in the study area. The radon detectors after three months exposure were sent to the Laboratory of Centre of Applied Nuclear Physics, Tirana. Radon detectors were chemically etched and then the tracks were counted by a track counting system. Indoor radon levels in all cases were below action level 400Bq/m^3. Radon concentrations were in the range 30-250 Bq/m^3 and followed a normal distribution.

Key words: radon levels, primary schools, passive detectors,

061 THE EXTRACTION OF AMINO ACIDS FROM SOYBEAN IN ORDER TO BE USED AS CORROSION INHIBITOR

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Abstract

The corrosion is an extremely broad and serious issue. In particular, the problem of corrosion of metal surfaces in contact with various corrosive environments such as gas, electrolyte solutions and solvents is well known. The need exists for a corrosion inhibitor which is relatively non-toxic, has a high degree of efficacy and is cost competitive. Some organic compounds have shown inhibitor properties to protect the metals against the corrosion. The recent researches show that amino acids may be used as corrosion inhibitors. The corrosion inhibition behavior of some amino acids compounds, as L-cysteine, L-tryptophan, L-histidine and L-serine, on mild steel surface in acidic solution were studied electrochemically by some methods. Some of these amino acids are founded at soybeans and can be extracted from them. The amino acids to soybean are the components of proteins. There are some methods for extraction of amino acids from soybeans. The acid-wash process has the obvious advantage of using a non-flammable, non-explosive, non-toxic and inexpensive solvent: water. This process is based on the pH-dependence of solubility of soybean protein, that exhibit minimum solubility at pH 4.2-4.5 (isoelectric region). It's possible to extract the sugars, without solubilizing the majority of proteins using, as solvent, water to which HCl acid has been added to keep pH at the isoelectric region. First the proteins of soybean were defatted by treated them with hexane and ethanol in ratio of 1:2:4 (w/w). In order to define its chemical structure, the product of extraction was analyzed with infrared (IR) and nuclear magnetic resonance (NMR) spectroscopy.

Keywords: extraction, soybean, amino acids, corrosion inhibitor.

062 DATA ON THE PALYNOMORPHOLOGICAL CHARACTERISTICS OF FIVE PLANTS OF COMPOSITAE FAMILY IN THE REGION OF ELBASAN, ALBANIA

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ABSTRACT

Palynomorphological characteristics of the five plants of Compositae Family: Arctium lappa, Solidago virgaurea, Cichorium intybus, Senecio vulgaris and Leontopodium alpinum (the latter is very rare plant (status R) according to the data of IUCN), pollens of which were collected in fresh condition to the habitat of Great Site of the mountain Polis, were provided for the first time in the Albania's palynological literature by this article.This article aims to assess and highlight the existance of differences of some morphological features of the pollen grains of this family, regardless common particulars which distiguish the pollens of Compositae plants such as: the aperture three furrows three pores and the echinate exine. Regular pollen grains of three plants: Senecio, Leontopodium and Solidago were 3-zonocolporate, oblate spheroidal to prolate spheroidal and could be classified as Senecio type based to the data of the palynological literature. Three sharp tip furrows with smooth membrane and three pores with circular frames which due to thickening of intine in this zone, come out like cupoles, were identified to the pollen grains of the plants of gender: Senecio, Solidago and Leontopodium. Based on the results obtained by this study, it was concluded that the exine sculpture of the pollen grains of the five plants was echinate which vary from fenestrate at Cichorium, to echinate accompained by small round at the pollens of Arctium, echinae accompained by small granules at the pollens of Senecio, echinae accompained by hools in the base of every spine at the pollens of Solidago, and echinae accompained by microspinules at Leontopodium alpinum.

Keywords: Arctium lappa, Solidago virgaurea, Cichorium intybus, Senecio vulgaris, Leontopodium alpinum, plant.

063 PALYNOLOGICAL STUDY OF POLLEN GRAINS OF ARTEMISIA VULGARIS PLANT

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Abstract

This article represents for the first time in the Albania's palynological literature information about data on the palynological characteristics of pollen grains of Artemisia vulgaris plant, Compositae family. The results obtained are shown compared with the palynomorphological features of Artemisia absinthium and Artemisia caerulescens taken by the albanian literature. Pollen grains of the plant of Artemisia vulgaris were collected in fresh condition to the Elbasan area. By making comparison among the main palynological characteristics of pollen grains of these plants showed that there are similarities in terms of pollen grains shape to three plants, the number of furrows and pores but at the same time there are also changes related to the size of pollen grains, furrows and diameter of pores. These changes are a consequence of the ecological factors and pollen grains processing method. Based on the results obtained by this study, by comparison made between pollen grains studied species showed that larger proportions of pollen grains in length, width and the diameter of the pores represent those of Artemisia vulgaris. Width of furrows in pollen grains of Artemisia vulgaris is thinner than the other two plants. The layer of exina at Artemisia vulgaris is thinner than Artemisia caerulescens and slightly thicker than Artemisia absinthium. The sculptures of exina of pollen grains of the three types is accompained by small granules but especially, the pollen grains of Artemisia vulgaris are accompained by microspinules.

Keywords: palynological study, pollen, grains, artemisia vulgaris, plant

064 PTH-CALCIUM-VITAMIN D- CURVE IN PRIMARY AND SECONDARY HYPERPARATHYROIDISM

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ABSTRACT

Patients with hyperparathyroidism may be asymptomatic and therefore may not be identified until the pathology of secondary hyperparathyroidism has begun. The purpose of this study was to evaluate the PTH-Calcium-Vitamin D curve in primary and secondary hyperparathyroidism patients, the calcium mediated PTH secretion and the severity of hyperparathyroidism in these patients. 129 patients diagnosed with primary hyperparathyroidism and 83 patients with secondary hyperparathyroidism at the University Hospital "Mother Theresa " in Tirana from 2009 to 2011 were enrolled in this study. All the details of clinical and biochemical of these patients were recorded. PTH and serum concentration of 25(OH) D were measured by Electrochemiluminescence immunoassay, while total Ca were measured by turbidimetry method on Coobas 6000 system. 73 patients from the group with primary hyperparathyroidism have resulted with hypercalcemia, 9 patients with hypocalcaemia and 47 normocalcemic, while 51 dialysis patients from the group with secondary hyperparathyroidism, have resulted with hypocalcemia, 4 patients have resulted hypercalcemic and 28 normocalcemic. PTH level is highly raised, 328.23 pg/ml (mean) in primary hyperparathyroidism and 825 mg/l in secondary hyperparathyroidism. Serum 25 OH D concentration were 10-20 ng/ml in 25% , 20-30

ng/ml in 34% and more than 30 ng/ml in 3% of the patients with primary hyperparathyroidism, while in the group with secondary hyperparathyroidism it fells to lower than 5ng/ml in 38% of cases. According to this study, very high levels of PTH lead to high level of serum calcium in primary hyperparathyroidism and hypocalcaemia in most of secondary hyperparathyroidism cases and high level of active vitamin D deficiency, in both, primary and secondary hyperparathyroidism.

Key words: PTH, Hyperparathyroidism, hypercalcemia, hypophosphatemia, vitamin D.

065 THE RESTORATION OF THE DANUBE FLOODPLAIN,A FUNDAMENTAL ECOLOGICAL ISSUE FOR ROMANIA

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ABSTRACT

The Danube, the length of which is of 2,826 kilometers, represents the most important European river. Its hydrographical basin covers a surface of 817,000 square kilometers, which is half of Europe surface. During history, the structure and the natural functions of the river were part of the social-economic development of Europe. Under these circumstances, one may say that the Danube was subject to an intense anthropization. One of its fundamental structural-functional parts is represented by its floodplain. Along the river course, the dimensions of the floodplain increase from spring to the river mouth.
The development of industry, agriculture and human settlements triggered a reduction or even the disappearance of the floodplain. This process got obvious first along its upper and middle course, and later on, namely in the 20th century, it affected especially the lower sector.
Presently, there can be found only small sectors of the former floodplain (tens of hectares) in Serbia and Hungary. The largest surface (640,000 hectares) of the floodplain was on the Romanian territory, between Km 900 and 28. Through the construction of a 1,157 kilometer long dyke along the river, the lakes and temporary or permanent marshes covering a surface of about 400,000 hectares were drained and large surfaces of the floodplain were transformed into agricultural fields. The entire flora and fauna structure specific to the floodplain, thousands of species of aquatic and terrestrial plants and animals disappeared.
The transformation of the floodplain along the lower sector of the Danube into an agricultural zone proved to be inefficient from the economic point of view. Under these circumstances, a major issue, for Romania, is the restoration of the floodplain. The restoration process represents a complex action both technically and economically, but we consider that the ecological restoration of the Danube floodplain represents an action of general, European interest.

Keywords: the Danube's floodplain, the ecological restoration, Romania.

066 RESEARCH ON THE INFECTION OF THE CARP CYPRINUS CARPIO (CYPRINIDAE) WITH THE ACANTHOCEPHALUS POMPHORHYNCHUS LAEVIS (ACANTHOCEPHALA, PALAEACANTHOCEPHALA)

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Abstract

Pomphorhynchus laevis (MULER, 1776) is a parasite acanthocephalan worm that, in its adult age, inhabits fish intestines. It is most common in barbel (Barbus barbus), cisco (Leuciscus cephalus), pope (Acerina cernua), wels (Silurus glanis) and gudgeon (Gobio gobio), (BAUER, 1953; DİNULESCU, 1942; DUMİTRİU, 1937; RĂDULESCU, 1948). It affects a wide range of host fish in both natural and aquaculture environments, causing the illness called acanthocephalosis (MUNTEANU & BOGATU, 2008; COJOCARU, 2006). The present study was based on material collected in the Preajba valley hydrographic basin in June 2012. The study site included small dam lakes on the Preajba stream, a small tributary of the Jiu river. Gatherings were made in order to get the ichthyologic material needed for further parasitological studies. The 31 specimens caught belong to 3 species: crucian, carp, and perch, respectively, most of them belonging to the first species. The parasite was placed on a Petri dish, examined as a native preparation slide - cover glass with an Olympus SZX7 stereo microscope, but also with an optical microscope Olimpus BX 43, with 2x, 10x and ocular WHN 10x/22 objectives. The parasite was identified in the anterior portion of the intestine and visceral peritoneum of the liver of only one specimen of carp, a quiet species eating vegetable matter, which is assumed not to have any relation with intermediary hosts, but which, under certain circumstances, may however change its feeding habits (ROMAN, 1955). After examination and identification, the parasites were preserved in a plastic contained in formaldehyde 4%.

Keywords: Preajba stream, infection, acanthocephalus, Cyprinus carpio**,** Pomphorhynchus laevis.

067 IMPACT TO THE ENVIRONMENTATAL POLLUTION OF THE HEAVY METALS, PRESENT TO THE FOSSIL FUELS, CONSUMED IN ALBANIA

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ABSTRACT

Transport sector in Albania after '90 faced high trends of intensification. If in 1990 the road transport vehicles' numbers was 22601, in 1993, this number increased to 128 thousand. In 2010 this number was 419893 vehicles.In 2010 the Index No vehicles/1000 inhabitants was 121/1000, and the structure of 294 thousand cars, 7 thousand vans and 83.4 thousand trucks. Increase of the sector was reflected directly to the hydrocarbons market intensification. In the last decade this market, and especially that of the vehicles, was characterized by a gradient of growth of 15-20% per annum. Vehicles with diesel engine contribute by over 86% of the hydrocarbons market, while the gasoline engine vehicles figures were 13%.Transport sector results to be as one of main sources to the environmental pollution, not only to gas emissions: CO, CO_2, SO_2, NO_x, tar, volatile hydrocarbons etc; but also to heavy metal presence in air and especially to urban and overpopulated areas. This study aims to present and analyze the heavy metals presence of light fraction to the oil and mainly: gasoline and diesel; evaluates potentially risks to the contamination of air to urban sites and finally proposals to diminishing of their content to the fossil fuels.

Key word: heavy metals, Pb, gasoline, diesel, environmental pollution

068 THE ROLE OF FOREST ROADS FOR MANY PURPOSES

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ABSTRACT

The common problems of the forestry sector to the political and practical level are environmental concerns regarding the development and use of forests. Integral and pragmatic solutions must be found that are better adapted to the socio-economic and environmental conditions of the country. Road density should be limited depending on the technical, economic and environmental. Construction, maintenance and use of forest roads should not cause erosion, obstruct the flow of water streams, add avalanches, cause non-balance field that did not affect stability that flows have a negative effect on the watershed. Forest roads should be planned by professional engineer's forest, geographer, and construction of forest roads should be supervised by professional foresters and geographers. In this paper we have done research of the role of forest roads for many purposes. Nowadays, forest roads are not just for the use of forests, but also for various other purposes including tourism and recreation: transport of people, vehicles and goods, availability of natural resources, sustainable management of natural resources, sustainable use timber and non-timber products of the forest, protection of sensitive areas, habitat, biotopes, maintenance of forest areas, forest protection and access in the event of a disaster (fire, accident, etc..), jobs for local people, working places for local Population, job security, access in case of accidents, for the purposes of recreation and tourism, hunting and fishing opportunities, access to research, education and awareness raising for specific reasons, spatial arrangement and orientation.

Keywords: forest roads, sustainable management of natural resources-forestry, eco-tourism and recreation.

069 PATHOLOGICAL CHANGES IN LIVER MORPHOLOGY OF CRUCIAN CARP (CARASSIUS CARASSIUS) FROM AN AQUACULTURE FARM IN CËRRIKU TOWN

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ABSTRACT

Carassius carassius is a freshwater fish that normally dwell in the bottom layer of the waters of lakes, rivers and reservoirs. It is a sedentary fish that naturally feeds on zoo benthos and plant components and thanks to its sensitivity to the changes in surrounding medium is an ideal animal for indication of the health of freshwater aquatic ecosystems. It is susceptible for the teleostei fish liver to be disturbed by numerous, both toxic and metabolic factors. Liver pieces of 20 individuals collected from an aquaculture farm in Cërriku town (Elbasan, Albania), in June 2011, were excised and processed for standard histopathological analysis. The result revealed pathological changes in liver tissue including heterogeneity of tissue parenchyma, irregular hepatocyte cells and their nuclei. Massive vacuolization of liver cells and their nuclei, necrotic foci, karyolysis and karyopicnosis were also observed. Our findings imply that histopathological evaluation can be used effectively as biomarkers of fish physiological stress response and health status.

Key words: histopathology, liver, necrosis, Carassius carassius, physiological stress response, fish health

070 CLASTOGENIC EFFECTS OF TIRANA LAKE WATER ON PELOPHYLAX KURTMUELLERI RED BLOOD CELLS

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ABSTRACT

Clastrogenic effects of home wastes and agricultural contaminants of Tirana Lake located south of Tirana city, were investigated during the year 2011, in pheripheral erythrocytes of Pelophyllax kurtmuelleri. Examination of blood smears showed that the formation of micronuclei is significantly higher ($P<0.01$) compared to the control group (Dajti National Park). Other erythrocyte abnormalities were observed such as: cell deformity, chromatin condensation, cytoplasm vacuolization and signs of red blood cell apoptosis. Higher MN frequency in the specimens of Pelophyllax kurtmuelleri from polluted areas indicates that urban and agricultural pollution increase the risk of clastogenic effects on the peripheral red blood cells of frogs and may has similar effects on the human population around the lake.

Key word: Clastogenic effect, Pelophylax kurtmuelleri, environmental genotoxicity, micronucleus test, cytoplasm vacuolization, red blood cell apoptosis, Tirana Lake, peripheral erythrocytes.

071 CURRENT AND POTENTIAL USES OF PLANT RESOURCES IN THE MIDDLE FLOW OF SHKUMBINI RIVER BASIN

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Abstract

Although middle flow of Shkumbini river basin's territory is small, its flora is characterized by a considerable species richness, of higher plants - about 700 - 750 - is greater than that in much larger area. This is due to its geographical position, geological factors, relief, climate and hydrology. The total number of plants of economic importance in area is larger than many might suspect. The presence of about 174 medicinal and aromatic plants, such as mints (Mentha), Thyme (Thymus), marjoram (Origanum), or chives and leek (Allium), improves the biodiversity values in this area and also play an important role in everyday life in this region, because of the locality consume as phytomedicines, herbal teas etc. Also very rich, about 234 plant species is the assemblage of well-known plants for honey producing by bees. 42 plant species have forage values, distinguished for their nutritional values and as food for the animals. A great importance represents the recognition of 59, harmful and toxic plants in preventing and avoiding the damages which may be caused by them. This great diversity constitutes a rich reservoir and is of great importance not only from the scientific, but also from the economic point of view.

Key words: plants of economic importance, medicinal and aromatic plants, honey plants, forage plants, harmful and toxic plants.

072 PRELIMINARY DATA ON EXTRACTION, ISOLATION AND CHEMICAL ANALYSIS OF TUBERS OF GYMNOSPERMUM ALTAICUM SUBSP. SCIPETARUM WITH DICHLORMETHAN

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ABSTRACT

Recently Albanian biologist discovered a new plant unknown before in Albania. The DNA analysis showed that this is a sub species of Gymnospermum Altaicum. The name Scipetarum was proposed but is not registered yet. In our laboratory we were interested in screening its chemical composition. We were interested in the chemical composition of this plant for another reason: for the local population this was known as a poisoning plant for animals. In this paper we will present the preliminary results on the analysis of the tubers of this plant. The dried tubers were extracted with different extraction methods, including extraction with organic solvents and subcritical CO2. Organic solvents with increasing polarity, such as hexane, DCM and methanol, were used under Soxhlet and reflux conditions. The extractions were further purified with flash column chromatography on silica. Each fraction from the chromatography was analyzed by TLC and volatile components were further characterized with GC-MS. Dichloromethane seems to be a good solvent for extracting compounds of different nature. Chromatography column enables a certain separation facilitating the work of identifying peaks which in crude chromatograms results so difficult because of overlapping of compounds with the same RT.

Key words: extraction, isolation, chemical analysis, tubers, gymnospermum altaicum, dichlormethan

073 PRELIMINARY CONSIDERATIONS ON THE RAPALOCEROFAUNA (INSECTA: LEPIDOPTERA) OF SHARR MOUNTAIN AND ITS SURROUNDINGS (MACEDONIA)

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ABSTRACT

A study on the Ropalocerofauna of Sharr mountain and its surroundings (Pollog and Mavrove) has been carried out during the year 2011-2012, from March to November. About 3000 specimens that belong to 5 families and 133 species and subspecies have been collected in 18 sampling stations. For each sampling station data on the vegetation type, altitude, latitude and longitude have been recorded. In this paper species composition, distribution, (horizontal and vertical), habitat preference and conservation status are presented and discussed.

Key words: Ropalocerofauna, species composition, distribution, Sharr mountain, Macedonia

074 MONITORING OF SULPHUR CONTENT IN DIESEL IMPORTED IN ALBANIA AND ENVIRONMENTAL IMPACT, DURING THE PERIOD 2007 – 2012

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ABSTRACT

Development of road transport over the last decade has been accompanied by a growing trend to derivative

fuel imports, gasoline and diesel, at 70 - 75%. This development among others, is associated with negative impacts on environmental pollution especially in urban areas at the rate of 25 -75% of the total pollution. Sulphur oxide (SOx) emissions from diesel vehicles are one of the main pollutants of urban air. The sulfur level in diesel fuel ranges from below 10 ppm to above 10,000 ppm. The diesel imported during this period is 2 244 thousand tons. In these conditions, continuous monitoring of sulfur content in diesel takes a special significance to improve its quality standards. In developing countries improvements to standards on the control of sulphur content in diesel fuel actually is in focus. In our country, a significant improvement of laws mark the adoption of Decision 147, dated 21.03.2007, in which the Sulphur content to imported diesel was limited at 350 mg/kg for the period from 1 January 2009 and 10 mg/kg for the period from 1 January 2011. The aim of this study is monitoring of the sulfur content in diesel import during the period 2007-2012, the environmental effects in urban areas and the impact of legal restrictions undertaken in the country to reduce the sulphur level to transportation fuels.

Keywords: Diesel, environnemental impact, sulfur content, standard, pollution.

075 POPULATION STRUCTURE OF ORNITOFAUNA IN THE DAJTI MOUNTAIN, ALBANIA

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ABSTRACT

A study on the population structure of Ornitofauna in the Dajti mountain has been carried out during the year 2012. Birds community of all three phytoclimatic zones (Mediterranean shrubs, Oak and Beech forests) have been investigated. Species richnes, comunity composition and distribution according to habitat types (aquatic, shrubs, shrubs/forest, forest, rocks/cliff, urban), and phenological types (resident, wintering, summer visitors, and migratory), as well as species of special conservation and recreation interest are presented. Ornitofauna of the Dajti mountain is composed of 131 species, belonging to 36 families and 13 orders. 76 species (58%) are resident, 37 species (28%) summer visitors, 13 species (10%) are wintering and 5 species (4%) are migratory. 18 species (13.7%) of birds in the Dajti mountain are considered threatened, while 34 bird species are of special recreation values.

Key words: Bird comminity, population structure, distribution, habitat preference, Dajti mountain

076 MORPHOLOGICAL CHARACTERS OF GENTIANA LUTEA L. (GREAT YELLOW GENTIAN) AND DISTRIBUTION AT DIBRA REGION

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ABSTRACT

Gentiana lutea L. is widespread in some regions of the country and has a high interest as medicinal plant.This plant is used for several purposes due to it composition of glycoside, sucrose and gencanine alkaloid. Natural products and their chemical composition at the Albanian medicine/aromatic plants is needed to know first the distribution of Gentiana lutea L. not only in the study site but also hole parts of Albania

which they have Great Yellow Gentian at their landscape. It is noted that in some cases in different areas there are different forms of the plants that are not identical in terms of morphological features such as the size of leaves, floral color or height of the plant. It this context this plant should to be studied in terms of changes that these forms may be present in the content of different chemical substances.On the other side, this study is focused on the distribution of Great Yellow Gentian at Dibra region. From the study is defined that Gentiana lutea L. is distributed mainly at Communes such as: Melan (Rabdisht village), Sohodoll (vranje village), Selishte, Tomin (Zimur village), Lure, Kala e Dodes etc.

Key words: medicinal and aromatic plants, alkaloid, morphological character , morphological feature

077 PHYSICO-CHEMICAL QUALITY ASSESSMENT OF THE DRINKING WATER IN THE WINTER SEASON IN TETOVA

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ABSTRACT

Water is the most essential product that is consumed by humans, which must be prevented from deterioration in quality. The quality of drinking water becomes even more important as water borne diseases spread through water. For this purpose, we assess the quality of drinking water in the city of Tetovo with some physico-chemical parameters, which have a significant role in determining the potability of drinking water. The obtained results were compared with Macedonian standards as well as with those set by the WHO and the EU. In this research, parameters such as turbidity, EC, TRAE, TDS, COD, TOC, DOC, nitrates and chlorides were found to be within the permissible limits, while temperature, pH and residual chlorine in some cases were found to be below the recommended limit. Finally, the Drinking Water Quality Index (DWQI) developed by Canadian Council of Ministers of the Environment for fifteen sample points is calculated. It has been found that drinking water in the 2011 winter season was of a Good category (average value of DWQI = 90.25) and suitable for drinking. We recommend that the relevant municipal authorities make regular and proper amount disinfection of drinking water, as there is no compromise that can be made when it comes to the drinking water.

Keywords: drinking water quality, DWQI, physico-chemical parameters, public health.

078 SOME PALEOPALYNOLOGICAL DATA ABOUT THE PRESENCE OF FORAMINIFERA IN ELBASAN REGION

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ABSTRACT

Elbasan city is one of the biggest cities of Albania which is situated in the middle of Albania state. Many different biological studies have been realized in Elbasan area these two last decades. This study provides some paleopalynological data about the presence of Foraminifera representatives during Quaternary period in the area where is situated Elbasan city.The goal of this paper is to present the correlation between the depth

and dispersion of Foraminifera on different periods of time. For this purpose we took some samples from various layers of soil, starting from the surface to five meters depth. A soil sample is obtained by acetolysis, which entails heating the soil sample with a mixture of one part concentrated sulphuric acid and nine parts acetic anhydride.Palynological data for these Foraminifera representatives will presented for the first time in this scientific international activity, since it is a recent study conducted at the end of last year. According to the analyses of these samples we found out several interesting data that showed clearly the correlation between the depth and number of Foraminifera. Comparing these data we found out that, the dispersion level of Foraminifera is different from the bottom near to the surface.

Key words: Paleopalynological, Quaternary period, acetolysis, soil, Foraminifera.

079 IMPACT OF FAT CONTENT ON MILK COAGULATION PROPERTIES

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ABSTRACT

Previous studies shows that coagulation properties of milk were indicated from content of protein, casein and fat as well as from genetically factors, lactation period, growth conditions, seasonal factors ect. The aim of this study was to investigate the influences of composition of milk, especially fat content on coagulation properties, with regard to the market demand for good quality and safety dairy products. Was investigated some breeds of cow, sheep and goat, raised in home conditions, in Tirana and Devolli regions from February to Aprill 2013. Milk samples were analyzed for physical and chemical properties (density, acidity, content of casein, protein, fat, lactose and non fat solids) as well as coagulation parameters such as R (clotting time in minutes), curd firmness measured in volt after 20 minutes (A20) or 30 minutes (A30) and the rate of firming K20 (in minutes) for bulk raw milk and skimed milk. The results showed that the content of fat have no significant affect on clotting time of cows, sheep and goat's milk samples. Firmness values A20 and A30 of skim milk resulted two times lower than those of bulk raw milk. Regarding to rate firmness (K20) the values resulted two times higher for skim milk compared to raw milk.

Keyword: fat content, milk coagulation time, curd firmness, rate of curd firming, optigraph.

080 MONITORING OF QUALITY PARAMETERS FOR GASOLINE AND DIESEL FUEL MARKETED IN ALBANIA AND THEIR ENVIRONMENTAL IMPACT

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ABSTRACT

The transport sector is one of the major nodes of economic development. After 2000 in Albania this sector has seen a growing development which is directly reflected in the development of hydrocarbons, especially vehicle fuels market that characterized by a gradient increase in the values of 15-20% for year. In our country as in all developing countries, the major health and environmental problem is air pollution and increased consumption of petroleum products highlights the environmental pollution caused by CO_2 emissions, gas, NOx, SOx, CO, Pb, soot and unburned hydrocarbons. Since the amount of these pollutants in atmosphere

depend on, inter alia, from the quality of fuels used, special importance has taken control of fuel quality parameters, with a focus on monitoring the content of sulfur and heavy metals such as Pb which are and determining environmental indicators. The purpose of this paper is to present quality diesel hydrocarbon market situation for the city of Tirana for the period of the first six months of 2011, monitoring of Pb content in gasoline imported and consumed in the country for the period 2005 to 2010, environmental impact relevant, as well as their compliance with the Albanian standards and those of the European countries.

Key words: Transport sector, environmental impact, fuels, SO_2, lead, legislation.

081 EVALUATION OF THE WASTEWATER QUALITY OF POGRADEC CITY BEFORE ENTERING OHRID LAKE BASED ON SOME PHYSICO-CHEMICAL AND BACTEROLOGICAL PARAMETERS

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ABSTRACT

The big demographic changes that have happened these two last decades in the area around Ohrid Lake are followed by the increase of the inhabitant's number and the different kind of pollution levels particularly in the Albanian littoral. The discharge of the wastewater of Pogradec city into the lake without treatment was the main cause of the high coliform pollution level until 2009. The wastewater treatment plant of Pogradec city started to function partially four years ago (2009). It is situated around 5 km far from Pogradec City. The goal of this paper is to evaluate the quality of the wastewater of Pogradec city before entering Ohrid Lake after its treatment. In order to achieve that, some physico-chemical and bacteriological analyses were carried out in 2011 and 2013. Some data about diluted oxygen, conductivity, temperature, pH and total coliforms are presented in this paper. The comparison of these data with international standards shows that some of them are comparable, but some others are higher.

Key words: Ohrid Lake, Albanian littoral, coliforms pollution, wastewater treatment plant, conductivity, wastewater quality.

082 IMPACT OF SPECIES CHARACTERISTICS IN THE ROUGHNESS OF WOOD SURFACE

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ABSTRACT

The roughness of the surface during the wood cutting in woodworking machines depends on a series of factors related to the machining conditions as cutting conditions, cutting geometry, feed direction, cutting tools/instruments parameters and related to the species characteristics as nature, density and moisture. The study involves five species with different wood density namely White Fir (Abies alba Mill), Aleppo Pine (Pinus halepensis Mill), European Beech (Fagus sylvatica L.), Walnut (Juglans regia L.) and White Oak (Quercus petraea Liebl), with the purpose of studying the impacts of species characteristics mainly density on the surface roughness. Moisture content of the specimens was hold constant by 10% for all species and the surface roughness measurements were performed with a contact stylus profilometer (Mitutoyo SJ-201P), where the length of measurement is 25 mm. The roughness parameter, maximum peak-to-valley height (Ry),

was considered to evaluate the surface characteristics of the wood samples. From the test results that Ry parameter values for the high density species as beech and oak are 12% lower than for the other species of lower density. Changes during the tests in the cutting regime related to the rotation speed and feed speed and for the same chip thickness have an impact on the surface roughness but there are no significant differencies in the surface roughness values between the tested species.

Keywords: surface roughness, wood density, cutting regime

083 IMPACT OF POLLUTION FROM KOSOVA'S POWER PLANT IN OBILIQ ON HISTOPATHOLOGICAL CHANGES IN ALBUMEN GLAND OF THE LOCAL POPULATION OF GARDEN SNAIL (Helix pomatia L.)

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ABSTRACT

The possible effects of toxic constituents derived from the combustion of coal in the Power Plants of Kosovo in Obiliq on histopathological changes in albumen gland of vineyard snail (Helix pomatia L) were studied. The examined microscopic preparations show significant degenerative changes in the snail's albumen gland taken in contaminated region compared with the control group (taken in the village Gaçkë, Ferizaj). The albumen gland of snails of the contaminated region (around power plants) indicate an altered morphology, reduced in size and with a dark color, while in the histopathological term could be seen picnotic and atypical nuclei of secretory acinar cells, acinuses destruction with cell necrobiosis, dilatation of interstitial zone, cytoplasm vacuolization of acinar and centrilobular cells, elongation of cell nuclei as well as decrease of galactogen granules compared with similar observations in the control snails. Histologjical microscopic preparations' were done according to the Švob method while observation's results were performed at the Institute of Pathology within Faculty of Medicine at the University of Prishtina. It was concluded that the pollution from Kosova's power plant, its toxic constituents respectively may affect negatively the populations of vineyard snail (Helix pomatia L.) in pathological and histopathological term. Therefore, the species Helix pomatia L. may be a good model for evaluation of negative effect of pollution from Kosovo's power plant and other sources of pollution.

Key words: Helix pomatia L., albumen gland, histopathological, degenerative changes, acinuses

084 RADON AND RESPIRATORY PARAMETERS OF SOME SECONDARY SCHOOL STUDENTS IN PRIZREN – KOSOVO

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ABSTRACT

The objective of this investigation was the relationship between radon concentration level from indoor areas (classrooms) in some secondary schools of Prizren municipality and eventual consequences of ionizing radiation in the respiratory parameters of secondary school students (N=50, males and females, age 13–15).The measurement of radon concentration in indoor area of classrooms from different floors was made with alpha stimulating method using portable apparatus PRM-145 and the CR-39 detector of trace that was developed in the "Josef Stefan" Institute in Ljubljana. In the indoor air of classrooms that are located on the basement, the annual average radon concentration (222Rn) varies from 335 – 485 Bq/m3, whereas in the classrooms of other floors between 11–28 Bq/m3. Respiratory parameters were measured by the use of the method of Pulmonary Function Test (Student Spirometer, Harvard apparatus). Results of the investigation show that compared with the same age group students who study in classrooms with low radon concentration; the students of classrooms with high level of radon concentration show the decreased values of respiratory parameters (tidal volume, vital capacity). The most pronounced changes of these respiratory parameters are emphasized in male students compared to female students.

Key words: Radon, spirometer, vital capacity, tidal volume, ionizing radiation

085 POLICIES FOR LESSENING CLIMATE CHANGE IN AND FROM THE FORESTRY SECTOR IN KOSOVO

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ABSTRACT

After Kosovo's declaration of independence, on February 2008, its Government commenced to consider among other environmental problems, climate change as a priority and started to allocate funds for environmental issues that are directly related to climate change. The legislation is also harmonizing with the expanding European environmental legislation dealing with climate change, stimulated by the will to European integration, as well as to contradict considerable amounts of carbon dioxide and other greenhouse gases (GHG) released in present time into atmosphere. Kosovo is not a signatory party to the Kyoto Protocol under the UNFCCC Convention, and it has a relatively small territory and population. Hence, one might say that it is not obliged to take any action against climate. Nevertheless, Kosovo is giving its contribution to the abatement of climate change. One of the main areas of this contribution is forestry sector. In this paper, carbon removal potential through accumulation/emission reduction activities in forestry, constituting a compelling portfolio to diminution has been considered. Accordingly, institutional conditions, forest policy framework and supportive measures for reducing the greenhouse gas and carbon dioxide (CO_2) emissions and removals through accumulation/emission reduction have been analyzed. A climate protection strategy, as part of the national program for the forestry sector would play an important role to the diminution of gases responsible for climate change.

Keywords: climate change policy, forest management, mitigation potential, institutional framework

086 BIO-MORPHOLOGICAL CHARACTERIZATION OF THE TABLE GRAPE CULTIVAR "CARDINAL" IN KOPLIK, MALËSIA E MADHE, ALBANIA

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ABSTRACT

"Cardinal" is one of the most sprout table grape cultivar in the North-western and Central part of Albania. Study was conducted in three consecutive years, 2010-2012, in Koplik, Malësia e Madhe, 180 m above the sea level, in a 12 years old vineyard. For evaluation of the main bio-morphological characteristics the IPGRI Descriptors of Grapevine was used. Form of the new shoot tip of "Cardinal" is half-open, with anthocianic coloration, with densely prostrate hairs. The upper surface colour of new leaf is green with bronze spots. Flower type is hermaphrodite, and the first florescence appears at the 4-5th nodes. Mature leaf size is medium (129.9 mm), leaf shape is pentangular, shape of the lateral teeth is concave in both sides, shape of the base sinus is half-open, shape of the upper lateral sinus is closed, and the depth of the upper lateral sinus is 43.15 mm. Bunch weight is medium (550 g) and bunch density is medium. "Cardinal" has large-sized spherical deep red to violet berry with soft colourless pulp, berries are uniform. Grape yield is 237 kv/ha^{-1} (21.5 kg/plant), grape must content is 71 ml/100 g fresh grape, sugar content is low (15.1%), total acidity is medium (6.3 g/l). The time of bud break is medium, while the number of inflorescences for fruit-bearing offshoot is 1.8. The annual vegetative growth is 226 cm. "Cardinal" leaves are susceptible to Plasmopara viticola, berries appear a relatively high resistance to Plasmopara viticola, and high resistance to Uncinula necator and Botrytis cynerea.

Key words: bio-morphological characteristics, "Cardinal", cultivar, high production rate, table grape.

087 CONCENTRATION OF RADON AND THORON IN ENVIRONMENT OF SOME LOCATIONS IN INDOOR AIR IN PRIZREN, KOSOVO

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Abstract

Radioactive noble gas radon (^{222}Rn) originates from α-transformation of radium (^{226}Ra) in the ^{238}U natural decay chain in minerals. There are three other radon isotopes that have a half-life of over an hour: ^{211}Rn, ^{210}Rn and ^{224}Rn. The ^{220}Rn isotope is a natural decay product of the most stable thorium isotope (^{232}Th), and is commonly referred to as thoron (^{220}Rn or Tn). Our measurements of radon (^{222}Rn) and thoron (^{220}Rn) were done in indoor air of 15 homes and 7 public buildings in Prizren city - Republic of Kosovo. The measurements were done in January 2011 by exposing Rn–Tn discriminative etched track detectors. The following ranges of the activity concentration were obtained for public buildings: 94–530 Bq m^{-3} for C_{Rn}, 19–230 Bq m^{-3} for C_{Tn}. In homes, the C_{Rn} range was 12–374 Bq m^{-3} and C_{Tn} 10 - 29 Bq m^{-3}. From our results the C_{Rn} and C_{Tn} values in some buildings and houses exceeds the limit of allowed values and concentration must be checked with other methods in future.

Key words: radon, thoron, activity, dose, environment.

088 COMPARISON OF BIOMASS PRODUCTIVITY IN TWO DIFFERENT PLATATIONS OF FAST GROWT SPECIES.

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ABSTRACT

The increasing demand for energetic resources, in concomitance to the negative impacts of green house effect, lead to major attention to the woody biomass, as one of the potential energetic sources. One important way of biomass generation, are the fast growth and brief turns species plantations (2-5 years), characterized by high density and productivity, combined with advanced mechanisms for sowing and harvesting. The study aims to verify different growth variations of two fast growth species (poplar and robinia) in different conditions. Height and diameter growth analysis reflected good continuity in both agricultural and abandoned lands. Xylo-energetic analysis evidenced decreasing robinia wood density and basic density, passing from base to the top of the plant, contrary to poplar. Wood calorific power is higher then bark one. The results connotes that this species usage could be of interest for biomass production.

Key words: basic density, biomass, calorific power, density, growth, humidity percentage, mean weight.

089 NEW UTILIZATIN TECHNOLOGIES OF THE BEECH FORESTS IN ALBANIA

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ABSTRACT

Forests in our country are a very important component for the environment, considering the fact that they cover more then 1 031 000 ha or 36% of total Albania surface. 47% of the total timber volume comes from the utilization of beech forests. In our country beech forests are located in steep and very steep terrain. Taking into account the above facts silviculture and utilization study of these forests is of great interest to identify different conservation and development technologies. Is very important for the future the evaluation of new utilization technologies in the context of a sustainable forestry and silviculture considering the experience we have had in the past has not been very generous. This study has compared different utilization methodologies of beech forest in Albania and Italy. Has also been of interest to evaluate the productivity of various working subphases to identify the weak points of utilization works in Albania and the possibility of their improvement. This study aimed also the study of the actual infrastructure of Albanian beech forest which is very defective and needs maintenance.

Key words: beech forest, utilization, real productivity, potential productivity, gross working hours, net working hours.

090 OPTIMIZING PRODUCTION PROCESSES ACCORDING TO CLEANER PRODUCTION PRINCIPLES LEADS TO BETTER ENVIRONMENTAL AND ECONOMIC PERFORMANCE

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ABSTRACT

Cleaner production as a preventive pollution strategy aims at waste and emission's minimization, as well as at energy consumption, in order to achieve better environmental and economic performance. The present study is undertaken in a company (ALDKRIS srl, Tirana) producing non-alcoholic beverages (carbonated or not) with focus on increasing efficiency of electric power use, so lowering energy consumption, leading to lesser production costs. By analyzing different production steps of low energy efficiency and implementing a set of cleaner production measures it was possible to minimize power losses and consequently to reduce production unit costs.

Key words: cleaner production, pollution, strategy, emission

091 RANGELAND IMPROVEMENT METHODS IN ARID AREAS OF EASTERN MOROCCO

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ABSTRACT

Rangelands are the most important feed sources for sheep and goats in the Eastern Morocco. This study aimed to investigate the effect of two improvement treatments on pasture production in Eastern Morocco. This study was conducted in pasture areas (M'Brek El Ibil) exclusively used by sheep herds. We used three treatments: open grazing, protection from grazing, shrub plantation (Atriplex nummularia). The vegetation parameters (consumable biomass and plant cover) were measured during three periods of the year. According to the results, the consumable biomass and the plant cover were significantly different ($P < 0.05$) according to the applied treatment and the period of measurement. The consumable biomass was 814 KgDM/ha, 463 KgDM/ha and 41KgDM/ha respectively in shrub plantation, protected and open grazing. The average vegetation cover was 34%, 47% and 18%, respectively. Rangeland improvement methods, Plantation of Atriplex nummularia and protection from grazing, increased the consumable biomass and plant cover of pasture areas. These methods are necessary to insure sustainability of pastoral resources.

Keywords: Rangeland, improvement methods, consumable biomass, cover, arid, Eastern Morocco.

092 IMPACT OF FOREST ECOSYSTEM PROTECTION AS A FACTOR IN SUSTAINABLE DEVELOPMENT

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ABSTRACT

Forests can be considered as a link between ecosystem stability and protection. Cutting and exploitation of

forests in some areas has brought the phenomenon of soil erosion and degradation of the territory. In the case of Albania, these negative phenomena emerged and were consolidated progressively in the last 20 years different from the positive experience of European countries who applied for forest protection policies accordingly and land ecosystems. In this study is targeted for study analysis of sample plots which are managed according to traditional use of forests that have gone under the ownership of local government units and those that are managed by the state. Analyst of this study will be conducted monitoring of certain test surfaces, to see how much is to increase the forest that is managed by a farmer as compared to forest of state managed from in some sample plots in the region of Diber. This analysis will serve us to see how community contributes to the protection of the forest and realize sustainable development of the forest, bringing sustainable development in these areas and soil protection from erosion.

Key words: Erosion, Sustainable development, Ecosystem, Protection

093 DETERMINE THE COMPOSITION OF WASTE IN PRIZREN AND PRISTINA

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ABSTRACT

This paper presents and discusses the data obtained for waste in household container, household markets, grass and wood, plastic containers and housewives market, paper, housewives, containers and market, Rubber and Leather housewives. The type of delivered samples are six: 1.Kitchen wastes, 2.Papers, 3.Textiles, 4.Grass and wood, 5.Plastic, 6.Rubber and leather. The overall purpose of this study was to enhance understanding of the current knowledge of the composition of municipal waste, and to inform the needs for further research and detail how these needs may be met. When collecting data of any type it is important to keep in mind the intended use of the information being collected. Some of the uses for waste data are to: identify options for diversion from landfill;plan for waste management; develop appropriate and practical policy at a local and national level; evaluate the potential risks of waste disposal; measure progress that has been made in waste minimisation. Samples are analyzed in these parameters: Humidity, Combustible substances, Non-combustible substances(inorganic material) (organic material OM), Organic Carbon and Nitrogen using international standards ISO 6496:1999, EN ISO 5983-2005 , A.O.A.C 17th end 2000 Official Method 941.12 Ash of Spices and Article TOC NCEA-C- 1282 EMASC-001 April 2002 (Nelson and Sommers, 1996). Obtained result for six type of samples are presented in table form for analyzed indicator and show normally value except one sample that had lower value of organic material due to the presence of metallic parts connected (sealed) with plastic

Key words: waste, composition**,** parameters, combustible substances

094 STUDY OF COLORUING ,AROMATIC STRENGTH AND BITTERNESS OF SAFFRON CULTIVATED IN KOSOVO

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ABSTRACT

Ideally,planting of saffron in new areas is a key resolving question of farmers which this article is a contribution to obtain information necessary for the quality of saffron in Kosovo, and the aim of the work was to determine to which category belongs the saffron. Crops of saffron, which so far has been very little known in our country, has been largely cultivated by many Kosovo farmers , Kosovo is one of the countries that produces very high quality saffron. Saffron evaluated through laboratory setting 1% absorption crocin (color) at 440 nm, picrocrocin (taste) at 257 nm, and safranal-(flavor) at 330 nm. These parameters of saffron produced for the first time in Kosovo are determined by spectrophotometers method by aqueous solution of 0.005%. Same samples were sent to laboratories in Maroco, France for comparative analysis. Grading the quality of saffron is made with international standards, in four categories (I, II, III and IV) on the basis of 1% of the color absorption values in three wavelengths (ISO3632-2) and acid- insoluble ash (ISO 930). Results obtained in two laboratories IBK-Kosovo and in Maroco showed that all the analyzed samples belong to the first category and that Kosovo is an appropriate place for the cultivation of this spice.

Keywords: Saffron, spectrophotometer

095 EFFECTIVENESS OF SEVERAL FUNGICIDES FOR THE CONTROL OF WHEAT DISEASES IN ALBANIA

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ABSTRACT

Different climatic conditions of our country influence the development of several parasites on wheat crops and where a great important place is occupied by leaf air-fungus diseases. There are *B. graminis, Septoria sp, Puccinia recondita, Fusarium sp* the most spread diseases that attack wheat crops in Durres Albania conditions. One of the methods used against these parasites is still the chemical method, using the fungicides. Chemical control of the principal leaf air fungicide diseases that attack wheat crops was the scope of this study. For this purpose, a comparative experimental study was carried out to test the efficacy of certain fungicides against these fungus diseases. Seven commercial fungicides arranged in four replications of a randomized block design: Amistar (Quadris), Tilt 25EC, Defender, Vari (Horizon), Frumidor, Sportak and Falcon were tested and compared with testimonial (not treated variant) in the Durres experimental field , during 2010-2011. The results of this study confirmed that there were significantly differences between control and other treated variants in reference to the effect of each fungicide. All fungicides tested reduced satisfactorily the parasite infection and damages on wheat production. Falcon, Horizon, Frumidor and Quadris showed generally better effectiveness than the other fungicides tested.

Keywords: wheat, cultivar, fungicides, foliage diseases.

096 REAL-TIME PRECISE SPRAYING ROBOT FOR WEED CONTROL

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ABSTRACT

Weeds cause a decrease in quality, quantity and the growth of cultivated plants during their competion with water, nutrients and light. Chemical method is the most commonly used method in controlling the weeds in agriculture. However, the pesticides used in chemical struggle should be used carefully and least loss should be considered because it has anegative affect on human and nature also the there is a rise in production. In this study, a precise spraying robot having a disinfection unit, control unit, a computer and camera was designed and made with the purpose of detecting and disinfecting weeds existent in interrows in a sugar beet field. Through this robot, weeds in interrows were detected according to their colour and then disinfecting liquid (diluted ink) was applied on them. Weeds in interrows were detected through image processing techniques. Sugar beet (Beta vulgaris) and such frequently found weeds in sugar beet fields as lamb's quarters (Chenopodium album), prickly lettuce (Lactuca serriola), musk thistle (Carduus nutans), and cockspur grass (echinochloa crus-galli) were photographed in the field. These photographs were printed out and covered with plastics so that photos of sugar beet and weeds used in tests were obtained. In this study, in an implementation carried out with a sensitive disinfecting robot, when compared to conventional pulverizing methods there was a saving in the amount of the applied disinfecting liquid by %53.96. In this way, since the system is to detect weeds and implement disinfection not throughout the whole field but only on the weeds, human, animal and environmental health will be able to be preserved and disinfection costs will be reduced

Key words: chemical weed control, agricultural automation, precision agriculture, image processing

097 THE INFLUENCE OF THE ECOLOGICAL CONDITIONS ON THE HEMATOLOGIC PROFILE OF AUTOCHTHONOUS SHEEP

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Abstract

The purpose of this study is to determine the number of erythrocytes, hemoglobin, leukocytes and the normal leukocyte formula of autochthonous sheep. The sheep were divided in 4 groups according to age: 0-1, 1-2, 2-3 and over 3 years. For each group, the blood of 10 sheep was analyzed. Hematological tests were carried out in 3 seasons: summer, autumn, winter. The results obtained showed that the season of the year influences on the hematologic profile of the sheep. The reduction of red blood cells and hemoglobin in the season of autumn and winter is noticeable. While the number of erythrocytes and leukocytes in the blood, depending on the age, is not a significant difference. The normal values of hematological indices differ from those of other authors. This is explained by the specific ecological conditions in which the autochthonous sheep is raised.

Keywords: sheep, ecological condition, erythrocyte, leukocyte, leukocyte formula, hemoglobin

098 THE EFFECT OF DIFFERENT ENVIRONMENTAL FACTORS ON THE LEUKOCYTE FORMULA OF THE BOVINE

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ABSTRACT

The data on the number of leukocytes and the leukocyte formula are being used extensively all over the fields of medicine to determine the diagnosis or the performance of the pathological process in an organism. The purpose of this study is to determine the number of leukocytes and the normal leukocyte formula in two

different bovine breeds, in two different climatic zones (lowland and highland). Cows of the breed Holstein and Jersey were divided in groups, according to their age. The achieved results showed that the average number of leukocytes per 1 μl of blood was higher in the cows of the breed Holstein, for all the age groups, compared to the cows of the breed Jersey. As the animals grew older the number of leukocytes reduced. The number of lymphocytes, which comprise the highest percentage of the leukocyte formula decreases while growing old. Lymphocytes are in a higher percentage in the cows of Jersey breed. The number of neutrophils is higher in the cows of the breed Holstein. It has been noticed that their number increases as the animals grow older. Even the number of eosinophils increases while growing old. Basophils and monocytes comprise a low percentage in the leukocyte formula and do not represent significant changes with the age changes.

Keywords: cow, environmental factor, climatic zone, age, breed, leukocyte formula

099 ENVIRONMENTAL ASPECTS IN THE ECOSYSTEM OF LAKE SHKODRA

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ABSTRACT

The protection of water resources and their quality is a worrisome problem faced today. In the analysis of the environmental situation of Lake Shkodra, we have taken into consideration the long-term water regime changes, which have caused changes in the original natural habitat. Interventions in the Lake Shkodra water discharges, especially in the Drin River, are the main reasons for the high water level fluctuations. These fluctuations cause a situation of instability and frequent changes of habitats. Eutrophication is a phenomenon that plagues the surface waters of the lake. Eutrophication of surface waters in some areas has increased nitrates in the ground around the lake due to agricultural development and penetration of pesticides in sediments of the lake waters. There exist conflicting data on the content of toxic elements in the lake. The main sources of these poisons are industrial waste in the Montenegrin side and the drainage of the wastewater of Shkodra in the Albanian part. A solution would be a full network of sewage systems and the treatment of wastewater in the municipalities of Shkodra and Koplik, through the construction of a sewage treatment plant. In addition, the reforestation of overused and degraded forests of Tarabosh, Dobraç, Vrakë, Bisht Iqini, Shegan, Rragam and Hot with willow, (Fraxinus angustifulia), (Ulmus), (Populus alba), (Salix purpurea) and (Pinus pinea).

Key words: environment, ecosystem, lake, water resources, forests, Albania

100 CLIMATE CHANGES AND THE ROLE OF HUMANS IN THEIR REDUCTION

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Abstract

The climate is changing due to the way energy sources are being used. In this study, are shown predictions on climate changes for Albania in future decades by providing annual average changes and changes for four seasons (December to February, March to May, June to August, and from September to November). It is presented, an increase in average temperatures, reduced precipitation and reduced water resources and arable land. The areas most vulnerable to climate changes are expected to be the coastal areas, and in terms of sectors, it was figured that water resources, energy, agriculture, and tourism will be affected more. Reduction of water resources is expected to negatively affect river flows, which would subsequently, negatively affect the production of electricity from hydropower plants. This is a problem that should be taken into consideration for the future. Climate change is a global problem, and yet each one of us has the power to make a difference. Even small changes in our behavior can help prevent emissions that cause the greenhouse effect without any decline to our quality of life.

Key word: climate, climate change, energy resources, Albania

101 STRUCTURAL CALCULATION OF WHITE FIR TIMBER TRUSSES AND STRUCTURAL TIMBER

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ABSTRACT

Since centuries wood material has found a wide use in different areas of human activity, including construction. Forests are scarce natural resources, a problematic, which requires an efficient use of timber. In order to increase the efficiency of timber use in construction we need to apply specific technical and technological knowledge. The main objective of the study is to apply the calculating criteria and rules recommended in the field literature in constructing timber trusses and in using structural timber, based in mechanical properties test values. Tests are conducted in the laboratory of mechanical properties of wood of the Faculty of Forestry Sciences in Tirana for timber trusses and structural timber manufactured from white fir (Abies alba MILL.). Timber trusses in relatively small dimensions, 160 cm long, 32.2 cm high and with a cross section of 3x3cm are tested in order to calculate the shear strength, cause of its importance in calculating the dimensions for the construction of the timber trusses. Tests results shows shear strength values varying from 3,02 – 3,78 N/mm^2. Structural timber from white fir is tested in compression and bending in order to calculate the compressive and bend strength of the material, which values are important in deciding its use for manufacturing timber trusses. Compression tests show values between 32-40 N/mm^2, while bending tests show values between 64-73 N/mm^2. Tests results for trusses show also that testing scalable models of trusses is appropriate in assessing the performance of timber trusses in real scale.

Keywords: structural timber, timber trusses, mechanical properties, calculating criteria

102 ASSESSMENT OF THE CONDITION OF BIODIVERSITY IN KOSOVO

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ABSTRACT

Based upon studies up to the year 2009, carried out in Kosovo, there exist about 1,800 species of flora. It is supposed that this number is larger, reaching up to 2,500 species. The flora and fauna of Kosovo is significant and attractive due to a large number of endemic species, relicts and subendemic species. The areas which posses the highest concentration of flora and fauna are: Malet e Sharrit and Bjeshkët e Nemuna. However, Kosovo still does not have a complete inventory of biodiversity past these areas. Protection of the environment and nature through the implementation of protected areas is a very important instrument for conserving biodiversity. Currently, an area of about 46,247 ha (4.27% of the entire territory of Kosovo) is protected by law. This accumulation includes 2 national parks, 11 nature reservations, 37 natural monuments, and 2 protected landscapes. The main objective remains the protection and the expansion of the existing network of protected areas. With the inclusion of Bjeshkëve të Nemuna as a national park, and putting other areas under the protection of the law, the total area of protected regions would increase to include up to 10% of the total territory of Kosovo. For this main purpose, there remains to be affirmed the application of contemporary plans for the management of protected areas. Regarding the agricultural biodiversity, the inventory is yet to be completed and it can be assumed that the intensification of the use of modern and productive genotypes for intensive production has increased the risk of extinction of some species and native varieties.

Key words: biodiversity, flora, fauna, Kosovo

103 PLANT SPECIES, RARE AND ENDANGERED IN ECOSYSTEMS OF KOSOVO

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ABSTRACT

Amongst the flora of Kosovo there are a number of plant species that are considered rare and endangered, given the fact that a large number of these plant species are present only in a narrow realm. Overall, some plant species of medicinal, aromatic, and industrial use are also endangered due to overexploitation. In order to protect these species, a necessity of compiling a list of rare and endangered species is unveiled, which is currently being assembled and will be defined after proper analysis on the field, by the Institute for the Protection of Nature in Kosovo. Some plant species considered rare and endangered in Kosovo: *Taxus baccata* L.; *Quercus trojana* Ŵebb.; *Ulmus campestris* L.; *Acer heldreichii* Orph.; *Tulipa scardica* Bornm.; *Lilium albanicum* Gris.; *Leontopoodium alpinum* Casa. Var. nivele (Ten.) D. C. etc. It is worth noting that so far in Kosovo, there have been founded 139 plant associations, grouped into 63 alliances, 35 orders and 20 classes (Rexhepi, F. 1994). In this quantity, researchers on mosses, lichens and fungi are not included. Although the biodiversity of Kosovo has been used for centuries, the fact that recently this use is irrational and without any planning, is quite worrying. In the near future it may result in unpredictable consequences. The target damages are particularly upon forests, but also the variety of plants used in industrial, pharmaceutical exports.

Key words: variety of species, rare plant species, endangered species, ecosystem, Kosovo

104 THE EAIS FRAMEWORK AS A TOOL TO ASSESS SUSTAINABILITY AND EXTERNALITIES AT FARM AND FIELD LEVEL: A CASE STUDY IN OLIVE PRODUCTION SYSTEMS IN APULIA REGION

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ABSTRACT

Depletion of renewable resources especially in the last decades brought to the necessity of searching sustainable producing and natural resource management systems. Sustainability and environmental externalities assessment is became a practical instrument which can be used by different actors such as: politicians; farmers and advisors. Already are developed a wide range of methods from the most difficult to the most practical ones which together with common objective of sustainability evaluation have other particular and specific intentions. The method used in the present research is called Environmental Accounting Information System. The final objective of this research was to select a set of suitable indicators to assess farm sustainability and environmental externalities of olive production systems. Indicators in the EAIS were selected in relation to critical points of olive production farms in south part of Italy, Apulia region, presented by two different farming systems. The particularity of EAIS is integration of environmental indicators and economical indicators creating a common framework for comparison between reference system and another system to be evaluated. It was concluded that EAIS can be an instrument for sustainability assessment in the farm and field level; because of the environmental focus it can be used as an instrument of externality assessment. Indicators used can be site specific but always there is a set of indicators that are stable in different situations such as: biodiversity, soil organic matter, The Environmental Potential Risk Indicator for Pesticides. This method is able to distinguish different production systems regarding sustainability; it gives different results for organic and conventional farms and can create a common framework for comparison between them for their performance regarding the sustainability.

Key words: Environmental accounting information system, sustainability and externalities assessment, indicator, organic versus conventional farm, case study, Apulia region.

105 ASPECTS REGARDING THE ROLE OF THE NATURAL FOREST RESERVATIONS FROM THE DANUBE'S BASIN (REPUBLIC OF MOLDOVA) IN THE BIOLOGICAL DIVERSITY'S CONSERVATION

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ABSTRACT

Natural Forest Reservations (NFR) are protected territory categories that have the objective to assure optimal conditions for the protection and reestablishment of the species, vegetal communities and animals that are nationally significant. In the Republic of Moldova there are 51 objects that have the status of Natural Forest Reservation and are taken under the State's protection. In the study are included 22 Natural Forest

Reservations, which are geographically located in Danube's Basin (Republic of Moldova). The investigated areas are located in the forest fund that creates favorable conditions for growth and development of a rich flora and fauna diversity. As a result, it was found that the investigated objects are characterized by a satisfactory ecologic condition and contain a rich diversity of flora and fauna rare species. For some of the identified species, the evaluated areas serve as new habitats. The obtained results serve as scientific support for proving the protection category of the investigated objects, filling up the Ecologic Passports and the Database regarding the Cadastre of the State Natural Protected Areas.

Key words: State Natural Protected Areas, Natural Forest Reservations, Danube's basin, ecologic condition, rare species, conservation of biological diversity.

106 ECOLOGICAL POTENTIALS OF BEEKEEPING IN ADAMAWA STATE, NIGERIA

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ABSTRACT

This study was undertaken to determine the ecological potentials of beekeeping in Adamawa State. Following the delineation of the state into three zones, the inventory of plant resources at both woody and herbaceous layer was made to prepare the list of plant resources utilized by bees, determine density of both tree and shrub species and estimate the cover of herbaceous plant species in the study area. These were done using the plot and total count method for trees and shrubs, while herbaceous plant cover was estimated in quadrates by the ocular estimate method. Secondary data on precipitation, temperature, relative humidity were collected from the nearest meteorological stations to the study sites. Results obtained showed that 28 species of trees, 5 species of shrubs and 12 species of herbaceous plants were listed as plants utilized by bees in the study area. Among the trees inventoried, 60%, 72% and 75% were utilized by bees in zones 1, 2 and 3 respectively, while 50%, 81.75% and 86.67% of shrubs were also utilized by bees in zones 1, 2 and 3 respectively. 68%, 65% and 20% of herbaceous plants cover were utilized by bees in zones 1, 2 and 3 respectively. Precipitation (-0.183^{ns}) and temperature (0.776^{ns}) had no significant effect on the yield of honey. The effect of relative humidity on yield of honey was significant (0.308, $P \leq 0.05$), while that of tree density was highly significant (1.297, $P \leq 0.01$).

Key words: plant resources, specie, ecological potential, Nigeria

107 EFFECTS OF PLANT GROWTH-PROMOTING RHIZOBACTERIA (PGPR) ON YIELD, YIELD COMPONENTS AND NUTRIENT CONTENTS OF PEPPER UNDER GREENHOUSE CONDITIONS

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ABSTRACT

Research was carried out Department of Horticulture, Faculty of Agriculture, University of Selcuk Research Greenhouses. Delta-07 pepper cultivation was used as trial material and, a total of 6 different applications which consist from N 52/1, N17/3, Fe 43, F 21/3, 637 Ca bacteria races and control were used as application. According to the results of study, while yield per da and number of fruit per plant were found important, fruit length, fruit size, plant length, root neck diameter were found unimportant as statistically. Root, fruit and leaf

nutrient analysis of the results of N, P, K, Ca, Mg, S, Fe, Cu, Zn and Mn contents were significant in statistical terms. The highest yield per da was obtained from the application N 52/1 with 3872 kg.da^{-1}. At least yield was obtained from N 17/3 bacteria application with 2354 kg.da^{-1}. Number of fruits per plant, while the most fruit was taken from N 52/1bacteria application with 89.53 per/plant, at least fruits was taken from N 17/3 bacteria application with 56.8 per/plant. As a result of nutrient analysis, while N 17/3 and F-21/3 bacteria applications increased of macro nutrient uptake, F 21/3 bacteria application showed positive results in micro-nutrient uptake. The results of study, N 52/1 bacteria gave positive results in practice; in addition N 17/3, F 21/3 and 637 Ca bacteria applications had positive effects on nutrient element content of pepper.

Key Words: Bacteria, *Capsicum annum*, nutrient, pepper, yield.

108 ETERMINATION OF SALT (NACL) TOLERANCE LEVELS OF SOME LOCAL MELON GENOTYPES

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ABSTRACT

This study was conducted to determine the levels of salt (NaCl) tolerance of the some local melon genotypes and was made at Selcuk University, Faculty of Agriculture, Department of Horticulture Experimental Greenhouse and laboratory in 2009. In the research, the dose of 150 mm NaCl application had been tested on, 41 local melon genotypes with two commercial varieties (Kırkağaç 637 and Ananas) of melon had been used as a total of 43 melon genotypes. In the study, the negative effects of salt application was observed on seedling shoot length, shoot diameter, shoot fresh weight, shoot dry weight, root fresh weight, root dry weight, leaf number and leaf area. There wasn't any significant genotype in terms of relative values which had been obtained with the content of saline nutrient conditions compared to content in salt-free conditions. After salt application on different melon genotypes, the entrance of Na+ ions increased much and the value of that increase was varied significantly depend on genotypes, and the genotypes which had received less Na+ ion into leaves were found as more resistant to salt.

Key words: Cucumis melo L., saline soil, melon seedling, nutrients, the development of seedling

109 ETERMINATION OF THE SALT (NACL) TOLERANCE LEVELS OF SOME LOCAL FRESH BEAN GENOTYPES

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ABSTRACT

In this study, it has been aimed to determine the levels of salt tolerances of 32 numbers of domestic fresh bean genotypes. For this purpose in this study,10 days after the cultivation, in every other day 50 mM NaCl and totally 250 mM NaCl has been applied for each pluts. On the fifteenth day when salt stress has been started to see, for the bean seedlings, "1-5 scale values, length of seedling, fresh and dry weight of shoot, root length, fresh and dry weight of root, fresh and dry weight of leaf" have been analyzed. After the study, the dates achieved have been evaluated according to each control groups of genotypes relatively. After the study the damages of leaves have been observed on every genotypes due to salt stress. It has been determined that 11, 23, 24, 17, 12 and 29 numbered genotypes have been affected less than the others. Therefore, it has been

understood that they are much more tolerant. It has been provided that there can be proposed hopeful genotypes for similar studies.

Keywords: *Phaseolus vulgaris* L., NaCl, salt tolerans.

110 EFFECT OF PROBIOTIC SUPPLEMENTATION ON LAYING HEN PERFORMANCE

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ABSTRACT

In the present study, the effects of dietary supplementation of commercial probiotic (Protexin™) on daily feed consumption, egg yield, egg weight, food conversion ratio and humeral immune response in layer hens were investigated. In 7 replicates, a total of 280 40-week-old *Hysex Brown* layers were fed diets containing either 0.250 or 500 ppm for 90 days. Egg production were found insignificant between groups ($p>0.05$). When compared with the controls, the feed consumption, feed conversion ratio and the damaged egg ratios were found lower in the group consuming 500 ppm probiotic ($p<0.05$). Feed consumption values obtained at the end of experimental period from all 3 groups were found to be 113.23, 112.24 and 110.54 g, respectively ($p<0.05$). Feed conversion ratio values in the same groups found to be 2.59, 2.59 and 2.49 kg, respectively ($p<0.05$). There were differences between the groups on damaged egg ($p<0.05$). There were no differences between the groups on egg weight and specific gravity ($p>0.05$). The egg production, egg weight, specific gravity, and peripheral immune response showed no statistically significant differences between the groups, either.

Keywords: Hen, Probiotic Supplementation, Egg, specific gravity

111 THE HELMINTH PARASITES OF THE WILD RABBIT (*LEPUS EUROPAEUS*)

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Abstract

This study was carried out in order to determine the prevalence of helminths wild rabbits *Lepus europaeus* between 2003 and 2005. Out of the 36 wild rabbits examined, 17 (47.22%) were found to have 5 species of helminths. These species were identified as follows: Three species of nematode *Passalurus ambiguous*, (8.33%), *Nematodirus sp*. (11.11%) and *Trichuris sp.* (5.55%) and two of cestode *Mosgovoyia pectinata* (16.66%) and *Cittotaenia dendiculata* (22.22%) were identified.

Keywords: Helminth, Parasites, Wild Rabbit, *Lepus europaeus*

112 IMPACT OF GLOBAL CLIMATE CHANGE BASED ON ANALYSIS OF BIOCLIMATIC INDICATORS: CASE STUDY

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ABSTRACT

The main problem in global and local studies is determining the consequences arising from these changes. Global and local climate changes are quantifiable. They are calculated through the tracking of change, mainly in the thermal value of the components of the environment, these components being soil, air and water. Global climate changes have a direct impact upon flora and fauna. Their effect is measured. This is done through means of numerical comparison of animal and plant species in different periods of time. We used local climate studies and mathematical processing to show the evolution of trends and climatic elements in a locality or region. Local studies, in general, belong to a particular area or territory that is small in size. The indicators are realistic, and the results are reliable. Today, there are many available methodologies for assessing these climate changes, such as precipitation and drought indexes, hydro thermal diagrams, Kopen, Emberger, Rivas Martinez, etc. The areas upon which this study focuses are Vlora, Shkodra, Tirana and Korca, Albania. The data used is form the years 2009-2012.

Key words: bioclimatic indicators, analysis, global warming, impact, Albania

113 TOBACCO - A POWERFUL INDICATOR TO DETECT POLLUTION BY OZONE (O3)

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ABSTRACT

The tobacco react to the air pollution. A varietie of plant of tobacco is sensitive to a particular pollutant: the ozone. Form a certain leve of ozone in the atmosphere, the plant of tobacco react by developing necroses (zones of dead cells on the these sheets: these necroses show themselves in the form of small white spots to brunettes. We can estimate the level of pollution in ozone by estimating the percentage of surface necrosed on the leaf. We use survery stations: these are consituted by some plants of tobacco of sensitive varietie to the ozone ande some plants of resistant varietie, which serve as witnesses. The bioindication allows a qualitative approach of the pollution which brings a relative comparison of varous geographical zones. In conclusion, compaigns of environmental monitoring using tobacco could be organized on a wider geographical scale, and could also be used for educational and didactical purposes. A field study was conducted from May to October, during the years 2010-2012 to assess ozone (O_3) phytotoxicity in Elbasan by determing a percentage value of leaf area injured by ozone on two vatieties: Bel-W3, Bel-B and Bel-61/9 as bioindicators. The Bel-W3 varietie is considered as sensitive and Bel-B and Bel-61/9 varieties is considered as resistant. Damade and color evolution was measured in their leaves every one weeks. Percentage of damaged leaf area, number of damaged leaves per plant, and number of damaged plants per varietie were visually recorded. Percentage classes of damaged leaf area and damaged leaf number were estimated in 5 % intervals and only those measures higher than 5 % were considered. The average percentage of damaged leaf area was calculated in the four first leaves, except in large plants, where the average percentage of damaged total leaf area was calculated considering only the damaged leaves.

Keywords: plant, tobacco, pollutant, ozone, vatieties, damaged leaves

114 IMPROVEMENTS IN TECHNIQUES AND METHODS OF AIR CURING OF TOBACCO OF TYPE ORIENTAL

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ABSTRACT

For oriental tobaccos, distinguished characteristics are aroma. The qualities of the various varieties of tobacco, such as colour or aroma, depend on the chemistry of the leaf. Essential operation of the preparation of raw material, drying of tobacco n 'est not only an elimination of the excess of water. In effect, in leaves come true important modifications of the chemical, observable constituents by the changes of aspect and notably the color. Drying out was a process, which conditioned the future characteristics of products put later in the disposition of the merchants in tobacco, of producers of cigarettes and the consumers. The study describes to measure the effect of curing environment on the quality of Oriental tobacco, the principal sun-cured type grown in the Albania. Studies have shown that leaf quality can be improved by greater environmental control during the cure. The curing of tobacco under polyethylene shelters or in simple farm curers is used with icreasing frequency for the curing of sun-cured of type Oriental tobacco, in order to avoid the undesirable effect of certain climatic factors. The present report describes all existing method as well as the effect of the quality of the Oriental tobacco. The study was conducted in solar greenhouses Tobacco Station-Cërrik, with leaves collected from the cultivated varieties Katerini. The phase of yellowness escalated at intervals of 12 hours, ie: 12, 24, 36, 48, 60, 72 hours. From this study show that for the last floor optimal duration is 12 hours, the middle generation needs 36 hours and for the generation of top leaves should be 48-60 hours yellowness. Optimal duration of yellowness depends on environmental temperatures: when temperatures are high phase yellowish can take 36-48 hours for the generation of middle leaves. Increasing the temperature causes a decrease in the percentage of air relative humidity and thus extended leaf for yellowish process. This study included under tobacco production of «clean» id est tobacco with chemical ingredients as harmful to the health of the consumer.

Keywords: improvement, techniques, methods, air curing, type oriental, tobacco

115 AN OVERVIEW OF WATER QUALITY OF VJOSA RIVER IN ALBANIA BASED ON SOME BIOLOGICAL PARAMETERS

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ABSTRACT

The social-economic development in our country has been accompanied by considerable changes in aquatic and terrestrial ecosystems. One of our duties is to monitor continuously human impact in environment and for this reason we decided to monitor water quality of Vjosa River, as one of most important rivers in south of Albania, based on some biological parameters. Vjosa is a transboundary river, shared between Greece and Albania. In albanian territory the river passes through many urban areas and a relatively high human impact is expected. Samples are collected every month from March - November 2011 in six stations along the river. Total coliform bacteria and the number of heterotrophic bacteria in water are used as microbiological parameters of water quality. Benthic microinvertebrates are analised by the number of individuals per taxa, the value of biothic index, EPT value and tolerance value. Environmental parameters like pH, temperature, turbidity, ammonia, phosphate, nitrite and dissolved oxygen are estimated using standard methods. As it was

expected, there is a high load of feacal coliform bacteria and heterotrophs in sample stations near urban areas. A seasonal change is observed in bacterial parameters. On the other hand, according to data concerning benthic microinvertebrates, the water in Vjosa river is, in total, of good quality. We have to stress out that the values of parameters like EPT, biothic index, tolerance value and chemical parametres are in correlation with bacterial load in water. The human impact in the quality of water of Vjosa river is more than evident.

Keywords: water quality, MPN index, biothic index, EPT value, heterotrophic bacteria

116 ANALYSIS OF THE DIFFERENT LAND REALLOCATION RESULTS IN LAND CONSOLIDATION

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ABSTRACT

In this study, Interview-based model and block-priorty based land reallocation model results were analyzed. These models are used generally in determining of block reallocation plan at land consolidation. The both models were applied to Turkey- Adıyaman-Boztepe Village land consolidation project. The block-priorty based land reallocation model maximizes the landholding acquisitions from their largest land block at the end of land reallocation. Block-priorty land reallocation model and interview-based model known as conventional method results were compared. Furthermore, the satisfaction degrees related to land reallocation were searched conducting a survey in land owners. This survey results showed that land owner pleased with 57,2% rate from interview-based land reallocation model and 71,4% rate from block priority land reallocation model.

Keywords: Land consolidation, landholding, land reallocation, interview based land reallocation, model, block-priority based land reallocation model

117 IN VITRO PROPAGATION OF PLANTLETS OF WILD PEAR (PYRUS PYRASTER L.) USING SHOOT TIPS AS PRIMARY EXPLANTS

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ABSTRACT
Wild pear (Pyrus pyraster, syn. P. communis var. pyraster) is considered to be the most important relative form that gave rise to all other members of the genus Pyrus. P. pyraster is important species, both for its relative closeness to cultivated pear and for reforestation of marginal farmland and for the production of timber. Shoot tips were used as primary explants. In order to study the in vitro proliferation of wild pear explants, were used two different media a) MS MS media containing 0.3 mg l^{-1} BAP, 0.1 mg l^{-1} IBA, 0.3 mg l^{-1} GA_3; b) WPM media containing 1 mg l^{-1} BAP, 0.1 mg l^{-1} NAA. All media were combined with 3% sucrose and 0.57% agar. For the subcultures were tested MS and WPM media both containing 1 mg l^{-1} BAP, 0.1 mg l^{-1} NAA. After multiplication, best results were observed on WPM medium during proliferation and subculture stage. The maximum frequency of rooting and highest number of roots was produced on MS medium containing 0.1 mg l^{-1} IBA. Acclimatization was affected directly by rooting conditions. Survival was best when plantlets were transferred to pots after a short period of root emergence on rooting media.
Keywords: micropropagation, shoot tips, nutrient medium, phytohormones, Pyrus pyraster L.

118 VACCINATION IMPACT IN PREVENTING MEALSES IN CHILDREN

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ABSTRACT

The last measles cases in Albania results from 2007 but measles is still common in other countries, including our neighbors. The virus is highly contagious and can spread rapidly in areas where vaccination is not widespread. It is estimated that in 2008 there were 164,000 measles deaths worldwide—that equals about 450 deaths every day or about 18 deaths every hour. Measles can be prevented by vaccination. Vaccination coverage in Albania is more than 95% for both doses. A sero-prevalence study was performed in children before and after vaccination. The aim of this study was to evaluate the level of IgG antibodies related to Measles in order to evaluate children protection with this vaccination strategy. Results told us that after vaccination protection level value reached 88.8% and also without any significant change after vaccination regarding gender, place of living or origin. Evaluated according to vaccination status in separate age groups 6-9 and 10-15 years there is a significant change before and after vaccination.

Key words: Measles, vaccination, protective level.

119 ENVIRONMENTAL RISK ASSESSMENT OF FERIZAJ REGION

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ABSTRACT

Water is the most common substance in the composition of all living beings. It's required to meet our basic needs in daily life, cooking, drinking, bathing, disposal of sewage, irrigation, generating electricity in power plants, cooling etc. Municipal wastewater is the outflow that comes from households, offices, laundries, hospitals, and small industrial plants. This wastewater typically contains human and other organic waste, nutrients, pathogens, microorganisms, suspended solids, household and industrial chemicals not removed. The water pollution in Kosovo is an important problem because of the wastewaters from inhabited areas is discharged in the nearest rivers without previous treatment. The Kosovo Rivers in a daily basis are becoming more polluted by endangering the existence of the vegetal and animals in the same time while affecting pollution of the fertile land of direct or indirect manner. Same fate has the Nerodime River, which derives into the village Nerodime of Ferizaj city. The main purpose of this work was the qualitative and quantitative study of organic, inorganic and trace heavy metals and to evaluate the ecological state of water at the Nerodime river. Standard procedure for examination of wastewater was used to mark organic and inorganic compounds. The experimental results show that wastewater discharged from the municipality of Ferizaj to the Nerodime River, contains small value of OD, high value of: COD, BOD5, fats and oils, proteins, carbohydrates, trace amounts, of priority pollutants and surfactants. To adequately protect public health, the safety of wastewater discharged to a receiving stream must be ensured.

Keywords: Ferizaj region, Nerodime River, OD, COD, BOD5.

120 IMPROVEMENT OF THE STRENGTH OF SOILS WHICH COMPRISES GRANULAR PUMICE

BY INJECTION OF CEMENT UNDER LOW-PRESSURE

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ABSTRACT

In this study, improvement of granular pumice soils' (sands) strength by injection method in the residential areas of Nevşehir City (Turkey) was investigated. In that region, the granular material encountered in natural deposits is named as "pumice" which is softer and has lower density and higher void ratio than those of natural sands. In general, pumice aggregates are formed during a series of volcanic explosions. During forming, pumice aggregates comprise numerous macro/micro scale pores due to the gases escaping from their bodies and their sudden cooling. Pumice soils cause many problems in their area. The geotechnical properties of granular pumice soils (sands) were investigated in this study. To increase the bearing capacity of the soil, samples taken from the field were prepared to 35, 65 and 85 % density, relatively. Pressure of 100 kPa and water/cement ratio of 1.0 was applied to this test samples and the samples were allowed to cure for a period of 7 and 28 days. Changes in strength of unconfined compression of injected pumice samples were analysed.

Keywords: Pumice; injection; cement ; unconfined compression strength

121 DISPOSAL AND TREATMENT OF URBAN SOLID WASTE - CAN ALBANIA AFFORD URBAN SOLID WASTE MANAGEMENT?

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ABSTRACT

After half a century of extremely centralized economic and political regime, Albania made important steps towards a market based economy and decentralized political authority, followed by several public reforms at central and local level. Efforts on preparation the national environmental policy in Albania have been confirmed. However, the effective translation of national policy to municipal and regional levels, critical to decentralization reform implementation, has hardly begun. In Albania, like in other CEE countries, the responsibility for solid waste service provision, as other local public services, has been delegated to the lowest level of local government unit (both municipality and commune), not necessarily always the most efficient service provision level. Furthermore, this allocation of responsibility is not associated with establishment of service provision quality level standards; this has led to further deterioration of environmental conditions and posing more risks to human health. Finally, decentralized responsibilities have not been accompanied by adequate financial resources. The local government units are suffering the lack of financial resources through which public services will be modernized. Local authorities, especially for capital infrastructure investments, will still need the support of both central government and external donors. Waste management in Albania is at a low level. Systems for the collection of urban solid waste are provided in most cities and towns, but not in rural areas. Very little recycling of waste is undertaken. Wastes are mainly disposed at municipal dump sites. With few exceptions (Sharra and Bushat landfills) there are no properly engineered landfill sites in the country. Two other landfills are planned to be built in the short-to medium term with KfW and World Bank

support. There are no collection systems in rural areas and small towns. Most waste from these areas is disposed of by dumping in ditches, ravines, or at the side of roads where it is washed and blown onto other land and ultimately into water courses. In order to ensure a balanced ratio between environmental protection and economic development a clear analysis of financial and economic sources is needed to enforce every part of legislation. Actually the appropriate policies regarding solid waste treatment are missing. Even though in some parts of the legislation or in different strategic documents some references regarding waste treatment are made, still they stay as fragmentary parts of the full mosaic. Adoption of EU standards for both emissions and ambient environmental quality is a requirement of accession process. In any event the implementation cost of compliance with the EU Framework Directive on Waste is estimated at between € 150 and € 200 Million with additional annual operating costs of around €52 Million per year by the year 13 after implementation. The primary objectives of this paper are (i) to highlight the importance of urban solid waste treatment (ii) to generate the discussion regarding the financial bill for different waste treatment technologies (iii) to analyze in which level these plants will be built and the potential of economy of scale.

Keyword: Municipal solid waste management, solid waste technology, cost of waste treatment, economy of scale.

122 WATER MITE (HYDRACHNIDIA: ACARI) FAUNA OF THE LAKES REGION (TURKEY)

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ABSTRACT

According to the results of the field survey on the water mite fauna (Hydrachnidia) of the Lakes Region (southwestern Turkey), were determined 137 species from 22 families. Endemic species determined from the study area are *Shivatonia ispartaensis*, Boyacı & Özkan, 2004, *Arrenurus dileri* Boyacı & Özkan 2004, *Shivatonia turcicus* Boyacı, 2010, *Acherontacarus anatolicus* Boyacı & Özkan, 2010, *Sperchon serapae* Boyacı, Gülle & Özkan, 2012, *Barbaxonella taurusensis* Boyacı, Gülle & Didinen, 2012, *Lebertia martini* Gülle & Boyacı 2012.

Key words: Water mite, Acari, Hydrachnidia, Lakes Region, Fauna

123 LEGAL DİLEMMAS, SOCİOLOGİCAL AND ECOLOGİCAL PROBLEMS İN MANAGEMENT OF RAMSAR SİTE LAKE BURDUR

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ABSTRACT

Lake Burdur, is one of the 13 Ramsar sites of Turkey; it was declared as a Ramsar site in 1994, which followed its announcement as a natural protection area in 1998 and in 2006 as a wildlife reserve. Accordingly, within the context of the Regulation on Wetland Conservation it has been given the highest degree of national protection status for a wetland in Turkey. Despite all the efforts, some negative factors likes rapid decrease of the lake's level and pollution is threatening the ecological integrity of the lake. Being an A class

wetland area based on the bird population and endemism criteria, the Lake Burdur houses 235 breeding and wintering bird species and also has been known to be the wintering site for the 70% of the world population of the globally threatened white-headed duck before its decline in recent decades. As a result of the continuous drop of water levels starting by the mids of 1970s, the lake has lost 40 % of its surface area. During this period, about 20 reservoirs were implemented and ground water use has increased in the catchment area of the lake. Long-term disposal of agricultural, domestic and industrial wastes into the lake gave rise since 2000s to a dramatically eutrophication process and heavy cyanobacteria blooms have been observed. Although a five years Management Plan for Lake Burdur (2008-2012), along with other legislations in force, was entered into force and launched, success of actions for improvement of current conditions in Lake Burdur remains in a limited scale. Through the window of Lake Burdur, large gaps can also be seen in the management of other Ramsar sites and wetlands of Turkey. İn the study are discusses the political, legal, sociological, cultural, economical and ecological aspects of Burdur Lake's management.

Keywords: Burdur Lake, Ramsar site, water crisis, Lake management, Biodiversity

124 EVALUATION HARVEST INDEX AND SPIKE TRAITS OF DIFFERENT WHEAT CULTIVARS FROM CROATIA UNDER AGRO ECOLOGICAL CONDITIONS OF KOSOVO

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ABSTRACT

Thirteen wheat varieties, which were introduced into Kosovo, from BC-Institute - Croatia, were evaluated for plant biomass and spike traits. Field trial was conducted during the growing seasons 2010/11 and 2011/12, at the Plant Testing units of seed company "Semenarna Kosovë"shpk, Prishtina, in Locality-Livadhi, located in geographical position: N42º05' 54", E 21º 06'36", and 581 M.A.S.L. The experimental design was complete random block with three replications (RCBD), according to combinations: (Years-Y-2 x Cultivars-C-13 x Replication-R-3 x Parameters-P-5) = 234 results. For data analyses were used ANOVA, LSD-test, and Multiple Comparisons with the Best, Fisher Method and Pearson correlation coefficient, according to program ©MINITAB -16. The aim of the research, was to investigate Croatian wheat cultivars, in the associations with production years for harvesting index (HI), spike treats (ST), and to determine the most promising cultivars suitable to Kosovo agriculture conditions. Based on two-year investigation, average values for different parameters were: harvest index HI=45%, Plant Biomass PB=3.03g plant^{-1}, weight per spike WS=1.90 g sipke^{-1}, grain weight per spike GWS=1.4g spike^{-1} and grain yield per unit GY=574, 5 g m^{2}. All the traits examined showed significant difference on level ($P < 0.05$ and 0, 01) also for correlation analyses showed significant difference for evaluated parameters. Variability among Wheat cultivars originated from Croatia, growing under agro ecological conditions of Kosovo, for harvest index and spike traits and grain yield per units, determined by specific reaction of cultivars, influenced from genotype, environment and growing conditions.

Key words: Wheat cultivars, plant biomass, harvest index, spike traits, variability.

125 THE STUDY OF SOME PHYSIOLOGICAL CORRELATIONS DURING DYNAMICS OF OLIVE FRUIT'S *(Olea europaea L.)* GROWTH

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ABSTRACT

During three years (2008-2011), from August to February, in 15-day intervals, were taken samples of fruit and leaves on *cv. Ulliri i Zi*, in over 10 randomized olive tree in Gerbllesh, Tirana. The analysis consisted in statistics estimates according diagnostics and multivariate correlation analysis for: fruit weight, percentage of oil, the humidity in leaves and fruit, acidity and peroxides no. too determinate physiological correlations. After bonding, fruits have increased rapidly until endocarp sclerification *17.3 mg/day*. In August and September fruits and leaves are dehydrated (withered), and fruit's growth was lower, *11.1 mg/day*. Reduction of water in the fruit to 50% correlates linearly with the leafy content 55%, ($r^2=0.92$). As a result, the photosynthesis was reduced, and therefore oil daily assimilation rate was 0.11%, in linear correlation with leafy moisture *($r^2 =0.86$).* After strong dehydration a part of leaves and fruits were falling down. By recreating of turgor, growth of mesocarp's fruit was *17.1 mg/day*, at the same time as oil synthesis in fruit *0.18 %/day*, *($r^2=0.87$).* At the beginning of December fruit's weight=2.31g (maximum weight) and oil percentage of 19.2%, considering the biological correlation.After dehydration of fruit as a result of further maturation, and decreased weight 18.6 mg/day, while the % of oil has resulted in an increase of 0.1%/day and between these phenomena has been negative correlation ($r^2 =-0.17$). At this stage the humidity of the leaves is normal while the value of acidity, and peroxides no. has been associated with the maturity of the fruit.

Key word: olea europaea, pericarp; percentage, olive oil, dehydration

126 THE ASSESSMENT OF THE POTENTIAL CHANGE IN CARBON FOOTPRINT FROM BIODEGRADABLE WASTE DISPOSAL IN 2012-2032PERIOD: A CASE STUDY FOR TURKEY

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ABSTRACT

Annually only 10 million tons of municipal waste is disposed in sanitary landfills in Turkey, while over 25 million tons of waste is generated in one year. On the other hand, national greenhouse gas emission in 2009 is equal to 370 million tons of CO_2, which doubles the emissions of year 1990. The emission from waste disposal services was 5.2% of the total in 1990, and this portion raised to 9.2% in 2009. The number of unsanitary landfills operated by municipalities is 1112 and the amount of waste landfilled at these sites is over 350 million m^3. Therefore, a great portion of the greenhouse emissions from waste disposal services is generated by the uncontrolled landfills. During the process of accordance, Turkey adopted many waste management regulations from European Union, such as; Waste Framework Directive (2008/98/EC) and Council Directive (1999/31/EC of 26 April 1999) on the landfilling of waste. According to the developing legislations, the national waste management strategy has changed and the short and medium term goals and quotas about the diversion of biodegradable wastes from landfilling have set. The goals include the extension of the uses of composting plants and anaerobic digesters, as well as thermal techniques for the disposal of municipal biodegradable waste in the future 20 year period. Here, the potential change in carbon footprint from waste disposal in Turkey will be discussed according to the new legislations and the amount of

biodegradable waste will be diverted from the landfills in the period of 2012-2032.

Keywords: carbon footprint, landfills, biodegradable, municipal waste, legislation

127 BUOYANT FİLTER REACTOR FOR THE ANAEROBİC TREATMENT OF PHARMACEUTİCAL WASTEWATER CONTAİNİNG TWO MACROLİDE ANTİBİOTİCS

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ABSTRACT

In this study an anaerobic Buoyant filter reactor (ABFR) were operated with tylosin (TYL) and erythromycin (ERY) antibiotics at loadings increasing from 8.33 to 33.33 g/m^{3}d and at a constant HRT of 2.25 d to observe the effects of increasing TYL, ERY concentrations on COD, TYL, ERY yields, HCO_3 alkalinity, total volatile fatty acid (TVFA), total, methane gases and methane contents. Synthetic wastewater was obtained from the laboratory and the ABFR was operated constant HRT with a initial molasses concentration giving 4000 mg/L COD as primary substrate. The maximum COD reductions for TYL, ERY antibiotics were 93% and 95%, respectively at a loading rate of 16.67 g/m^{3}d in the effluent of the ABFR. The maximum TYL, ERY removal efficiencies (92%, 94%) were found at a loading rate of 16.67 g/m^{3}d in the effluent of the ABFR. The maximum total, methane gas productions and methane content were found as 4.50 L/d and 2.50 L/d and 60% for TYL, 5.50 L/d and 3.00 L/d and 62% for ERY, at the same loading. In this study, pH, TVFA, HCO_3/TVFA variations in the effluent and all sampling points of the ABFR were suitable for optimal anaerobic treatment at all TYL and ERY loadings.

Keywords: ABFR reactor; Anaerobic treatment; Erythromycin; Tylosin

128 REMOVAL OF NICKEL (NI) IONS FROM AQUEOUS MEDIUM WITH PUMICE

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ABSTRACT

In this study, Ni(II) from aqueous solutions was investigated to removal in batch system using Doğantarla pumice of Aksaray. During the study, the amount of adsorbent, the most appropriate values of the parameters of the contact time and pH were determined. The experimental studies, 100 mg / L of Ni(II) at concentration; 0.05-3 g range adsorbent material; 1-150 min contact times; and 2, 3, 4, 5 and 6 pH values, were carried out. In made studies, removal of optimum Ni(II) has been occurred 2 g adsorbant material, pH 6, and 5 minute contact time. As a result of this study, pumice as 4.04 mg Ni^{2+}/g adsorbent owned capacity of adsorbate have been identified.

Keywords: Pumice; Nickel removal; Adsorption

129 EFFECTS OF RHAMNOLIPID (RD) BIOSURFACTANT ON THE REMOVAL OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) AND TOXICITY IN THE ANAEROBIC INVERSE TURBULENT BED REACTOR SYSTEM (ITBR)

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ABSTRACT

In this study, the anaerobic treatability of 15 polycyclic aromatic hydrocarbons (PAHs) was studied in an anaerobic inverse turbulent bed reactor (ITBR) for the biodegradation of PAHs in the petrochemical industry wastewater treatment plant in Izmir, Turkey. The removal efficiencies of acenaphthene (ACT), fluorene (FLN), phenanthrene (PHE), anthracene (ANT), carbazole (CRB), fluoranthene (FL), pyrene (PY), benz[a]anthracene (BaA), chrysene(CHR), benz[b]fluoranthene (BbF), benz[k]fluoranthene (BkF), benzo[a]pyrene (BaP), indeno[1,2,3-cd]pyrene (IcdP), dibenz[a,h]anthracene (DahA), benzo[g,h,i]perylene (BghiP) were determined at increasing rhamnolipid (RD) concentrations (0, 15, 50, 75, 100 and 150 mg/L) at a HRT of 2.75 days, at a SRT of 63 days. The corresponding OLRs were 1.04 g COD_{dis}/m^3.day and 106.18 ng PAH/mL.day based on COD_{dis} and total PAH. 75 mg/L RD increased the COD_{dis} and total PAHs removal efficiencies from 72% and 71% to 95% and 89% in the wastewater, respectively. The presence of 75 mg/L RD increased the less hydrophobic PAHs removals with 3 benzene rings (ACT, FLN, PHE, ANT and CRB), 4 benzene rings (FL, PY, BaA and CHR), 5 benzene rings (BbF, BkF and BaP) and 6 benzene rings (IcdP, DahA and BghiP) from 54-81%, 58-64%, 44-63%, 43-52% up to 83-95%, 77-84%, 55-74%, 55-65%, respectively. The acute toxicity test results were obtained as inhibition percentages in the influent and effluent of the ITBR system through continuous operation at a HRT of 2.75 days. The EC_{50} (the COD_{dis} concentration affecting 50% of the *Daphnia magna*) concentration of the influent wastewater was 174 mg/L after 24 hours in *Daphnia magna* acute toxicity test. The EC_{50} values increased from 174 mg/L to 3181 mg/L and the maximum acute toxicity removal efficiency was 95% in the effluent of anaerobic ITBR system at a 75 mg/L RD concentration.

Keywords: Anaerobic; petrochemical; polycyclic aromatic hydrocarbons; rhamnolipid; toxicity

130 REMOVAL OF CADMIUM (CD) IONS FROM AQUEOUS MEDIUM WITH CLINOPTILOLITE

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ABSTRACT

In this study, the adsorption mechnism of aqueous phase Cd(II) by natural material in Aksaray clinoptilolite in batch syustems has been examined. For this purpose, a serious of batch of adsorption tests were carried out as a function of pH, absorbent amount and contact time using clinoptilolite. Amount of absorbent, contact time and pH values were used between 0.05-3 g, 1-150 minutes and 2-6, respectively. The maximum Cd(II) removal was determined as 90% at 2 g of absorbent material, 6 of pH and 5 minutes of contact time in the batch system. As a conclusion adsorbtion of clinoptilolite for Cd (II) was found as 4.52 Cd^{+2}/g absorbent in the aqueous phase of 100 mg/L Cd(II) at optimum operation conditions aqueous medium of Cd (II), which in a natural material batch system using Aksaray Dogantarla clinoptilolite removal was investigated. During the study the amount of adsorbent, the most appropriate values of the parameters of the contact time and pH were located. 100 mg / L Cd (II) concentration, the range of 0.05-3 g of adsorbent material, contact times range from 1 to 150 min, and 2, 3, 4, 5 and 6 the experimental studies were carried out at pH values. Optimum studies Cd (II) 2 g of adsorbent material removal, was showed to occur at pH 6 and 5 minute contact time. As a result of this study, clinoptilolite 4.52 mg Cd^{2+} / g adsorbent is capable of adsorbing have been determined.

Keywords: Clinoptilolite; Cadmium removal; Adsorption

131 NEW DATA ON ENDANGERED LEPIDOPTEROFAUNA OF NORTH-EASTERN ALBANIA

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ABSTRACT

In this paper I am going to present some Lepidoptera species from the North-Eastern Albania, endangered in their habitats, which have also their perilous categories at the national level based on the Red List of IUCN (International Union for the Protection of Nature). There are exactly 45 Lepidoptera species with their risked categories. These data are derivative of a several-year monitoring, based on expeditions carried out in different areas of the country. Most of them seem to be threatened on their habitats, belonging to the IUCN red list, where: 38 species belong to the vulnerable category (VU); 2 are near threatened species (LR); 2 are endangered (EN); 2 are critically endangered (CR); 1 is data deficient (DD). We wish to contribute in the further knowledge of Entemophauna of North-Eastern Albania, focusing also in preservation and conservation of endangered species and their respective habitats, especially warm field-hilly regions, warm lower grass areas, rich vegetation areas and water heated areas.

Key words: threatened species, endangered species, IUCN category, Red List of Lepidoptera, habitat, scientific name, chorology, bio-ecology of species.

132 SOLID WASTE AND ENVIRONMENT POLLUTION CAUSED BY THEM: PROBLEMS AND OPTIONS TO REDUCE THIS POLLUTION

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ABSTRACT

One of the causes of environment pollution are solid waste, mainly urban ones, which account for the major share of the total solid waste (SW) generated in our country. This depends both on the amount of SW generated and their characterization, and by the treatment methods and final disposal. So, improving SW management and implementation of advanced technologies for their treatment, means to contribute to the reduction of polluting emissions pertaining to this sector. To give an idea of the level of environment pollution associated with this sector, we are mentioning the fact that everything produced today, tomorrow will be a waste. Major features of a waste is that it is in the state of use temporarily. One side of this problem is the amount of SW generated and, on the other hand, different substances of which consist of different products and the nature reacts in different ways relative to those.

Keywords: environment pollution, solid waste, advanced technologies

133 EXTENSION OF THE NATIONAL PARK "SHARRI" BOUNDARIES, IMPORTANCE FOR PRESERVATION OF NATURAL VALUE

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ABSTRACT

In Kosovo are situated, characteristic and important mountain massif such as Bjashkët e Nemuna, Sharri Mountain, Koritnik, Pashtrik, Mokna Mountains, Kopaonik, etc. Sharri and Koritnik Mountains are characterized with high diversity of geomorphology, flora, fauna, landscape, degree endemism making them important biodiversity centers in the Balkan Peninsula. Because of its richness a part of Sharri Mountain was declared as National Park in 1986 from the former Assembly of Kosovo with an area of 39,000 ha. Large parts of Sharri and Koritnik Mountains, which are characterized by high biodiversity value, too were left outside the protected area. During detailed surveys (2009-2012) of flora, fauna and vegetation the "Sharri" National Park resulted in proposal for extension of with 23.469 ha. In December 2012 Kosovo Assembly adopted the Law on the National Park "Sharri" which recently include the area of 53.469 ha., that lies in the territory of five municipalities: Kaçanik, Shtërpcë, Suharekë, Prizren and Dragash.

Key words: National Park, biodiversity, border, law, endemism.

134 CLIMATE CHANGE AND FOREST DISTURBANCES IN REPUBLIC OF ARMENIA

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ABSTRACT

Studies of the effects of climate change on forests have focused on the ability of species to tolerate temperature and moisture changes and to disperse, but they have ignored the effects of disturbances caused by climate change (e.g., Ojima et al. 1991). Yet modeling studies indicate the importance of climate effects on disturbance regimes (He et al. 1999). Local, regional, and global scale temperature and precipitation changes can influence the occurrence, timing, frequency, duration, extent, and intensity of disturbances (Baker 1995, Turner et al. 1998).The Earth has experienced cycles of temperature and precipitation change on a geological scale, but today, when we talk about deforestation, forest disturbance, it is important to mark, that at this point human activities take a wide part of that. In the places where two or more several ecosystems (forest-grassland; grassland-step) interact to each other, even a little anthropogenic pressure can be decisive for one or another ecosystem. These interactions mainly are peculiar for rare and remaining forests, which somehow are the intersection for several plant ecosystems. We have planed forest monitoring in rare and remaining forests of the several regions of Republic of Armenia (RA), to find indicator species, which should be one of the keys, to understand the rate, and the type of the changes in forest cover, because of climate change in RA.

Key words: climate change, forest disturbances, ecosystem Armenia

135 METHYLENE BLUE ADSORPTION ONTO FORMALDEHYDE TREATED ELAEGNUS ANGUSTIFALIA SEEDS

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ABSTRACT

In this study, the characteristics of methylene blue adsorption onto formaldehyde treatedel *Aegnus angustifalia* seeds for colour immobilize were evaluated. The effects of methylene blue initial concentration, pH of solution, temperature and adsorbent dosage were investigated for adsorption process. The optimum pH for maximum removal of methylene blue was 10. The adsorption data was best represent by Langmuir isotherm. The maximum amounts of methylene blue adsorbed, as evaluated by the Langmuir isotherm, was 74.62 $mg.g^{-1}$. The equilibrium time was found to be 60 min. for 100 $mg.L^{-1}$ dye concentrations. It was found that the adsorption kinetics of methylene blue obeyed pseudo-second-order kinetic model. Gibbs free energy, Enthalpy and Entropy of adsorption -1700 J, -11.28 $kj.mol^{-1}$ and 41.98 $J.K^{-1}.mol^{-1}$, respectively were determined. Results of adsorption methylene blue indicated thatel aegnusangustifalia seeds could be used to removal methylene blue dye from aqueous solutions.

Key Words: Methylene blue, adsorption, aegnusangustifalia seeds, isotherm

136 CANINE BRUCELOSIS AND LISTERIOSISAS AN ENVIRONMENTAL HEALTH CONCERN IN KONYA, TURKEY

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ABSTRACT

Uncontrolled populations of stray dogs are of concern in urban environment since such animals are likely involved in transmission and spreading of zoonotic diseases to human beings in a shared environment. *B. canis* can be transmitted to man either by laboratory accidents or contact with infected dogs. The *Brucella canis* in fectioninduces various reproductive disorders in dog sand also in humans. Brucellosis seroprevalence on 135 dogs stemming from pounds or from the Faculty of Veterinary Medicine of the Konya region was determined by an indirect ELISA (I-ELISA) using *B. canis* NCTC 10854 strain antigen. The canine brucellosis prevalence was 21.5%.Thefirst report on seroevidence of *Brucella canis* in fection in man, Konya was published in the year 2010 and the prevalence reported was %9.2.Listeriosis is a well-known cause of abortion, septicaemia and meningoencephalitis in human and animals.To diagnose *Listeriamonocytogenes*in fected dogs have important role fora better public health since the seanimals spread the causative agent by their faces orurines. The same canine sera above were also checked for the presence of anti-listeria antibodies by an ELISA. The frequencies of listeriosis in the city pound of Konya, the Faculty clinics, and dog research unit of theFacultywerefound19.8%, 0% and 0% by ELISA, respectively. This high rate for the disease in stray dogs in Konya suggested that it is of concern for veterinary and human public health issues. In conclusion, to strictly control stray dogs would decrease the occurrence of the such diseases in man.

Keywords: Canine, brucellosis, listeriosis, environment.

137 BIOLOGICAL AMMONIUM REMOVAL VIA NITRITE PATHWAY

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ABSTRACT

The main aim of this study is to introduce to the operational strategies of partial nitrification in order to accumulate NO_2-N in the effluent water of the biological reactor. Due to the cost disadvantages of the classical biological nitrogen removal process (BNR), the novel biological nitrogen elimination method namely nitritation (partial nitrification, nitrate shunt, nitritation) and denitritation have been investigated during the last three decades. In contrast to the traditional separate BNR process, the nitritation/denitritation process results in savings amounting to 25% of the oxygen supply for nitritation while carbon requirements for denitritation are approximately 40% lower than for denitrification and denitrification rates with nitrite are 1.5 to 2 times greater than with nitrate.In order to perform nitritation and denitritation process, nitrite oxidation should be controlled without affecting the ammonium oxidizing bacteria (AOB) and nitrite oxidizing bacteria (NOB) must be adapted to high concentrations of nitrite. Nitritation and denitritation are based on the facts that, since NO_2-N and NO_3-N are intermediary compounds in the BNR processes, the nitritation to NO_2-N and denitritation from accumulated NO_2-N, instead from NO_3-N, would be feasible. Due to the NOB has lower affinity for oxygen than the AOB, NO_2-N accumulation can be determined by controlling the DO concentrations in the reactor. The maximum specific growth rate of NOB is approximately half of that for the AOB at elevated temperature and the accumulation of NO_2-N could be determined by operating the biological reaction at high temperature. Recent studies also suggested that free hydroxylamine, an intermediate of ammonia oxidation, might be a key factor that caused inhibition to nitrite oxidation. Other factors that could be used for control of nitrite oxidation were sludge retention time and hydraulic retention time.

Keywords: biological nitrogen removal, nitritation, nitrite accumulation

138 EFFECT OF TEMPERATURE AND DISSOLVED OXYGEN CONCENTRATIONS ON THE NITRITATION IN A SUBMERGED BIOFILTER

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ABSTRACT

This experimental study focused on the effects of DO concentrations and temperature on the ratio of NO_2-N/NO_x-N and NH_4-N removal efficiency in the submerged biofilter. The highest NO_2-N/NO_x-N ratio was achieved at the temperature of 35^0C. At the DO concentrations of 4.5 mg/L, the removal efficiency of NH_4-N and NO_2-N/NO_x-N ratios were about 91% and 0.52, respectively. Decreasing the DO concentration to about 4.0 mg/L, the removal efficiency of NH_4-N dropped to 73%. However, the ratio NO_2-N/NO_x-N increased to about 0.62. Increasing the DO concentrations at the top of the biofilm reactor, enhance the activity of nitrobacter species and NO_2-N was further oxidized to NO_3-N. The highest NO_2-N production (0.386 Kg NO_2-N/m^3.day) and NH_4-N removal rate (0.750 Kg NH_4-N/m^3.day) were obtained at the DO concentrations and temperature 4.0 mg/L and 35^0C, respectively.

Keywords: Dissolved Oxygen, nitritation, NO_2-N/NO_x-N ratio, temperature

139 VALUATION OF ECONOMIC INDICATORS IN PRESPA, ALBANIA

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ABSTRACT

Businesses that take place in this area are divided into commercial activities such as bars, shops, pharmacies, etc., and production activities such as dairy, carpentry, etc. Trade activity in this area presents several aspects: a network of small shops in villages, supplies residents with daily consumer goods and meets specific needs. Small trade has developed in terms of clothing items with regard to imports from Macedonia and their retail in Korca. There is very little trade of agricultural products and livestock within the city of Korca. The number of the employed in 2011 is 27.4% of the population. By sector, the numbers of employment are: the public sector employs 2.8% of the population; the private sector employs 1.9% of the population and agriculture employs a total of 24% of the population. The population is able to obtain an income through mostly self-employment in agriculture, migration and employment in the government. Based on the results of the study, it can be stated that the area of Prespa withholds diverse potentials for sustainable, long-term development. The region offers opportunities for the development of natural and cultural tourism throughout the year. In the summer, the lake shore offers a chance for the development of sun tourism combined with the appeal of the mountainous terrain.

Key words: economic indicator, business, employment, tourism, Prespa, Albania

140 GAS SENSING PROPERTIES OF DIFFERENT CALIXARENE DERIVATIVES

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ABSTRACT

Organic compound pollution has become a major concern with respect to environment healthy and in many countries there are strict regulations that limit the concentration of these compounds. Among them, toluene, DMF, acetone and methanolare widely used as organic solvent in many chemical manufacturing processes. In these chemical processes, they can escape atmosphere easily during the reaction due to their capability of high volatility. Sensors can be used to control and keep of organic solvents before diffusing to the environment. Calixarenes have generated considerable interest as useful building blocks for the synthesis of hosts for cations, anions and neutral molecules. During the last two decades, they have attracted much attention as receptors in supramolecular chemistry. Generally two strategies have been adopted by the different groups in order to enhance the affinity of calixarenes toward guest species; either there have been incorporated different ionophoric groups including carbonyl, amide, nitrile and other suitable functionalities onto the calix-platform, or the calixarene units were fixed in a polymeric matrix. In our previous works, we have also synthesized several polymeric calixarenes and it has been investigated their extraction or adsorption properties for ions and neutral molecules. According to our knowledge, there are little studies with calixarenes as sensor though various studies have been carried out about sensing of organic solvents in the literature. Hereby we have prepared some calixarenes molecules containing different functional groups and investigated their sensing properties for some organic solvents in this work.

Keywords: calixarenes, organic solvent, sensor

141 EFFICIENCY OF ELECTROFISHING AS A SAMPLING METHOD FOR TRIBUTARIES OF THE MAJOR ALBANIN RIVERS

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ABSTRACT

There is increasing international interest by water resource management agencies worldwide in developing the capacity for quantitative bio assessments of rivers. The main purpose of the paper is to provide with proper water habitats assessment using fishes as biological tool. The electro fishing as standardized method in WFD to be used in surface water, both lotic and lentic, has been implemented in different rivers and streams in Albania, Devolli, Osumi, Vjosa, Mati and Drini. Altogether 32 samples collected in 2008-2012 from the different Albanian rivers were used to estimate proportional fish species richness from single-pass electro-fishing and probabilities of detection for individual fish species. Mean estimated species richness from single pass sampling was 93.1% and 94.3% of estimated total species richness for Osumi and Devolli rivers, respectively. Decisions regarding standardized sampling effort and whether to conduct one or more electro-fishing passes must be based on study objectives. For more accurate evaluations of fish assemblage structure two-pass electro-fishing is recommended. We suggest that sufficient site length determinations should be based on the survey objectives, the relative heterogeneity of the habitat template, and the quality of data necessary for meeting programmatic data quality objectives.

Key words: elektrofishing, Albanian rivers, bio monitoring, fish, WFD

142 EFFECT OF PROHEXADIONE-CALCIUM(REGALIS) ON SHOOT GROWTH IN PEAR VAR. PASSE CRASSANE

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ABSTACT

Prohexadione-calcium (Regalis) is a shoot growth retardant that inhibits gibberellins biosynthesis The aim of this study was to evaluate the efficacy of applying Regalis by foliar applications in Passé Crassane pear orchards to reduce tree vigor or shoot growth, to improve the structure of the canopy, to accelerate the earliness of fruit bearing and to control the alternate fruit production. Three different dosages were tested: 50ppm, 100ppm 150ppm. Regalis treatments ranging from 50 to 150 ppm were compared with control, without treatments. The first treatment was applied 7days after petal fall and the others every 10 days after the first treatment. The data was collected at the end of the vegetation period on 10 October. The growth vigor of the shoots and the shoot length of node was significantly difference after the treatment of 150 ppm than the application of 100ppm and 50ppm. The mean number of nodes per shoot percentage was not significantly different between different treatment (50ppm, 100ppm and 150ppm). The length of the shoots for non- treated trees was higher than for treated ones.

Key words: prohexadione-Ca, Regalis, Growth retardant, Passe Crassane

143 INTERACTION OF CYTOKININS (BAP) AND INDOL BUTIRIC ACID (IBA) ON ROOT INDUCTION IN OLEA EUROPEA L.

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ABSTRACT

Olive, var. "Kokerr Madhi i Beratit" is an important table variety for Albania. Also this is one of the major difficulties with respect to vegetative propagation from leafy stem cuttings. Leafy stem cuttings of olive var. "Kokër Madhi i Beratit" were obtained from 1-year-old olive shoots sampled on 24April during the 2012 growing season. The shoots were collected at the same height of crown of the tree to avoid the effect of juvenility on root induction. To improve the rooting of olive cuttings, different concentrations of BAP(6-Benzyl aminopurine),100 ppm, 150 ppm, 200 ppm and 250ppm were tested in combination with IBA (Indol Butiric Acid)4000 ppm. After treatments the stem cuttings were planted in greenhouse equipped with an automatic mist system. At 50 days after the beginning of rooting treatments, cuttings were scored for the presence of callus, percentage of rooted cuttings, root number per cutting and root length. BAP inhibits adventitious root formation, but adding it to IBA in a small ratio (1:30-1:40) improved the rooting. The combination of IBA 4000 ppm + 100 ppm (40:1) and IBA 4000ppm+150ppm BAP modified significantly higher rooting of cuttings. Those combinations of growth stimulators induce also a higher number of roots per cutting in comparison with those treated with IAA alone. The mean root length was not significantly different between IBA alone and IBA combined with BAP.

Key words: olive, root, shoot, Benzylaminopurine, Indol Butyric Acid

144 SPATIAL DISTRIBUTION AND MORPHOMETRIC PROPERTIES OF THE KARSTIC DEPRESSIONS IN THE VICINITY OF KARAPINAR, KONYA, TURKEY

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ABSTRACT

In this study, morphometric characteristics of the karstic depressions (doline or sinkhole) observed in the vicinity of the Karapınar (Konya, Turkey) and effects of overlying alluvium and pyroclastics to the morphometric features of the karstic Insuyu Formation were investigated. At first, the digital elevation model of the study area was prepared by digitizing of contour lines from the original topographical maps. Then, field works were carried out around the important karstic localities. So, after the field works and evaluation of the topographic maps and the digital elevation model, 442 depression localities in the study area were determined and they were mapped. The ArcGIS 9.3 and FRAGSTATS 4.1 GIS software were used in the morphometric analysis. According to obtained data, morphometric values for the depressions were determined. In addition, coefficients of nearest neighbour point analysis, lengths of major and minor axis, and their orientation angles for depressions were determined by the performed analysis. As a result of the studies, morphometric characteristics of the depressions were defined and depression morphometric characteristic for the karstic İnsuyu Formation and overlying formations were found to be similar to each other. This result shows that depressions in the formations are related to the depressions of the karstic basement geological unit, İnsuyu Formation. It is thought that the results obtained from this study will be an useful contribution for the formulation and evaluation of doline hazards maps in this region.

Keywords: karst, doline, depression, morphometric, Karapınar, Turkey

145 THE EFFECT OF STORAGE PERİOD AND TEMPERATURE ON WEİGHT LOSS İN QUAİL EGGS AND THE HATCHİNG WEİGHT OF QUAİL CHİCKS

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ABSTRACT

The present study was aimed at the determination of the effects of storage period and temperature on weight loss in quail eggs, hatchability results and hatching weight of quail chicks. Total 6,000 eggs obtained from a quail flock composed of 250 male and 750 female animals which were of the same age, provided with the same feed, exposed to the same management conditions and raised in cages and 2004 quail chicks which hatched from these eggs constituted the material of the study. Eggs of hatching quality, weighing 12-15 g were allocated to 3 groups and were stored at temperature of 11°C (10-12), 21°C (20-22) and 27°C (26-28), respectively. Each of the 3 temperature groups were divided into 4 sub-groups such that they were stored at the indicated temperature for a period of 1, 5, 10 and 15 days, respectively thus, resulting in a total number of 12 groups. Throughout the storage period, all eggs were kept in 3 storage compartments which had the same features and of which the humidity was adjusted to 75±5%. Throughout the storage period, eggs were neither subjected to pre-storage incubation nor were their position altered. Throughout the trial period, the humidity rate of the storage compartments was reduced at the following rates for the sub-groups which were stored for periods of 1, 5, 10 and 15 days, respectively; in the group subjected to a storage temperature of 11°C 0.2, 0.6, 1.3 and 1.8%, in the group exposed to a storage temperature of 21°C 0.6, 1.5, 3.1 and 5.3% and in the group stored at a temperature of 27°C 1.1, 2.0, 3.7 and 6.10%, respectively. In the same sub-groups, the hatching weight of the chicks were as follows; in the group subjected to a storage temperature of 11°C 9.47, 9.18, 9.50 and 9.13 g, in the group exposed to a storage temperature of 21°C 9.38, 9.42, 9.41 and 9.30 g and finally, in the group stored at a temperature of 27°C 9.67, 9.49 and 9.071 g for the 1st three sub-groups, respectively. The sub-group of eggs which was stored at 27°C for 15 days did not hatch. The differences between the calculated percentages were statistically significant ($p<0.05$). When evaluated together with hatchability results and embryonic death, it was determined that egg weight losses above a rate of 3% affected hatching weight and hatchability adversely. Moreover, in the group of eggs determined to have suffered a weight loss percentage of 6.1% no hatching was observed.

Keywords: storage, period, temperature, determination, eggs

146 THE ANALYSIS OF METHYLENE BLUE ADSORPTION WITH USINGFACTORIAL DESIGN

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ABSTRACT

In this study, methylene blueadsorptions were investigated statistically by usingAegnusAngustifalia seeds treated with formaldehydefor color immobilization. Single and multi-factors effects of the pHof solution, time, temperature, initial concentration ofdye and the amount of adsorbents wereanalyzed with 2^5 factorial design. Regression analysis and ANOVA results were obtained by MATLAB. In this two level five factors design the effects of parameters, the coefficient of model, values of standard deviation, the model equations and the interaction graphs were yielded. As a result of the study, the parameters affected on methylene blue adsorption were indicated.

Key Words: Factorial design, anova, aegnusangustifalia seeds Methylene blue, adsorption

147 THE ENVIRONMENTAL PARAMETERS RESPONSIBLE OF THE CONSERVATION OF WOODEN MATERIALS IN POST-BYZANTINE CHURCHES IN REGION OF KORCHA

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ABSTRACT

In the past several decades the conservation of monuments has been done into large interdisciplinary scientific branches where the demand for quantified information and values of tested parameters and practical use has been confirmed as a proper approach and tools. The principal aim of this paper is to describe and analyze in statistical manner the role of environmental parameters i.e. variables that are responsible for the conservation of the historical monuments, and further to that of the wood materials. Several churches of the Post-Byzantine period in District of Korcha (Prespa, Voskopoja, Mborja and Vithkuq) were subject of detailed analyses in a non-destructive survey. As a standart procedure the monument conservation and restoration includes the study of the original materials, the historical information on their construction as well as the know-how of the materials of the specific time of the Post-Byzantine period at which the monument was built. The different climate data were statistically analyzed.In our case the use of 'environmental parameters responsible' in analysis proves to be a very powerful tool in the study of building materials, particularly wooden windows and doors at the old constructions and weathering condition.

Keywords: Post-Bysantine, Churches, Prespa, Voskopja, wooden material

148 THE EFFECTS OF FISH DISEASE AND PARTICULARLY SPRING VIREMIA OF CARP ON COMMERCIAL FRESHWATER AQUACULTURE IN ALBANIA

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ABSTRACT

It has been recognized that the Spring viremia of carp (SVC) is an acute systemic viral infection caused by *Rhabdovirus carpio* (RVC) virus. The disease was known as infections dropsy of carp till the isolation of the virus from common carp. There is no studies relation the damages that caused fish disease in general Spring viremia of carp. The principal purpose of this paper is to highlight the effects of the disease on the freshwater aquaculture and quantify the damage to the local producer's economy.Following various data the commercial freshwater aquaculture in Albania started at the end of sixties. Warm water freshwater species (originally based on common carp, to which Chinese carps were introduced at the beginning of seventies) represent the major aquaculture production in our country. Cold water salmonides, principally *Oncorhynchus mykiss* and *Salmo letnica* are another important group for aquaculture production in Albania. In the last period of two decades, because of economical and political changes the production in general declined, while in the last years there is a revitalization trend. Until 1990 the fish farming areas has reached to a total surface area of 215 ha, the production of fingerlings for restocking purpose arrived at more than 32 millions fingerlings of about 8 - 10 g, each. On the other hand, part of these fingerlings was used as stocking material in the fattening ponds of the semi-intensive fish farming. There were about 200 ha in, all fattening ponds and the average yield was 2 - 2.5 ton/ ha with a maximum of 5 ton/ha. In 2001, the carp production was 15 t fish and 5 million

fingerlings. Following our analyses in several fish ponds in Elbasan, Korca, Fier and Shkodra, there is also in between 10-20% of the production that affects local incomes and threaten the health security of fish systems itself and human population as well.

Keywords: Spring Carp Viremia, common carp, fish farming, stocking, disease

149 HEAT WAVES AFFECTING WEATHER AND CLIMATE OVER ALBANIA

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ABSTRACT

Many scientists investigate climate changes and try to predict changes up to several years or decades and the best predictions considerate hindsight analyses and can be assessed on them. Good results are taken for changes on annual mean air temperatures or rainfall meanwhile not enough studies were done about the past and present events of extreme weather. In order to improve the future prediction, a better understanding of extreme weather is needed. It can be done by studying recent events and compare them with similar past events. Generally, extreme weather includes severe or weather at the extremes of their historical distribution. The most used extreme weather definition is based on extreme weather events distribution where extreme events occur at 5% or less of the time. During the last decades, extreme weather often faced Albania and many countries. A less known of extreme weather is the heat wave phenomena and analyses of it were done in this study over two important Albanian cities. As a first step, periods of heat waves were distinguished from the daily temperature records and then analyses of atmospheric patterns associated were done to point out the shapes of air circulation which bring hot and moist air toward Albania. Then, analyses and comparison of atmospheric patterns were done for the days when air temperatures exceed historical records and the results will be used as an attempt for extreme temperature prediction in the short range forecasting.

Keywords: heat wave, extreme air temperature, atmospheric pattern.

150 VARIATION ON MEAN AND EXTREME VALUES OF AIR TEMPERATURES OVER SHKODRA AND TIRANA DURING A SIXTY YEARS PERIOD AND THEIR PROJECTIONS INTO THE NEAR FUTURE

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ABSTRACT

Climate changes became the most discussed topic of scientists and decision makers and the main interest stands to know the impact of climate changes in the everyday human life. One of the most important indices of climate change is the observed change on annual mean and extreme values of air temperatures over both the whole world and specific areas. During the last decade, clear variations of air temperatures are detected over Albanian territory on both mean and extreme values of air temperatures. The variations are reflected on daily up to annual time scale and also from a region to another. For this reason, in this study were considerate two Albanian locations that have available air temperature time series for a period of 60 years. Air temperature series include daily observed minimum, maximum values which are analysed for the whole period and then compared with the multiannual mean values of the respective areas. Analysis of such a long time series would bring very good results about the changes of air temperatures consequently would be more

clear the fact of warming or cooling over these locations. Another important estimation in this study is the attempt to project the resulted changes of air temperatures into the near future.

Key words: air temperature, variation, extreme values, prediction

151 COMPARING HEAVY METAL CONTENTS OF ROADSIDE SOILS WITH COASTAL AREA SOILS

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ABSTRACT

In this study, accumulation of heavy metals in roadside soils was investigated. Soil samples were taken from the refuges of main road (polluted positions) and from the coastal areas (unpolluted positions) far away from the intensive traffic. Iron, zinc, copper and nickel contents of soil samples changed with the sampling positions. There were significant differences ($P<0.01$) among the locations for lead contents of soils. The mean lead contents in unpolluted positions and polluted positions were determined as 0.581 ppm and 0.887 ppm, respectively. The percentage increases in heavy metal concentrations in polluted positions compared with unpolluted positions were obtained for zinc (374.16 %), copper (291.40 %), lead (236.41 %) and nickel (736.87 %).

Key words: Heavy metals, pollution, roadside soils.

152 THE EFFECTS OF SOME ORGANIC FERTILIZERS ON NUTRIENT CONTENTS IN *GLADIOLUS* SP.

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ABSTRCT

The objective of this research was to determine the effects of organic fertilizers on nutrient contents in leaves and corms of *Gladiolus* sp. used as a cut flower in landscape arrangement. This research was conducted in a randomized experimental design with three replications. Chicken manure, farmyard manure, peat and waste mushroom compost were used as organic fertilizers. As a result, while the highest mean contents of nitrogen (1,97 %), iron (160 ppm) and manganese (128 ppm) in leaves were obtained in chicken manure application, the highest mean contents of potassium (2,01 %), calcium (1,80 %) and magnesium (0,25 ppm) were determined in waste mushroom compost application. The highest mean contents of phosphorus (0,30 %), zinc (25,3 ppm) and copper (9,29 ppm) in leaves were found with peat, control and farmyard manure applications, respectively. The highest mean contents of phosphorus (0,83 %), potassium (1,47 %), calcium (0,57 %), manganese (73 ppm) and zinc (67,3 ppm) in corms were obtained in farmyard manure applications. While the highest mean contents of nitrogen (4,86 %) and copper (20,9 ppm) in corms were determined in chicken manure application, the highest mean contents of iron (17,6 ppm) and magnesium (0,20 %) in corms were obtained in peat and waste mushroom compost applications, respectively.

Key words: *Gladiolus*, nutrient elements, organic fertilization, ornamental plant.

153 DOES THE TROPHY STATE OF POLLUTED AREAS HAVE IMPACT ON THE PRESENCE OF PICOPHYTOPLANKTON SPS ? – CASE STUDY IN MARINE COASTAL WATERS OF DURRES BAY, ALBANIA

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ABSTRACT

The aim of the study was the use of molecular tools for the determination of the presence of picophytoplankton species, and the evaluation of their distribution in Bay of Durres, were sampling stations represent hot spots of different origins of pollution, like urban waste waters, portual residues, fuels, etc. *Synechococcus* and *Prochlorococcus* are two genera of photosynthetic prokaryotes evolving oxygen as a major component of oceanic ecosystems. These organisms form phototrophic picoplankton (<3µm). The presence of marine *Synechococcus* and *Prochlorococcus* in the Mediterranean coastal waters of Durres, Albania was examined through PCR amplified intergenic transcribed spacer (ITS) fragments. The sample stations were: Golem Beach, Channel of Plepa, Hekurudha Beach, Ex-Fuel Quay in Marine Durres Harbour. Two more samples were taken outside Durres Bay respectively at the Channel of Durres City Waters and Currila Beach. The distribution and ecology of *Synechococcus* and *Prochlorococcus* were studied in relation to biotic and abiotic water factors. Total Chlorophyll a (Chl a) (biotic factor) was used to classify the stations as oligotrophic, mesotrophic and/or eutrophic. Abiotic factors as temperature, pH, salinity, dissolved oxygen content, turbidity, macronutrient (N and P) were used to explain the variability of the presence of marine *Synechococcus* and *Prochlorococcus* populations in the waters of Durres Bay.

Key Words: *Prochlorococcus*, *Synechococcus*, Durres Bay, 16-23S rDNA internal transcribed spacer, biotic and abiotic water factors.

154 STATISTICAL STUDY ABOUT THE LUNG CANCER IN REGIONAL HOSPITAL OF SHKODRA FOR 2008 - 2012

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ABSTRACT

Primary carcinoma of the lung is a major health problem with a generally grim prognosis. The International Agency for Research on Cancer estimates that there will be over 1.18 million deaths from lung cancer worldwide in 2007, which will rise to 10 million deaths per year by 2030. Each year, primary carcinoma of the lung affects males and females, making it the leading cause of cancer death in both men and women. Lung cancer accounts for 29% of all cancer deaths (31% in men, 26% in women). Lung cancer is responsible for more deaths in the world each year than breast cancer, colon cancer, and prostate cancer combined. More women die each year of lung cancer than of breast cancer. The aim of this study is to describe the incidence of all the hospitalized cases with lung cancer at the Regional Hospital of Shkodra during the period of 2008-2012. We have used a descriptive method and the data are elaborated with Microsoft word excel 2007. In this article we have considered all hospitalized cases in Regional Hospital of Shkodra, diagnosed with lung

cancer. We conclude that the rate of lung cancer has increased. This increase is related to the changed lifestyle of population (tobacco smoking, inappropriate nutrition) and the improvement of diagnostic skills of doctors. On the other hand the improvement of methods and items in medicine influenced in an easier discovery of these new cases.

Key words: asthma, cancer, diseases, health, lung.

155 THE STATISTICAL ANALYSIS OF THE METHYLENE BLUE REMOVAL FROM AQUEOUS SOLUTIONS BY USING CORE-SHELL OF MELON

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ABSTRACT

In this study, we examined the removal of methylene blue dye from aqueous solutions by means of melon's core-shell treated with formaldehyde. A series of experiments were conducted in the different conditions for defining effective parameters to the removal process of methylene blue dye from waste water. Based on statistical analysis of obtained data, solution pH, the concentration of methylene blue and adsorption time parameters were surveyed. The effect of core-shell of the melon treated by formaldehyde to the removal of methylene blue from aqueous solutions was evaluated by the 2^3 factorial designs. We specified the basis effects of parameters, interactions, standard deviations and significance levels by MATLAB software in two-levels, three parameters full factorial designs.

Keywords*:* MATLAB, Factorial Design, Core-shell of melon, Methylene blue

156 THE STATISTICAL ANALYSIS OF ADSORPTION BETWEEN METHYLEN BLUE AND CORE-SHELL OF THE WATERMELON

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ABSTRACT

In this research, we studied on methylene blue adsorption with the modified core-shell of the watermelon. We analyzed statistically on the attaining data by conducting the experiments in a number of different circumstances for finding the levels of parameter's effects in the adsorption process. The concentration of methylene blue dye, solution pH and adsorption time parameters were examined. The effect of modified core-shell of the watermelon to the adsorption capacity of methylene blue was evaluated by the 2^3 factorial designs. We specified the basis effects of parameters, interactions, standard deviations and significance levels by MATLAB software in two-levels, three parameters full factorial designs.

Keywords: MATLAB, Factorial Design, Core-shell of watermelon, Methylene blue adsorption

157 APPLICATION OF THE METHOD OF BUDDING, DURING GRAFTING NEW TREES TO WALNUTS (*JUGLANS REGIA L.*) : A CASE STUDY

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ABSTRACT

The walnut is classified as a strategic species for human nutrition and is included in the FAO list of priority plants. Walnut, (*Juglans regia*) L. propagation is more difficult, compared to most fruit species. Due to walnut heterozygosity, propagation by seeds does not lead to inheritance of the characteristics of a certain variety. That is why the propagation technologies are being improved worldwide. The purpose of this experiment was to increase the inoculation success of the walnut budding var. Franquete. Various methods, as patch budding and chip budding have been employed. To find the most appropriate season of inoculation, June budding on 28 June (with buds taken in the current season), autumn budding on 28 August (with buds taken in the current season) and spring budding on 28 May(with buds collected during the winter dormant period), have been tested. As rootstocks for the June and August budding, the seed scions of *Juglans regia* L of the current year's growth have been employed. For the spring inoculation the one year old scions have been used. Patch budding was the most successful budding method used for walnuts. The success of the method of patch budding depends on the season of inoculation. Successful inoculation percentage in patch budding (about 80%) was achieved by June budding (on 28 June). The June budding of the patch method can be implemented in the production of grafted young walnut trees.

Key words: walnut, budding, rootstock, inoculation

158 CONTROL OF APPLE SCAB (*VENTURIA INAEQUALIS* [CKE.] WINT.) IN ORGANIC APPLE PRODUCTIONIN ALBANIA

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ABSTRACT

The field experiment conducted over two growing two years, from 2011 and 2012, in Qerret Pukë Albania are chemicals tested: - Armicarb® 100 (85% KHCO3 from Helena Chemical Company, USA), 2- Kresoxim-methyl, from BASF, Belgium), 3- Thiovit jet (80% micronised sulphur, from Syngenta Agro S.A.S., France) and 4- water control.With the cultivation of susceptible commercial apple cultivars, apple scab control is becoming more difficult, such that losses caused by apple scab would be about 70% if no control measures were taken. Even in Integrated Pest Management systems, scab is currently controlled by up to 15–20 applications of protective and curative fungicides during the growing season, regardless of the presence of ascospores in the orchards.The objective of this study was to evaluate the effectiveness of bicarbonates used alone or combined with horticultural oils for the control of apple scab in order to develop a successful strategy using environmentally friendly substances compatible with the organic production system.

Keywords: Apple scab, disease management, orchards, fungicides

159 THE QUALITY OF "SHARRI" CHEESE IN MICROBIOLOGICAL AND PHYSICO-CHEMICAL ASPECT

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ABSTRACT

The "Sharri" cheese called because it was made many years ago at the "Sharri" mountains with an altitude of 800-1200m. This kind of cheese produced from sheep's milk, cow's milk and "Sharri's aroma". If the pathogenic microorganisms are presented into the untreated milk, are supposed to be also in the cheese if it is prepared months ago, before consumption. *Escherichia coli* coli is the primary cause who makes cheeses to be failed. The purpose of this project is the inspection of the microbiological and physico-chemical quality of "Sharri" cheese in a licensed diary in the Republic of Kosovo. Methodology of work: sampling, transport and analysis of samples in the laboratory are made according to the standards. Samples were taken during the year 2012. During the year 2012 have received samples for the microbiological and physico-chemical analysis. Our results talks pro that 8% of the samples resulted in bacterial contamination, which is isolated: *Escherichia coli*, and after implementation of HACCP is not found bacterial contamination. All the samples analyzed in physico-chemical aspect, are conformity with the standards which works NIPH. The implementation of HACCP in this diary has given satisfactory results. HACCP is an emergency to be implemented in all the other topics that deals with food activities.

Key words: samples, contamination, bacteria, hygiene, "Sharri", HACCP.

160 *ELODEA CANADENSIS* AS INVASIVE SPECIE IN LAKE OHRID

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ABSTRACT

Invasive alien plants present a threat to diversity of native species. Evaluation of potential endangerment of invasive alien plant species (*Elodea Canadensis*) was made and results are presented in this paper. The distribution of invasive aquatic plant species *Elodea canadensis* studied as an indicator of water quality in Lake Ohrid was discussed. The study is based on, literature sources and field survey data, summarized in distribution maps over the time. From the 30 investigated stations E*lodea canadensis* was present in 16 stations, it is the most abundant in the depth zone 0-2 meters. It was rarely found in 4-10 m. Habitat analysis of well-established stands of *E. canadensis* showed that its preferred habitats watercourses flowing, more or less disturbed riparian zone, with moderate presence of retention structures, and with fine organic matter. The alien species *E. canadensis* express its invasive character in macrophyte communities.

Keywords: invasive alien plants, habitats, Lake Ohrid.

161 THE TIME DISTRIBUTION OF LAMBING THROUGHOUT A DAY IN AKKARAMAN EWES

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ABSTRACT

Diurnal distribution of the time of natural spontaneous births was studied in the native Akkaraman sheep kept under the traditional management system. Data from 288 births were collected from a commercial farm during two consecutive years to determine the influence of ewe age, year of birth, lamb sex and birth type on time of parturition in ewes. Time of birth was categorized into 4 sub-groups within a day; namely, 22.00:04.00, 04.00:10.00, 10.00:16.00, and 16.00:22.00 hours. Chi-Square statistic was used in determining the association of birth time with dam age, sex, birth type, and year at a significance level of 0.05. Over the course of two years, 156 male and 156 female lambs were born from 288 births. The numbers of single and twin born lambs were 264 and 24, respectively. Generally, 31.2% of all the births were mainly between 16.00:22.00 hours, but 15.6% were between 22.00: 04:00 hours. In addition, 52.9% of sheep gave birth during the day between 06:00 to 18:00 hours and 47.1% gave birth in the night hours between 18:00 to 06:00. The effects of dam age and birth year on birth time were significant (P<0.05) but the effects of sex and birth type were insignificant.

Keywords: Sheep, Akkaraman, lambing time, lamb sex, type of birth

162 MILK AND WOOL PRODUCTION TRAITS OF AKKARAMAN SHEEP RAISED UNDER SEMI INTENSIVE CONDITIONS

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ABSTRACT

This study was carried out to determine milk and wool production traits of Akkaraman sheep raised under semi intensive conditions of TİGEM Gözlü State Farm in Konya province. Data were collected from 1043 lactation records for milk production traits and 244 fleece records for wool production traits. Least squares means respectively, were determined as 57.82 L for marketable milk yield (MMY), 157.75 days for lactation period (LP), 114.57 days for milking period (MP), 482.08 ml for average daily milk yield (ADMY), 683.99 ml for maximum daily milk yield (MDMY), 2.32 kg for greasy fleece weight (GFW), 1.57 kg for clean fleece weight (CFW), 11.50 cm for staple length (SL), 13.99 cm for fiber length (FL), 10.18 for average number of crimps over a length of 5 cm (ANC), 30.89 µ for fiber diameter, 6.06 % for medullated fiber ratio (MFR), 2.72 % for kemp fiber ratio (KFR) and 65.34 % for wool yield (WY). Year had a significant effect on MMY, LP, CFW (p<0.05), ADMY, MDMY, SL, FL and WY (p<0.01). Birth type had no significant effect on all milk production traits. Except for ANC and KFR, age had a significant effect on the other traits (p<0.05; p<0.01). Effect of sex on GFW, CFW, SL, FL (p<0.01) and WY (p<0.05) were significant. Repeatabilities were estimated as 0.276, 0.796, 0.765, 0.450, 0.474, 0.669, 0.710, 0.485, 0.586, 0.693, 0.831, 0.693, 0.816 and 0.651 for MMY, LP, MP, ADMY, MDMY, GFW, CFW, SL, FL, ANC, FD, MFR, KFR and WY respectively.

Key words: Akkaraman, Lactation, Milk Yield, Fleece Weight, Repeatability

163 HUMAN AND ENVIRONMENTAL HEALTH PROBLEMS DURING MECHANICAL PROCESSING OF WOOD IN ALBANIA

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ABSTRACT

During the processing of wood, in various types of machinery and mechanical processing lines, a large amount of waste in the form of sawdust, shavings and dust is created. The fast removal of these types of dust is necessary not only for the normal running of the processing, but for the creation of appropriate hygiene conditions on the ward as well. Tiny particles of dust, flying in the air and continuously falling on equipment, walls and columns enter humans during breathing. Inhalation of large quantities of wood dust causes illness and cancer. Therefore the fast and timely removal of dust and waste directly during wood processing is a problem with a significant environmental impact.

Key words: dust, wood, mechanical processing, environment, pollution, human health.

164 RESULTS OF THE IMPACT OF THE TYPE OF COVERAGESCALE ON SEVERAL INDICATORS OF GROWTH AND SURVIVAL OF CARP (CYPRINUS CARPIO L.1758) CULTIVATED IN PLANT KLOS, ELBASAN, ALBANIA

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ABSTRACT

Nowadays functional semi-intensive aquatic culture are essential,
elements of human activity in many aspects which needs to be more recognized. The paper presents the growth of some different phenotype of species of carp fish, (Cyprinus carpio L.1758) cultivated in breeding place Klos, Elbasan, Albania. In this study are estimated some grown aspect and survival of four phenotype forms of this specie that change depending on distribution of scaled fish. During our study we note that: The phenotype form known as "scaled type" was represent with higher value of average weight (621.33 ± 38.295 g), while the form phenotype known as "mirror uncovered type" was represent with lower value of average weight. Are obvious significant differences ($P<0.05$), during a comparison between couples "scaled type" and " linear mirror fish", "scaled type" and "mirror uncovered type", and the couple " scattered scale type" and "mirror uncovered type". For the wild phenotype form of carp was estimated the higher average value of Specific Grown Rate (SGR) (0.571 ± 0.010%), and the lower value was encountered for the phenotype form "mirror uncovered type" (0.564 ± 0.0073%). We see also for "SGR" the same difference between phenotype form when we take on considerate difference between average weight. Based on Allometric Coefficient "b" relation weight-length, both phenotype forms "Linear mirror type ", and "mirror uncovered type" were represent with negative value.While the "scaled type " had the higher value of "b" (b=3.1056; r=0.984), the higher value of Index of Survival (96.11±9.42 %), and the higher performance (yield) (43.0 kv/ha).As the result the wild carp ("scaled type") under semi-intensive condition has a good performance of growth and productivity.

Keywords: Common carp, scale cover type, specific growth rate, allometric coefficient, survival

165 EFFECTS IN ENVIRONMENT OF NO_X AND DUSTS DISCHARGED FROM CEMENT MANUFACTURING IN CEMENT FACTORY - SHARRCEM IN HANI I ELEZIT

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ABSTRACT

The purpose of our work was the study of effects in Environment of NOx and dusts from cement manufacturing in cement factory – sharrcem and its impact on air quality in Hani i Elezit region. The cement industry contributes significantly to the imbalances of the environment in particular air quality. The key environmental emissions are nitrogen oxides (NOx), sulphur dioxide (SO_2) and grey dust. Industrial plant smokestacks from cement and construction companies are some of the biggest contributors to poor air quality, especially in urban developments. As air pollution sources, except KEC, Trepca, Ferronikel,Sharr-cem, public heating facilities and other industries, traffic is considered a significant air pollution sector. Major impacts on the environment from cement factories are the impacts on air from the rotary kiln, as a result of the physical and chemical dissolution of raw materials, and the process of burning in the oven at temperatures up to 1450 °C. Sharrcem makes periodical measurements by an external contractor. Monitored parameters are:dust, SO2, NOx, and CO. From our study shows that throughout the years, the maximum allowed values were exceeded. It is indicated that from 2006, there is a decrease of dust emitted as a result of investment in the electro filters, whereas in 2011 there is again an increase of the dust emissions. During the all years of monitoring represented in this study, the NOx values were under the maximum allowed value (800mg/Nm3).

Key words: environment, air quality, dusts, SO_2, NOx .

166 THE PALYNOMORPHOLOGICAL CHARACTERISTICS OF SOME PLANTS OF ASTERACEAE (COMPOSITAE) FAMILY IN ALBANIA

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ABSTRACT

Asteraceae (Compositae) comprise the largest family of vascular plants. The family has more than 1100 genera and about 25.000 species (Lewis et al. 1983, HEYWOOD 1978). The family is divided in two subfamilies: Asteraceae -Cichoroideae (synonym of Compositae – Liguliflorae / Lactuceae) and Asteraceae - Asteroideae (synonym of Compositae - Tubuliflorae). (W. Punt, P. P. Hoen The Northwest European Pollen Flora, 69). The plants of this family are economically important, they are used in medicine, they are very good honey plants, but and they also cause the beginning of allergy. The pollen grains of Asteraceae plants have a thick exine and they are preserved well as fossil. This article includes the palynomorphological study of six plants of Asteraceae family: *Scolymus hispanicus, Bellis sylvestris, Sonchus asper, Sonchus arvensis, Centaurea solstitialis* and *Achillea millefolium.* The plants are collected in fresh conditions in their habitat in Elbasan city and in some areas around it. By the study, the pollen grains of above plants are distinguished from some morphological features such as: the aperture three furrows three pores, three furrows and thick echinate exine. The shape of pollen grains according to the outline vary from prolate spheroidal at *Sonchus arvensis, Sonchus asper ,Scolymus hispanicus , Centaurea solstitialis and spheroidal at Bellis sylvestris* and *Achillea millefolium*. According to this study, the sculpture of exine is echinate. The spines are acuminate and they vary from spinules to microspinules. The exine sculpture of *Sonchus arvensis, Sonchus asper* and *Scolymus hispanicus* is from a particular type called fenestrate.

Key words: Asteraceae (Compositae), vascular plants, specie, habitat, Elbasan, Albania

167 MICROFLORE OF BACTERIAL AND FUNGAL IN FRUITS AND VEGETABLES

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ABSTRACT

The aim of our research was the determination of the presence and density of bacteria and musk yeast in fruits and vegetables.We also have seen the reason to conclude about numerical and qualitative reports of fruits and vegetables which were examinated with *heterotrophic bacteria, koliformet totale and musk of yeasts.*We had the curiosity to do the research of these data and also the comparison with other investigations in order to give a modest contribution on the density of investigated microflore in unit of measure for gram. of fruits and vegetables. Some fruits and vegetables have served as a material for the investigation. The materials have been collected in the green market, and in some markets of Mitrovica. The research methods have been methods with membrane filters. This method is the indirect method because of the results that were obtained, and they are also evidenced after the planting and incubation of the samples.

Key words: fruit, vegetable, bacteria, yeast and musk.

168 THE COMPOSITION OF THE FRUIT TREES IN A PROTECTED FOREST LANDSCAPE OF MOUNTAIN „KONJUH“

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ABSTRACT

During the crop season 2011. and 2012. The recordings were made phytocoenology in protected landscapes "Konjuh" (mountain Konjuh northeastern Bosnia), where there was a significant result. Although not within the zone of "2000" (according to height), Konjuh mountains, to say the naturalist Redzic, deserves special attention due to its Luxury and biodiversity.The aim of this study was to investigate the distribution of fruit trees in broadleaf forest ecosystems mentioned areas, with emphasis on biodiversity them. In broadleaf forests occupy an important place fruit trees, as regular followers of the forest ecosystem. Fruit trees, like noble hardwood that occur in the forest are wild cherry (*Prunus avium* L.), wild pear (*Pyrus communis* L.), wild apple (*Malus sylvestris Mill.*), Wild Service Tree or Chequer(s) Tree (*Torminalis clusii* M.Roem.) Whitebeam (*Sorbus aria* L.) and other wild cherry (Prunus avium L.) is the most famous forest of fruit trees, appearing as a single tree or in small groups (Noćajević, 2009.).Multiple benefits of forest fruit trees in a special time of flowering, when adorning the forest and its edges, providing a rich bee pasture in the fall and some earlier

(wild cherry) which is bearing fruit eaten by many members of the forest fauna (Oreskovic et al 2006). This importance is reflected in the more nutritious, treated by diet, pharmacological and bioenergetic balance (Noćajević et al 2011). Forests, because of their function which performs the most complex and most universal ecological system which integrally includes other ecosystems (Bojadzic, 2001).

Keywords: phytocoenology recordings, wild fruit trees, forest ecosystems, distribution

169 ASSESSMENT OF ENVIRONMENT AND OPPORTUNITIES FOR SUSTAINABLE SOCIAL ECONOMIC DEVELOPMENT IN SHEBENIKU – JABLANICA NATIONAL PARK

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ABSTRACT

The aim of this paper is to assess the environmental situation and opportunities for sustainable development of Albanian part of Shebeniku – Jablanica National Park. The ecosystems within the Park basin are of global significance and harbour endemic floral and faunal species. Despite the contribution of a range of services to human wellbeing, these ecosystems are facing numerous challenges, stemming for the existing practices in many areas that directly or indirectly affect the lakes. The region is also remarkable for its cultural values, and examples of traditional architecture. Current resource management practices including land-use planning, agriculture, and forestry are failing to maintain and restore the health of ecosystems within the Park. Productive sectors are failing to incorporate ecosystem health objectives into their daily management practices and protected areas are under threat and can barely serve as biodiversity refuges. There are a number of different stakeholders and resource users in the Park. The most important consumptive resource use with regard to extend and potential conflicts with the Park is livestock breeding (grazing of animals and looping of fodder) and the extraction of firewood. Non-consumptive resource users (tourism, honey production, private landowners and settlements) do currently not exercise any particular severe pressure on Park resources except for general problems of communities (solid waste, waste water discharge). There are no marketing and processing capacities inside the Park. Almost 100% of dairy products and 80% of meat is used for home consumptions. Small quantities of milk and cheese are sold to neighbours and 20% of meat is sold to traders at the farm gate and within the community (lamb and kid within the community and calf to traders).

Key words: National Park Shebeniku – Jablanica, sustainable development, ecosystem, environment, opportunities

170 FACTORS LEADING TO IMPLEMENTATION OF AGRICULTURAL BEST MANAGEMENT PRACTICES ON THE AL-PRESPA BASIN

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ABSTRACT

Nonpoint source pollution contributes as the largest source of degradation to surface water quality. One of the leading sources of this pollution comes from agriculture. One of the solutions to this problem lies in finding adequate management techniques, often called “Best Management Practices,” or BMPs, that decrease the levels of pollutants that escape farmlands and other sources. The Albanian part of Prespa Park (AL-Prespa) is no stranger to such problems. The aim of this study was to determine the factors that contribute to

implementation of agricultural best management practices so future policy decisions can be made more efficiently and effectively. This study statistically analyzes economic and other factors that contribute to farmer adoption of nine different agricultural best management practices in the AL-Prespa basin. For this reason, a logit model is applied to a sample of farms in the AL-Prespa basin in southeastern Albania. The data reflects the characteristics of the farmers, their farms, and their perceptions concerning environmental issues. One thing that makes this study different from other studies is its attention to numerous BMPs and the premise that the contributing factors for implementation of these best management practices vary depending on which practice is viewed. There are, however, several common factors that did influence the implementation of almost all nine BMPs studied. This study shows that any policy aimed at improving BMPs implementation in the AL-Prespa basin should take a flexible approach. The two most important factors in participation in BMPs are farm size and financial assistance. The impact of financial assistance amplifies the importance of proper funding in the implementation of such policies. The fact that farm size plays an important role shows the potential for some selectivity in producing the most effective policy. This study should give policy makers a better understanding of which farmers adopt agricultural BMPs in the AL-Prespa basin and what policies can effectively improve future BMP implementation. The study should also show that factors contributing to BMP adoption in the AL-Prespa basin are not uniform across conservation techniques. Each BMP may have different factors that influence adoption. Future studies should focus on determining factors of BMPs intensity in the region. With the proper analysis of participation and intensity, nonpoint source pollution policy formulation should become more effective. Knowing who to target should lead to the most effective and efficient way to improve water quality on the AL-Prespa.

Key words: AL-Prespa, BMPs, nonpoint source pollution, logit model, management practices

171 YIELD, YIELD COMPONENTS AND PROTEIN CONTENT OF DURUM WHEAT AS AFFECTED BY DIFFERENT SEED RATES AND PLANTING TIME

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ABSTRACT

The aim of this study was to evaluate the effects of planting date and plant densities on yield and yieldquality of durum wheat. The experiment was laid out according to randomized complete block design with split plot arrangements and four replications. Two genotypes of durum wheat (Creso and Line 5/11-1) were planted on 5 dates from 15 October to 15 December, with 15 days intervals at 4 densities significantly affected grain yield ha-1.Itwas observed that wheat yields and other characters for both cultivars responded differently to planting dates and plant densities. Highest yields for 5/11-1 were recorded under 15th November and 1th December planting time, whereas for Creso the highest yields were achieved under 1th and 15th November. The optimum seeding rate was different for the two genotypes. For line L-5/11-1 the highest and lowest grain yields were obtained at densities of 500 and 300 plant/m2 respectively, and for Creso at 400 and 300 plant/m2 respectively. Planting time and density did not show significant effect on protein content, wet gluten and vitreous of kernel. However, highest values of these traits were obtained from lowest and highest densities when yields were the lowest, showing that these differences are influenced by those yield values.

Key words: durum wheat, density, planting time, yield, protein, wet gluten, vitreous

172 ORGANIC SOLVENTS AND THEIR EFFECTS ON HUMAN AND THE ENVIRONMENT- A CASE STUDY

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ABSTRACT

The aim of study is to assess the risk which exists with working in a school laboratory. The study is focused on a laboratory located at University A in Turkey. Risk assessment tools and methodologies help to identify hazards of organic solvents and to decrease the health and safety risks in school laboratories. There are various risk assessment methods such as WHAT - IF Checklist, Hazard and Operability Study (HAZOP), Failure Mode and Effect Analysis (FMEA), Fault Tree Analysis. In this paper, What-If/checklist method is used to identify the risk factors of organic solvents in a laboratory. Checklist method uses a set of pre-written questions developed by experts mainly through what-if technique to stimulate discussion and evaluate the potential hazards exist in a workplace. It is a broadly-based assessment technique that combines the creative thinking of a selected team of specialists with the methodical focus of a prepared checklist. "What/If" questions were focused on human errors, experimental procedure error and equipment failures. On the basis of this method, some accidents with serious consequences could be ıdentıfied. In order to prevent the accidents or reduce the effects of them appropriate safeguards have been proposed.

Keywords: organic solvents, effects, human, environment

173 THE SPREAD OF GEOMORPHOLOGIC RISKS IN ALBANIA, ENVIRONMENTAL EFFECTS AND THEIR MANAGEMENT

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ABSTRACT

The main aim of this paper is to present the spread of geomorphologic risks in Albania, causes of origins and their development, the consequences in the natural environment and human economic activity. These risks are caused as a result of natural factors and social ones. The over controlled human activity on the environment stimulate the intensity of the action of geomorphologic processes. Through this paper is presented an overall assessment of natural hazards and human intervention with high intensity in the natural environment. As a result, it is important to have complex studies to analyze natural and human factors over environment. Further, this paper presents the types of geomorphologic risks in Albania, geographical coverage, favorable factors, the evolution and consequences in the natural environment and social-economic activity. A detailed analysis is made of erosion as the main form of land degradation. Albania is among the Mediterranean countries characterized by high levels of erosion. As a result, it is necessary to take protective measures for a good environmental management. Refers to the principle, it is easier to prevent "risks" rather than cure "scars", which often turn into "chronic", through this paper are presented the measures and recommendations that aim to prevent these risks in origin.

Keywords: Geomorphologic risks, erosion, sliding, environmental consequences, measures.

174 THE INCREASE OF THE EFFECTIVENESS OF A FARMER AND THE ROLE OF THE AGRICULTURAL PRICES ON ITS INCREASE

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ABSTRACT

In our country it's noticed a tendency of the increase of the number of small farms and this fact constitutes a problem for the future development of agriculture and especially for the integration of the farms into the market. From the study made ,we conclude that the price market of the agricultural products is not organized. The way of how a farm organizes has importance in the increase of the effectiveness of the farm. The organization and the function of the agricultural products' prices contributes in the avoidance of high costs for local farmers in the monitoring and coverage of the borrowings that operate in the informal sector therefore they make this sector of the market inactive for the agricultural producer. The main principle of price operating for the agricultural products is the difference between the selling price and the total costs of the products. According the data taken from the statistical observation during a year, the average income for the farm in monetary value of the agricultural activity have been $1219 or 1000 Euro. In 2004 the world production of the grains was 1.038.325 thousands ton while in 2006 this production fell in the value of 932.527 thousands ton. We have understudied the retail market of a specific product, of which there are taken 137 records through different periods in the region of Tirana. The used data are taken from the Statistical Bureau and from the Informative System of the Market(SIT). This material is based in the collection of the agricultural products' prices .Note, these data are analyzed and commented according the needs of the Agricultural Ministry, Rural Development etc.

Keywords: organized, SIT, inactive, price, total costs

175 A STUDY OF BASIL TYPES IN THE COASTAL PLAINS OF ALBANIA

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ABSTRACT

Basil is a plant of Lamiaceae family, with wide spectrum use in food industry, perfumery, as fresh spice, flavoring different environments, as well as in medicine. This is why basil is considered both a spice and a medical herb. These values are resulted from high content of ocimol in all plant organs (leaves, flowers, fruits, seed and roots. The fact that Dioscorides mentions that herb early in the first century, as a medicinal plants for the disinfection of premises, mouth and teeth, shows the values and its recognition since Antiquity. In Albania it is a known and cultivated plant, in families, gardens, and it has synonyms by area. For essence production, it begins to be cultivated in the 60s and, nowadays the demand is growing. Basil studies are limited in technology and comparisons of subspecies and varieties. A study of five subspecies in coastal plains of Albania (Toshkëz-Lushnja) is presented in this paper. The differences found are statistically significant.

Keywords: essence, spice, cultivation

176 THE IMPACT OF HARVEST WAY IN THE SAGE PRODUCTION AND ITS QUALITY

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ABSTRACT

Sage (*Salvia officinalis*) is a typical Mediterranean plant, and its origin is from Adriatic and Ionian coast, where the plant covers dry limestone mountain slopes, 150-1200 m above sea level, expanding almost entire Albanian territories. In Albanian spontaneous flora, the gender Salvia contains 15 plant species, where the more economic value and research interest presented 8 species, while more national interest are 3 types, Glutinous Sage (*Salvia glutinosa* L.), lilac sage (*Salvia verticellata* L.) and common sage or medicinal sage (*Salvia officinalis* L.). Albania and its territories produce 80 % of world production of essence, which in Albania has been started in 1956. The content of sage essence is 1.8 – 2.67 %. The sage of Northen Albania has the higher content, and the Leskoviku, Skrapari and Permeti's sage has the lower essence content. It contains up to 32 chemical compounds with medicinal value, as terpenes, *Sesquiterpenes*. The plant parts, bouquets of leaves, are used for many purposes in medicine and the treatments of some diseases (cough, rheumatism, against paralysis, epilepsy). It is used in cosmetics and perfumery industry, as well as a honey plant.Two different harvesting methods are used: one with bouquets (7-9 leaves), cutting them by hand and the other by mowing. Hand harvesting does not damage the buds and consequently the yield is 40-50% higher.

Keywords: Sage, essence, medicinal, aromatic, cosmetic, harvesting

177 A STUDY OF SOME MAIZE HYBRIDS, IN THE WESTERN COASTAL PLAINS OF ALBANIA

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ABSTRACT

The maize is the most prevalent crop in the world. It is considered a green mine, because for a short time, 100-135 days, it gives a dry mass production (grain and green mass), that can't be completed by any other plant. It has high and diverse values of use. Studies in maize plants are numerous, and they continue for different aspects: genetics, breeding, improving of technological parameters and its processing. Study of hybrids and their suitability in an area and micro-area constitutes a permanent field of study to increase the maize production and improving its quality. Based on this principle, a study of some maize hybrids in western coastal plains of Albania, and specifically in Toshkëz-Lushnja is undertaken.For the hybrids under study (from Italy, France, USA) plant indicators (height of plant, number of leaves, height of ear), production indicators (ear length, number of rows, number of grains in row and ear, production per plant and grain yield) and stages of plant development were evaluated.

Keywords: Maize, hybrid, technology, indicator, yield.

178 A STUDY ON THE IMPACT OF BASE DRESSING OF NEW ALFALFA PLOTS

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ABSTRACT

The forage production development, in the context of the agriculture development, has been and remains a permanent task that is dictated by the need to increase the livestock production. In the Albanian agriculture, alfalfa is the main forage plant and occupies the first place on the planting surface. In the structure of forage plants, alfalfa occupies over 50% of the planted area, and increase of its production constitutes one of the main targets for increasing of forage production. It is considered as the most important chain and as the bridge between agriculture and livestock. From statistical data, alfalfa plant is the main crop of Albanian farms, and as such, the care for implanting of its cultivation technology is increased. So, in our farms it is invested more for seeds, processing and storage of hay. From the other side studies on finding optimum level of nutrients and alfalfa fertilization have been scarce in Albania, and for this purpose this study was conducted, aiming at finding links between nutrient level and biomass. Alfalfa has a considerable demand for nutrients because of its active growth, and for each harvest a considerable amount of nutrient from the soil is gone. It is being investing for nutrients, but there is not yet any experiment study for the fertilizers that have the greatest influence, both in production as well as in alfalfa plots lifetime. It is this reason that this study was undertaken for three years, experimenting in time and space, thus obtaining results for each year of alfalfa plots lifetime. The result of this study showed that base dressing has a statistically significant effect.

Keywords: Fertilization, dry grass, farm, forage, technology.

179 PRESENCE OF HEAVY METALS IN RIVERS SURROUNDING INDUSTRIAL ZONE IN MITROVICA TOWN

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ABSTRACT

Mining and metallurgical activities are among the main factors of the atmospheric pollution in the earth, as in the recent past and also nowadays, especially considering the rapid technical and technological development and the need ever larger underground resource. The town of Mitrovica, has the largest complex metallurgy and mining in Europe known as "Trepca", known for exploitation of lead, zinc and cadmium, which town has been, and unfortunately continues to be, one of the most polluted cities in Kosovo as in air, soil and water, in particular in its industrial complexes surroundings. The purpose of this paper is to make research of the impacts of the mining and metallurgical processes on the degree of pollution with heavy metals of rivers in Mitrovica town. The methods used to determine the impacts of industrial processes on the river's pollution are as follows: Reviews of scientific materials related to field of study: Laboratory Research, with sophisticated equipment - AAS (Atomic Absorption Spectrometry).

Keywords: Mitrovica, Trepca, Water pollution, Heavy metal

180 INTERACTIONS AT METAL INTERFACES-A COMPARISON OF VARIOUS MODEL APROACHES

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ABSTRACT

Many of the mineral processing techniques depend on the interfacial interactions between solid and liquid, essentially water. The interfacial surface tension control those two phases, while the surface energy is one of the main components in understanding the interface process. The most common standard method used for determining the surface energy is contact angle method that characterizes the properties of the solids.This paper reports a description of the theory of interactions occurring at the metal interfaces and the experimental methods available for assessing those interactions. We made a review and a direct comparison of widely used models for the calculation of surface energy of solids such as Owens-Wendt-Rabel-Kaelble, Wu and Acid-Base models in order to evaluate their advantages and disadvantages. The particular site of Trepça Mining Complex jarosite waste material was used as an example for reviewing these interactions. In this case a contact angle between the surface and the edge of droplets of water, formamide, diiodo methane is measured. We conclude that values of contact angle provide an indication of the degree of surface hydrophobicity / hidrophilicity character. This method is an important parameter of processing the jarosite waste material in Trepca.

Key words: Interaction, metal interface, surface free energy, contact angle, Owens-Wendt-Rabel-Kaelble, Wu, Acid-Base model, jarosite waste.

181 THE EVALUATION OF FLORISTIC DIVERSITY OF NEMËRÇKA MOUNTAIN

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ABSTRACT

The term Biodiversity is becoming more familiar and the study of its elements is very important in the researches related to sustainable management of natural resources, without affecting biological natural balance. The present study is focused in the evaluation of biodiversity (specific and ecologic) of Nemerçka mount, one of the most interesting geo-morphological units in Albania. The results indicate that floristic diversity of Nemerçka Mount is very high not only in the species richness but also in the number of habitats. It is dominated by Mediterranean species which constitute 30 % of all species, belonging to 62 families. Biological spectrum is dominated by Hemicryptophyte and Therophyte forms, showing a deviation from natural optimum, correlated with high level of forest degradations. The 3-years study of flora of Nemerçka Mountain provides full information about key indicators of biodiversity evaluation as: biological and chorological spectrum, Shannon index and the presence of threatened and endangered species according to the IUCN categories, including the level of specificity, naturalness and economic values (direct and indirect).The study helps managers and private practitioners or users of these terrains to meet the objective of preserving the biodiversity within the framework of sustainable management of area.

Key words: Biodiversity, Flora, threatened species, IUCN category, sustainable management.

182 **THE IMPLEMENTATION OF EUROPEAN UNION NATURE PROTECTION LEGISLATION IN MACEDONIA**

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ABSTACT
Nature protection is an important part of environmental activities of in the field on protection and improvement of the environment. Activities, measures and standards in the nature protection need to be drafted in the strategic documents. The strategic documents can be implemented only with the accurately and comprehensive legislation. Legal regulation significantly contributes toward to better protection of the nature. European Union, as a community with the highest environmental standards since 1972 has been acting in the improvement of nature protection activities which are drafted in the legislation. Besides the problems with the practical implementation, Macedonia has been harmonizing its environmental legislation since 2004, with obtaining with the candidate status for the membership of the EU. This harmonization has been moving relatively successfully. Nature protection legislation compared with the other environmental sectors has been moving slower compared to the other environmental sectors. The same situation is with practical implementation of nature protection legislation even The Law on nature protection, which was adopted in 2004, is one of the first laws in the sphere of the environment in the process of harmonization the national legislation with the EU legislation. It is because of the numerous of subjective and objective reasons. The Law on nature protection has been changed and amended seven times. And after entering into force of the Law there were adopted a small number of strategic documents and sub law legal acts. The main aim of this paper is to analyze the process of the harmonization of nature protection legislation with the EU legislation and the possibilities for the acceleration of the process. Also the paper will gives the recommendation for the future improvement of the Macedonian, s nature protection legislation and its practical implementation.

Key words: nature protection, environment, legislation, harmonization, European Union

183 **DISTRIBUTION OF *EDRAIANTHUS AUSTRALIS* (WETTST.) LAKUŠIĆ AND *E. HORVATII* LAKUŠIĆ IN ALBANIA**

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ABSTRACT

The genus *Edraianthus* belongs to the Campanulaceae family with its center of distribution in the Balkan Peninsula. In the Albanian Floras book, the genus is represented by four herbaceous species: *E. graminifolius, E. serpyllifoliu, E. tenuifolius* and *E. wettsteinii*. The last one is a stenoendemic species of Mt Rumie in Montenegro, so it is an erroneous report for Albania. In addition, three species *E. albanicus, E. australis* and *E. montenegrinus*, even though to report many years before from Degen et Kummurle, Baldacci or Lakušić, have not included in the Flora of Albania, whereas *E. horvatii* were described as a new species for the country. Two other new species: *E. caespitosus* and *E. pubescens*, described recently from F.K. Meyer, needs other morphological and molecular investigation for their confirmation. In this paper we have summarized the current knowledge about Albanian *Edraianthus* species, focused mainly in distribution of *E. australis* and *E. horvatii* as two poorly known species for the flora of our country.

Keywords: Albania, distribution, Edraianthus genus, E. australis, E. horvatii

184 ZOOLOGICAL AND ECOLOGICAL DATA OF ORDER POLYDESMIDA OF THE DIPLOPODA CLASS IN VLORA REGION

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ABSTRACT

This article presents some zoological, sistematical and ecological data about the order Polydesmida, Diplopoda clas of Myriapoda group, in the district of Vlora. The Polydesmida order presents one of the richest orders with the Diplopoda class, group Myriapoda.Polydesmida order is represented from 29 families with a high number of species that live on the surface of the ground or inside of it. The zoological sistematical and ecological data about the Polydesmida order presented in this article are based on the gathering and zoological study of the collected individuals. Eventhough the Polydesmida order is very common in our country, it is studies very little. Our information is also compared with other data reported by foreign experts, like Verhoeff (1901), Atems (1929), Manfredi (1945); Mauriès et al. (1996). This study also presents their ecology; the way of living in the collecting habitat, feeding, reproduction, movement and sensitivity etc. This order consists of earthy environment creatures as decomposers and phytophags. Although they are very common, Polydesmida are not important for the humane economy, because the density of the population is limited, they do not harm the crops dhe do not transmit diseases in humans.

Key words: polydesmida, diplopoda, zoological data, ecological data

185 THE EFFECT OF HEAVY METAL CONTAMINATION TO THE BIOLOGICAL AND CHEMICAL SOIL PROPERTIES IN MINING REGION OF MIDDLE SPIŠ (SLOVAKIA)

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ABSTRACT

Despite the importance of mineral resources for the progress of humans, extraction of minerals has caused serious environmental problems. Contamination of soils by heavy metals in mining areas leads to the deterioration of soil quality and other environmental components. Removing of heavy metals from the soils is not easy, because they are non-biodegradable, and persistent in soils for tens or hundreds years. The aim of the study was to determine level of soil pollution by heavy metals in the surrounding of processing plant and find out the effect of heavy metals on enzyme activity and some chemical soil parameters. Total content of heavy metals (Cu, As, Cd, Pb, Zn), activity of soil urease, acid phosphatase, alkaline phosphatase, catalase, soil reaction, organic carbon and nutrients were determined. Heavy metals exhibit toxic effect on enzyme activities, what resulted as increasing soil enzyme activity with the decreasing heavy metal content. Significant positive correlation was found between heavy metals and some enzymes themselves. We found no statistically confirmed influence of heavy metals to the organic carbon, soil reaction and nutrients.
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Keywords: heavy metals, enzyme activity, mining area, soil properties, pollution

186 VERTICAL PROFILES OF SOIL PROPERTIES AND MICROBIAL ACTIVITIES IN THE

PEATBOG SOIL IN SLOVAKIA

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ABSTRACT
Peatlands are one of few long-term terrestrial carbon sinks, preferably important for global carbon regulation in future generation. Play important roles in maintaining water and soil quality, and supporting wildlife. Current methods of peatbogs assessment rely on the use of ecological indicators, but often lack an in-depth analysis of soil parameters. The objective of this study was to examine vertical profiles of some soil properties (soil reaction, organic carbon content, soil moisture) and various types of microbial activity (soil basal respiration, microbial biomass carbon, activity of soil urease, phosphatases and catalase). Soil samples were collected from three sites (centre of peatbog, edge of peatbog and site closely surrounding peatbog) on the peat soil at three depth intervals (0 – 0.10 m, 0.10 – 0.20 m and 0.20 – 0.30 m) in northeast of Slovakia. Enzyme and microbial activities decreased with the depth, but the significant correlation was found with alkaline phosphatase. Average values of most soil biochemical indices were highest at the centre of peatbog with the exception of urease and catalase activity. Our results indicated that enzymatic and biological potential for organic matter mineralization was strongly correlated to soil pH, soil moisture and organic matter content.

Keywords: Peatbogs**,** chemical properties, biological properties, soil depth.

187 STUDY ON THE USE OF AGRICULTURAL BIOMASS COMPOSTED, AS ADDITIVE AND EVALUATION OF THEIR ENVIRONMENTAL IMPACTS

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ABSTRACT

Different agricultural practices and cultivations bring the reduction of organic matter in soil and microbial activity. Recovery of organic waste in the farm, by transforming in organic fertilizer, is one efficient system that contributes in one significant way the use of agricultural and environmental resources. The strategy of use of additives in agriculture aims preservation and growth of organic component, improvements of fertility, improvements of soil structure, the control of microbiological activity in the land, and also to affect the sustainability of the production. This objective can be reached through composting, that can be realized inside the farm, through determine protocols, in order to evaluate agronomic and environmental impact of the compost and the impact of it in quantity and quality of the production. The study is performed in 2008-2009 in EDE (experimental didactic economy) at Agricultural University of Tirana, realizing the production of the compost using different plant materials and housing materials to verify environmental effects, testing associations of plants with different doses to verify agronomic effects. The results shows that through compost as additives in agriculture we can control microbiological activities in land, fertility of the soil, attitude of organic matter and the impact in quality and quantity of the production. The process of composting is monitored for one long period and in the end before use has become analytic control of the final product to be compared with normative references. The analyses confirm that compost made and used is within the normative quantity limits. Through using the compost we can verify differences in microbiological property of the soil, in the content of organic matter and also in the quantity of the production.

Key words: compost, additives, organic matter, fertility, environmental quality

188 A NEW CONCEPTUAL FRAMEWORK RELATED TO NATURAL SELECTION, SEXUAL

SELECTION AND CULTURAL SELECTION

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ABSTRACT

This article takes in consideration Darwinian conceptual framework which includes natural selection, sexual selection and cultural selection in analizing mate choice. We have analyzed 618 individuals and 30% of them believe that mate choice is pure coincidence. On the other hand, 46.05% of a suk of 816 individuals consider appropriate the following concept: We love other people/other people loves us/ we get married to other people. In 363 individuals tested, 2/3 of them are married by interference of another, member of the family or otherwise. These data allow us to raise hypothetically questions about mate choice and mechanisms in volving it. Coincidence and the interference of other people in mate choice are caused by cultural selection which acts upon cultural modules. On the contrary, natural selection and sexual selection acts upon noncultural modules which includes genetical modules, epigenetical modules and neuor-endocrine modules. In this context, natural and sexual modules acts solely on the modules mentioned above present on live organisms.

Keywords: natural selection, sexual selection, cultural selection, mate choice, modules

189 SELECTION AND SUGGESTIONS OF SITE TYPE FOR SOLID WASTE INCINERATION SYSTEMS IN TURKEY WITH BASIS AVAILABLE IN EUROPE

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ABSTRACT

Hazardous waste must be collected separately from other waste and to be disposed of and the appropriate methods because of environmental and human health risks. The disposal methods of hazardous wastes are source reduction/prevention, recycling, pre-treatment, energy recovery, landfill and incineration. Hazardous waste incineration unites in Turkey are located in İzmit İZAYDAŞ and Izmir Aliaga PETKIM. In addition, Izmit TÜPRAŞ refinery has incineration plant only for own waste. In this study, taking into consideration the importance of the incineration plants, data and parameters increase studied these facilities. In addition, the acquisition of energy alternative of disposal methods for waste incineration technology at the importance and dissemination for Turkey should be discussed. In some European countries indicates the importance of the issue: “regulations of municipalities and municipalities associations, non-recoverable waste will have to burn the phrase". In particular, the problems of place selection were taken into consideration. In addition, especially the construction cost is taken into consideration, because it is very important factor for presentation of incineration systems. For this reason, some incineration plants models in some European countries were analyzed and financial terms and site selection parameters have been considered and some suggestions about incineration plants to installing in Turkey. The study was presented with the aid of the data obtained from the assessments and recommendations, taking into consideration the municipalities in our country, which plans to build incinerators, site selection consisted of the opinion that the decision-making process will support.

Keywords: waste incineration technology, alternative methods of disposal, energy recovery, site selection parameters

190 ENVIRONMENTAL POLLUTION LEVELS AND POLLUTION SOURCES IN TURKEY

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ABSTRACT

There are important economic changes in recent years in Turkey with rapid economic growth and structural changes. Population of Turkey has reached about 75 million in recent years and remains one of the fastest growing in the OECD countries. Major migration from rural areas to urban, industrial and tourist areas are continuing. Economic growth with environmental and social development is undergoing. In last decades Turkey experienced increasing environmental pressures on the decision-making process and has made significant advances in the energy and industry sectors. However, most of the necessary environmental infrastructure has yet to be created in urban and industrial areas. The road towards environmental consciousness will require strengthened environmental efforts from the central government, municipalities and the private sector as the environment had a relatively low priority in Turkey in the past. Thanking consideration on environmental pollution control is going well as a candidate of European Union. Stopping pollution is not possible with relation of industrialization. Industrialization is increasing mining processes and metal industry with their pollution. Turkey's soil has number of metal and also heavy metal, which is affecting their contamination in natural water source and agricultural soil land as well. In this study, we tried to put forward pollution levels of Turkey's natural source.

Keywords: contamination, heavy metal, pollution, Turkey, soil

191 USAGE OF SHRUB TREES TO PROVIDE AS BAIT PLANT AND IMPROVEMENT ACTIVITIES IN THE ARID AND DESERT AREAS

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ABSTRACT

Growing world's population nutrients production needs to use the arid and desert regions in addition to the existing production areas with good planning. It will be needed to bring into places that contribute to the production. These areas will support the production of plant and animal varieties selected, bred by appropriate methods for sustainable growth. It is needed, especially in production of animal feed, primarily in the trees form and shrub plants can be achieved to use. Suitability of plants to be selected in this region, which is important in these regions due to the scarcity of fresh water, provision of necessary water. Response of plants to use waste water or non quality water is also important. Shrub and tree form plants (*Atriplex* ssp., *Kochia prostrata*, *Prosopis juliflora etc*.) upbringing is important in pre-application and additional measures of success. These activities carried out for the feeding of domestic animals, such as biological diversity caused by the wind, which will contribute to the prevention of erosion. After all, the food in the world suffering from these areas, and areas in the future may be very absence for food production. Studies related to this area in international cooperation and knowledge transfer is very important.

Keywords: Arid and desert areas - Tree plants - Shrub plants - Animal feed

192 NON-STARTER LACTIC ACID BACTERIA USED TO IMPROVE CHEESE QUALITY AND PROVIDE HEALTH BENEFITS

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ABSTRACT

Lactic acid bacteria (LAB) constitute a heterogeneous group of genera which share many physiological features. LAB owe their designation to their capacity to ferment sugars primarily into lactic acid via homo- or heterofermentative metabolism. LAB are generally employed because they significantly contribute to the flavour, texture, nutritional value and microbial safety of fermented foods. For these reasons, LAB find numerous industrial applications. LAB also provide competitiveness against pathogenic bacteria colonizing the gastrointestinal tracts, thus, several food applications depend on their probiotic effects. Among food fermentations, milk-based productions are common to many societies, and, nowadays, they are being produced even in South-eastern Asian countries that have not been traditional cheese and fermented milk consumers. Cheeses may be classified following different criteria that also include the type of microorganisms involved in the ripening process. Among the different schemes of cheese classification, one of the most recent considers the distinction of the following raw materials and inocula: pasteurized milk and selected starters; pasteurized milk and natural starters; thermal treated milk and natural starters; raw milk and selected starters; raw milk and natural starters; raw milk without starters. Cheese during ripening is a hostile environment, typically characterized by the presence of salt, low moisture, 4.9-5.3 pH value, low temperatures, and a deficiency of nutrients. The difficult conditions are inhibiting towards many microbial groups, except some LAB species which are able to tolerate the environment of cheese and may exert several beneficial effects. Non-starter lactic acid bacteria (NSLAB) dominate cheese microbiota during ripening. They tolerate the hostile environment well and strongly influence the biochemistry of curd maturation, contributing to the development of the final characteristics of cheese. Several NSLAB are selected on the basis of their health benefits (enhancement of intestinal probiosis, production of bioactive peptides, generation of gammaaminobutyric acid and inactivation of antigenotoxins) and are employed in cheese-making. This review describes the ecology of NSLAB, and focuses on their application as adjunct cultures, in order to drive the ripening process and promote health advantages. The scopes of future directions of research are summarised.

Keywords: lactic acid, bacteria, cheese, quality, health, gammaaminobutyric acid

193 STUDY ON THE USE OF BIO INDICATORS FOR ASSESING THE ENVIRONMENT QUALITIES IN AGRO-ECOSYSTEMS

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ABSTRACT

This biodiversity that we possess today, is result of the evolution process on the earth that is affected by the process of disappearance and creation of new species, but the progressive growth of the disappearance of species (where human being is main responsible), is obviously verified not only in ecosystems but even in

agro-ecosystems. This big changes that have affected agriculture, have broken the balance that existed between agriculture and biodiversity. Many species valued as "key species", that have important functional roles, are directly interdependent from agriculture. Measurement and evaluation of their functional role in agro-ecosystems affect directly production, sustainability and environmental quality of agro-ecosystems. Ecological function of species can be significant in the evaluation of the biodiversity and their presence is an indication of different the characteristics of the environment, and because of this are called biological indicators. They can give one idea on biodiversity in one in an environment (in one area) and especially in agro-ecosystems. In this last 10 years are used bio-indicators, that are species or one group of species with different requirements (needs) respectively with a set of physical and chemical variables.This study analyses one system of bio-indicators with more levels, to evaluate reduction of biological complexity and his influence in two types of agro-ecosystems (traditional and conventional) and consequences in environmental qualities and heir sustainability.

Key words: agro-ecosystem, bio-indicator, specie, biological complexity

194 GIS-BASED EVALUATION OF GROUNDWATER VULNERABILITY IN ISTOG BASIN (DUKAGJINI REGION, KOSOVO)

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ABSTRACT

In recent years, groundwater quality has been deteriorating in many parts of Kosovo as result of agriculture and industrial activities, solid waste disposal, and urbanization. A preliminary assessment of vulnerability to groundwater contamination in Istog watershed area of Dukagjini region, Kosovo, was undertaken. The major geological and hydrogeological factors that affect and control groundwater contamination were incorporated into the DRASTIC model, to produce groundwater vulnerability and risk maps. Moreover, a Geographical Information System (Arc GIS 10) was used to create a groundwater vulnerability map by overlaying the available hydrogeological data. The final DRASTIC index indicated that the central area of the Istog basin is highly vulnerable to groundwater contamination.

Key words: GIS, evaluation. groundwater, vulnerability, region

195 U.S. DOLLAR AND ITS ROLE IN THE ECONOMY

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ABSTRACT

By analyzing the events of recent years in economic terms, in this paper I will explore the role and importance of the U.S. dollar in the economy. I'll do a summary of how the U.S. dollar has started to lose its value and how this depreciation is considered an event of unquestionable consequences on the future of U.S. and global economy. So, I think it is important to focus on the effects that has the depreciation of the U.S. dollar. In the paper raised two hypotheses:
How did the U.S. dollar depreciation effect in the U.S. and world economy?

Did the changes of value in the U.S dollar has affected the level of its use in the Albanian business? The purpose of this paper is to recognize the impact on U.S. and world economy, resulting from the collapse of the value of the U.S. dollar and the consequences that will bring this decline in the future.

Key words: Albanian Lek, Balance of Payments, Euro , Global Economy, U.S. economy

196 USING OF ALTERNATIVE PLANT IN OUR ENVIRONMENT CHANGING WITHGLOBAL WARMING

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ABSTRACT

After 19th century, development of industry has ledtonaturalclimatechanges.This process accelerated with add of human impact. Properties has beenthreateddueto global warmingsuch as soil, water, plant.The most important source is water which restriction with the effect of global warming. Waterresourcesshouldn'tbe consumedin favor of onlypeople, but also in favor of thenatureto be protected. But, use of the water makes dispensable because of systems of urban open grenspace planning and cultural exchange requests.The negative effects of climate change haven't borders and these negative effectis have rapidly spreading in every field in case of slight. Due to increasing carbon dioxide rate in the atmosphere, of climate change should not be seen as the only environmental crisis. In addition, acid rain be ocured because of carbondioxide emissions.This reason is fact increased acidity of the oceans that are dimensions to ignore. All of this negative situation, scients 'coral reefs and other marine creatures, have been damaged in irreparable have reported. In plants that are important to all living; its have exteremely influenced by climate change. Especially plants species are risk reduction in global warming that percent of ten depend on, this is a serious threat for living organisms. Turkey increased have plant species more than all Europe's. In that importance of taking measures necessary maximum of there is a serious need to research on plantations. Because, the selection of drought-tolerant plants should reach more detaile according to a esthetic feature of the functional properties. Determination of natural species in plantation, increased of production plants in wooded and promotion is needed. Therefore, healthy plant for considering such as to ensure tissue, local adaptation to the environment, environmental quality improving, with low maintenance cost, require less water that was revive topic the use of natural plant species. In this study, in order to reduce maintenance and water costs of plants using in light-green areas, ensure a healthy plant tissue, xerophytic plant materials, which have little water-necessity, were determined and analyzed in terms of plant design.

Key words: Global warning, lascape, use of plants, drought

197 ANNUAL AND PERENNIAL HERBACEOUS ORNAMENTAL PLANTS USED FOR PHYTOREMEDIATION

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ABSTRACT

Photoremediation is a plant-based technique in which accumulation ability for several level of pollutions. It is a sustainable, cost effective and greenery supported biological approach. Urbanisation and industrialised resulted in increasing environmental pollution. Ornamental plants that can grow and tolerate in polluted areas can be used for remediation of pollutions. Some of the annual and perennial herbaceous ornamental plants has high durability against pollution; As, Cd, Cu, Ni, Pb and Zn by making harmless the spool or on site contaminants like atmosphere has the ability to export. Ornamental plants gain importance for their aesthetical and functional qualifications as remediation of polution for urban green areas which has intensive pollution from traffic, industrial and agricultural areas. With this study, it's aimed to determine ornamental plant species used at pollution intensive urban landscape areas and their usage.

Key words: Annual and perennial herbaceous plants, ornamental plants, pollution, phytoremediation.

198 NATURAL PURIFICATION SYSTEMS, AQUATIC PLANTS AND THEIR RANGE OF USE

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ABSTRACT

Water and process of purification of it have a crucial effect on living beings. Using of the residential and industrial areas that reduces operating costs, chemical-free natural water treatment system which also protects the environment at the same time provide economic and environmental benefits. In this context, aquatic plants, which are used as a natural treatment system, are also used to prevent environmental pollution by absorbing of nitrogen, phosphorus, potassium and carbon elements from the domestic wastewaters and by absorbing zinc, cadmium, selenium and copper from the industrial waste waters also. In addition, since aquatic plants such as duckweed and water hyacinth that is rooted in fringle and capable of self-renewal transmit the oxygen to the water through their roots, they enrich the oxygen level and supports the continuation of the existence of the fishes in ecosystem, as well. Aquatic plants must be correctly identified for what purpose to use as a natural treatment systems. Because the ones that were grown using nutrients in waste water are used as a protein-rich animal feed while the ones grown in industrial waste cannot be used. In contrast, by anaerobic ambient fermentation the production of biogas containing highly methane gas can be made by aquatic plants that grown in industrial waste waters, include trace amounts of nickel and cadmium elements. It is known that depending on the development stage of the crop harvest and the type of waste water, the contents of the plant, which is rich in vitamins and mineral, enrich the carbohydrate and protein contents so can be used as a food additive. On the other hand, the therapeutic properties of aquatic plants have created interest in phytotherapy researches. Because of their anti-bacterial, anti-fungal and anti-larvasidal microbiological properties lead such plants to be used in pharmaceutical industry.

Key words: Duckweet, water hyacinth, aquatic plants, metal absorbtion, waste water treatment, antimicrobial effects, carbohydrates.

199 ENVIRONMENTAL LAW, BASIC CONCEPTS AND PRINCIPLES GENERALLY; DEFINITION, PROTECTED JURAL PROFITS AND CONCEPTS

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ABSTRACT

Environmental Law; is an original discipline area that is different from all of the other branches of law. So, one should examine the environmental law different from the other traditional approaches. However, 'what will be' generally does not cover 'what should it be' and environmental problems are researched with traditional approaches but this is not a right thing to do. The aim of the environmental law is to protect the nature. The aim of the law is to protect the nature which is our common existence, how to improve it, protection of the natural resources and the lands in urban and countryside, prevention of soil and air pollution and the protection of the plant and animal existence of the country. In order to have convenient and drastic solutions one should evaluate the nature concept and the meaning loaded to it, the content of it and by perceiving the problems in essential reason-result relation. At early times in the struggle with the environmental problems, traditional methods were being used. Then this result in the reality of the incompetency of the private law solutions and the legal holes in the legislation that can just be completed with private law methods. In the second grade; the environment legislation started to be formed and the absence of the legislation was attracted by the decisions and performances of the law. The studies to cope with these holes in the law are started to introduce. In the third grade; as a result of the interdisciplinary studies related both private and public sectors, environmental law and performances have been tried to improve. It should not be remembered that the environment laws related to the ecology's basic rules ought to be in the legal systems of the countries and the necessity of jural sanctions' forming upon the protection of the current ecological balance. With these reasons the basic science researchers should always take care of the basic rules of the ecology which locates in the coverage of the environment law side disciplinary. Their necessities for not to destroy the environment while studying and working for the advantage of human beings should be essential and they should be supervised by law.

Key words: Environmental law, ecology, jural sanctions.

200 STUDYING ENVIRONMENT FRIENDLY GEOTERMAL ENERGY WITH AN AEGEAN REGION EXAMPLE

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ABSTRACT

Our World has been experiencing distasters caused by humans every otherday. Among the hazards given to nature are chloraflroracarbon gas caused airpollution and global warning because of ozon gases thinning. The geotermal energy usage and its growing up serves a great help to overcome these problems. Geotermal energy is a naturel resource formed by magma steam that are under fault-line. Geotermal energy as an enviroment friendly energy; is very important as it is a safe and useful source. Turkish Republic is a geologically young

country has and a rich down resources. In our country, geotermal energy taking place of fosil fuels helps positively. That is why; firstly our people should get knowledgeable about this and be aware of matters about environment. The studies that are done in schools are going to help this knowledge pass to youth first and then via youth to the families. Well-brought up and environment-conscious youth is going to help forming a more liveable environment.Alongside this with the help of local minucipalies, universities and press, this consiousness about this matter should grow up. The cooperation with other countries with the same features like Turkish Republic will make this matter spread worldwide. We should not that forget that the hazard given to athmosphere is rapidly growing and the solution is with in our will. The greatest support is geotermal energy which is also within our grasp. With the help of this thought; this work is based on one of the geotermal rich region Aegean Region as an example to Geotermal Energy.

Key words: Aegean region, geotermal energy, proctecting enviroment, sustainable energy, enviroment friendly

201 CAPER; THE EVALUATION OF ITS EFFECTS ON HUMANITY AND ENVIRONMENT

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ABSTRACT

Caper, known as deli karpuz and turşu otu in Turkey, is a perennial plant that is member of *Capparaceae* family, compatible with the Mediterranean ecosystem and resistant to drought and high-salinity. The required water of the plant is easily supplied from its own body. Due to its feature, the plant is suitable to be grown in arid regions, parks and gardens that are in limited irrigation. When compared with the other most plants, caper can remain as a green for a long time without any water even in the summer season. They can be used for prevention of soil erosion owing to the physiological structures similar to shrubbery and are resistant to fire. Capers, effectively used in nature protection and environmental arrangements, are very important to use in medicine, food and cosmetics industries. They are also used as hypoglycemic agents as well as their antioxidant, antifungal and anti-diabetic effects in pharmacology. Additionally, it is interesting that the caper flower buds can effectively be used as kidney disinfectant and to improve in liver function and are fairly popular as salted and fermented in food trade of the world. It has been reported that caper contains glucosinolate, phenolic acid, tocopherol and flavonoid derivatives. Although it contains scarcely heavy metal such as cadmium and lead, it is suitable to consuming by both human and animals. Since, it is an energy source in terms of crude protein and fiber with richly nutrient contents like potassium, calcium, magnesium, zinc and iron.

Key words: Capers, ecosystem, antimicrobial effect, food and agriculture.

202 RESEARCHING FOR THE POSITIVE AND NEGATIVE EFFECTS OF RITHA ON NATURE AND LIVING BEINGS

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ABSTRACT

S. emarginatus, s. mukorossi, especially *s. trifoliatus* sapindus species of Ritha, a member of *Sapindaceae* family, are found in many. Ritha with a high rate of saponin, grows in tropical regions of Asia in 200-1500m. Ritha is a plant which has a very important impact on both living beings and natural habitat. Ritha, is known as bio-surface active substance, whose fruits, roots and even leaves has very positive effects on environment and human beings' health. It is used in many ranges like medicine, pharmacy, cosmetics, agriculture and veterinary because of its positive features. For instance, Ritha's fruit and roots are used as an anti-migraine headache, antioxidant, antibacterial, antiviral, anti-diabetics and anti-tumor agents in pharmacology while it is also used for curing other important diseases like asthma, eczema, psoriasis and epilepsy in medicine. Growing on a soil contaminated by chemical pollution helps the purification of the soil, as well as helping to improve the quality and efficiency of the land, the plant contributes to the environment by this feature. Ritha's leaves have the ability to grab the heavy metals like mercury, cobalt, chrome, iron and zinc, and similarly its fruits resolves the inorganic pollution of lead and cadmium. Furthermore, it biologically decomposes harmful organic molecules such as hexachlorobenzene and naphthalene. Besides nectar of the plant has a killer effect on flies. For animal health, its serious levels of lethal effect on larvae of Southern cattle mite's species called *Boophilus microplus* that is hazardous transporter is also very important. Unlike its positive effects on living beings and nature, Ritha has a lethal effect on sperms and fishes, which is a disadvantage recently attracted by the researchers. Ritha, used in cosmetics industry as soaps, skin blemishes removal, firming and tonic, also used in recovery of the brightness of darkened valuable metals like gold and silver.

Key words: Ritha sapindus, chemical waste, soil pollution, cosmetic industry.

203 A DRAINAGE BASIN MANAGEMENT PROPOSAL MODEL "CASE STUDY OF DEVREKANISTREAM SUB- BASIN"

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ABSTRACT

Water resources and management subject has always been significant for societies throughout history. Understanding of the importance of water between developed and developing countries activated management models based on systematic, participatory and holistic perspectives. The study, has been carried out at Devrekani Watercourse Sub-Basin-which is a sub basin of Western Black Sea Basin of Turkey. The aim of the study is to develop integrated a basin management model for DevrekaniWatercourse Sub-Basinwhich will basically base on its natural a spatial development dynamics. In the scope of the study, applicability of the proposed model to other drainage basins in Turkey is defended. In this context, the development and providing of national level hierarchy is also examined.

Key words: Integrated basin management, water resources, Turkey.

204 THE EFFECT OF LIFE QUALITY AND USER SATISFACTION ON URBAN DESIGN

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ABSTRACT

In order to design appropriate, satisfactory and qualified living spaces for users, their personal assessments are required. Life quality is ultimately an important phenomenon and an assessment tool for happy people and a healthy community. Urban quality is a complicated concept, which is above the predetermined measurements of facilities' presentation levels such as urban infrastructure, communication, transportation and housing, within the subjective perceptions, behaviours and values varying in groups and individuals and in the places described as urban in terms of social, economic and spatial elements. Within the scope of this study, the factors affecting life quality and the criteria determining residential area satisfactory are investigated and the effect of the relationship between life quality and satisfaction is evaluated in the light of the findings of the survey results. Additionally, this study is supported "The effect of quality of life measurement of open and green areasin kastamonu city" named project by KÜBAP-01/2012-24.

Keywords: life quality, urban design, urban quality

205 NUTRIENT BALANCE AS AN IMPORTANT TOOL TO A BETTER PERFORMANCE OF DAIRY FARMS IN ALBANIA

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ABSTRACT

The big dairy in farms in Albania are getting more complex than before. They have started to be more concentrated in last years with breeds that produce higher yields of milk and very depended on purchase feed outside the farm. The economic factor and environmental impact are very much related with nutrient balance of whole farm. Therefore strategies and software to manage and calculate these balance are important tools in controlling the impact to the environment and the overall performance of dairy farms in Albania. Relation between the nutrient balance and utilization of nutrient in dairy farms are not fully understood from dairy farm operators in Albania and it seems that is new concept. The dairy farms are not requested management plan to control the manure and wastewater as well as a yearly plan of nutrient management. These two plans should be an important objectives in coming years according to the request of a effective management plan of discharges for every dairy farms in Albania. The research on whole farm dairy nutrient balance in central part of Albania is in its initial stages and it aim to provide an overview of whole farm nutrient balance situation and used its findings as an indicator to overall performance and environment impact of Albanian dairy farms. This article provides information of the present situation of dairy farms in relation with nutrient balance and compare it with other international findings. All the calculation of nitrogen ustilization express the balance as proportion. So the information of nutrient balances of diferent farms target evaluated in the study (only based on the information collected direct from target farms in central part of Albania) result on inbalances and direct losses of nitrogen ranging from 62% -89%.

Key words: Nitrogen Balance, Nutrient, Whole farm, Management, Feeding,

206 GLOBAL CLIMATE CHANGES AND EFFECTS ON URBAN CLIMATE OF URBAN GREEN SPACES

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ABSTRACT

Global climate change and drought are major threats of our age. The future of earth ecosystems is increasingly dependent on the patterns of urban growth because cities are growing rapidly worldwide. Urban ecosystems differ from natural or rural ones in many obvious ways and are also often of poorer quality than their rural equivalents. Human activities, such as building, traffic, or industrial production affect the quality of air, water, and soil which impacts ecosystems in many ways and the activities is causing global climate changes. Green space is an important part of complex urban ecosystems and provides significant ecosystem services. There are positive contributions on a properly designed and implemented a green spaces for bio-climatic environment creation, micro-air-climate creation, climate control to provide increase of oxygen decrease of pollution amount and dust reduction, energy savings provision, reduce the negative effects of rainfall, some benefits on city climate. In this study, on global warming and climate changes important threats of our era and effect on the environmental damage will be highlighted. Creation of the green spaces and the positive contribution to climate in the city will be described.

Keywords: Global climate change, urban ecology, urban green spaces.

207 EVALUATION OF CADASTRE RENOVATION STUDIES IN TURKEY

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ABSTRACT

In our country, the first institution cadastre has taken up over one hundred years and in recent years, by means of bidding for cadastre, it has been completed about % 97. In this long period , both the changes in the measurement methods and also improvements in technology have resulted in the production of map sections in different measurement systems through varied procedures and this has led to restoration without completing the cadastre. For about 30-40 years the cadastral maps have been restored due to a number of deficiencies. Recently through the amendments made to the cadastral regulations , 'Forming the base of spatial knowledge system' has been added to the aims of cadaster. Together with that new aim , the cadastral renovation works , supported by the credits of World Bank , have accelerated and especially across villages the renovations of the sections made by using graphic method have been accelerated. Our cadastral regulations have prohibited the second cadastre but by means of an exceptional term it has given way for the renovation works. However, the cadastral renovation works in progress are far away from realizing the aim of 'Forming the base of spatial knowledge system' and only digitisation is being made. In the study, as examples of the old and new cadastral renovation works, two sections are studied and the shortcomings of the cadastral renovation have been pointed out. The renovation cadastre made according to the former renovation regulations of a section of a quarter once a village , whose first institution cadastre was made through photometric method and also the renovation cadastre made according to the renovation regulations in operation of a village, whose first institution cadastre was made as graphic, have been studied. By means of this study both methods have been compared and how sufficient the cadastre work done is for today's needs and also the requirement of the second cadastre have been studied.

Key Words: Cadastre, renovation, spatial knowledge system, second cadastre

208 THERMO-FLUID DYNAMIC BEHAVIOR OF AN AIR SUPPLY CEILING DIFFUSER UNDER

DIFFERENT CONDITION

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ABSTRACT

In this paper, thermodynamic behavior of an air supply ceiling diffuser, part of an air conditioning plant, is analyzed. Also are evaluated the influences, that have in the solution, the values of characteristic parameters of turbulence and the resolution of computational grid. The aim of study is interesting especially for sterile rooms. Analyzes are made through 3-D numerical simulation of finite volumes with aim to simulate thermal and flow fields in a VAV (Variable Air Volume) type square ceiling diffuser, which is characterized by complex geometry and composed with concentric elements. In this simulation, fields of temperature, velocity and turbulence intensity are studied. Simulations are performed for three different air flow rates and two turbulence models k-ε Realizable and Standard. In conclusion, comparing the results obtained from simulations was found a relation that express the velocity as function of flow rate and position, in a symmetry plan of computational zone.

Keywords: Air distribution, VAV (Variable Air Volume), environmental air quality, simulation.

209 INSURANCE SERVICE ON PROPERTIES – INUNDATES IN SHKODRA

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ABSTRACT

The industry of financial services is so hard and complex at the same time. Though for many years, in Albania, the insurance market was enriched not only by the services offered by INSIG company – public owed, at this market many other private companies were added. Many of the insurance companies, make their gross income mainly from the obliged insurance services. The consumers behavior is dominated from the responsibilities that are born from businesses debts born from the relations to banking loans, from partnerships with foreign businesses, different European partners, transport system etc.The main reason, that we focused our study at the property insurance category is related with the inundates phenomena that is often happening recent years in Shkodra and Lezha ares. Apparently, exists always the potential risk that this area, specially during winter and fall, to be covered from water, for this reason, during this paper we are trying to study the present market, and the potential of insurance service on properties from the inundates risk. At one side of medal the inundates of a large area is a tragic situation for the inhabitants, but on the other side the insurance market targets this situation as the best opportunity for market extension. This paper makes a reflection of the situation of property insurance, the main reasons that actually influence the scheme of insurance services, also expanding new prospectives for this niche of insurance market.
The main objective, of this paper, is related with the evidence of the insurance market at this area (Shkodër, Lezhë), valuating the new potential that have the insurance companies.The conclusions that we have discovered from this study, are related mainly to the potentials of insurance market and the spaces to make people and businesses act more responsibility to this phenomena not strange any more to this area.

Keywords: Property insurance, individuals and businesses, insurance companies, inundates – a climatic phenomena.

210 THE EFFECT OF MAIZE PLANTS' DENSITY IN THE EFFICIENCY OF THE DRY BEAN YIELD IN AN INTERCROPPING SYSTEM

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ABSTRACT

In conditions of our agriculture, with small farms, the association of agricultural plants is an efficient way to increase the income for the unit area. The association of maize with dry bean is an old practice of cultivation, while the association of dry bean with maize is a newer practice one. The large surface planted with direct bean(14-16 thousand ha) and the little opportunity to mechanize its harvesting, make necessary the application of this way of cultivation.The aim of this study was to see the effect of maize plants' density on the efficiency of the yield of the dry bean.The results obtained showed that 'Shijak' bean cultivar and the maize hybrid (R-89) form appropriate components of association. Also, the density of maize plants from 10-30 thousand maize plants/ha prolonged the bean's vegetative cycle and reduced linearly the main components of yield. However, the density of 15 thousand maize plants/ha was better, because this density isn't stressful to the bean yield. In this level of association was achieved the same yield of dry bean (as in the case of its direct cultivation), and at the same time was produced 6-9 quintal/ha maize. This way of association increased the income for unit area with 15-25 thousand leke and can be applied successfully in the area where the water balance is sufficient

Keywords: maize plants, density, yield, intercropping, system

211 FOURIER TRANSFORM INFRARED METHOD OF DATA PROCESSING FOR THE CHARACTERIZATION OF HYDRATION PRODUCTS IN CEMENT BASED MATERIALS

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ABSTRACT

This paper summarizes the basics of Fourier Transform Infrared (FTIR) method of raw data processing and focus on the utilization for the FTIR spectra for the identification of hydration products in cement based materials. The raw data obtained as function of intensity versus time (time dependent function) can be mathematically transformed via a transform function called Fourier transform into a frequency dependent function. The Furie transform mathematically speaking consists on the summation of time functions of the raw signal and their conversion into frequency domain functions. This is done with the purpose of assessing the amplitudes and frequencies of the constituent waves in the spectrum. The splitting of time dependent signal by means of individual harmonic frequency dependent functions enables to get the amplitudes and frequencies of each harmonic. The last ones correspond to the coefficients of the respective harmonic function. Knowing the amplitudes of each harmonic, it is easy to calculate intensities distribution for each frequency, whereby intensities are proportional to the square of the amplitude. The resulting intensity – frequency or wave number spectra of the processed signal can be employed to identify the hydrated phases obtained in cement based materials. The identification consists on comparing the major absorption bands of the processed spectrum with absorption bands of pure phases.

Keywords: Fourier transform infrared method, hydration products, cement materials

212 FLORISTIC ANALYSES OF THE AREAL OF *PUNICA GRANATUM* L. IN ALBANIA

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ABSTRACT

The wild pomegranate (*Punica granatum L.*) is a member of the monogenus family; *Punicaceae*. It is a valuable plant that grows from Hani i Hotit in the north till Milot in the center of our country, between the altitudes 0-700m over the sea level. The study of the area of this plant is based on the floristic analyses. Floristic analyses include family richness, biologic and chorological spectra and threatening level. For the determination of areal of *Punica granatum L.* several expeditions are done during the period June-August 2012 in 10 stations. 117 species which are present in this study correspond to a richness of 39 families. Biological spectra include 30% Hemichryptophytes, 27% Terophytes and 21% Phanerophytes. Chorogical spectra show higher number of Euro-Mediterranean species (27%), Mediterranean species (21%), Euro-Asiatic species (15%) and European species (8%). This areal has 9 species which belong to the category of endangered species (E) according to the IUCN list: *Salvia officinalis*, *Satureja montana*, *Pinus peuce*, *Origanum vulgare*, *Laurus nobilis*, Juniperus *oxicedrus*, *Juniperus communis*, *Juglans regia* and *Hypericum perforatum.* Floristic analyses, during the period June-August 2012, show that this areal of the wild pomegranate is poor in number of species and consequently poor in number of families. This is mainly a result of its habitat, kserofitic soil and stones and although as a result of low Abundance-Dominance values.

Key words: Punica granatum, floristic analyses, family richness, biologic spectra, chorological spectra, threatening level.

213 ANIMAL WELFARE IN ALBANIA

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ABSTRACT

In comparison with other farmed animals, much research has been carried out on methods for assessing the needs and welfare of dairy cows. In considering the welfare of dairy cows, some of the most important aspects of poor welfare are disease conditions, in particular foot and leg disorders and mastitis. Reproductive and behavioral problems are also relevant indicators of poor welfare. As animal welfare is the physical and psychological well-being of animals, it is measured by indicators including behavior, physiology, performance, reproduction and longevity. Welfare is defined according to Broom (1986) as follows: "the welfare of an individual is its state as regards its attempts to cope with its environment". According to the preliminary data on animal welfare survey with consumers in Tirana the majority of the respondents thought that animal welfare is important for the farmers and animals. In addition the majority of respondents are ready to pay higher price for the animal origin products produced in farms respecting and treating well the animals.

Key words: animal welfare, survey, survey, consumers.

214 FAILURE OF REINFORCED CONCRETE BUILDINGS DURING A RECENT EARTHQUAKE WITH A MODERATE MAGNITUDE IN TURKEY

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ABSTRACT

An earthquake with magnitude (M_L) 5.7 occurred on May 19, 2011 in Simav, Kütahya located in the western part of Turkey at 20:15 local time with the epicentral coordinates of the 39.1328N – 29.0820E by the Earthquake Department of the Disaster and Emergency Management Presidency (DEMP). The DEMP reported the depth of the Kütahya-Simav earthquake as 24.46 km. The earthquake resulted in 2 casualties and more than 122 injuries. Building stock in Simav city center is generally formed from reinforced concrete structures and masonry structures. In this paper, the performance of reinforced concrete buildings during Simav earthquake in Turkey is discussed. The objective of this paper is to provide a brief overview of damages of RC Structures after Simav earthquake. Observations from the earthquake damages are discussed and compared with TDY 2007(Turkish Earthquake Code). The major deficiencies of reinforcement detailing in Simav is discussed and finally, a short overview of advices are mentioned.

Keywords: Simav Earthquake, Earthquake hazards, reinforced concrete failures, structural deficiencies.

215 AN EXPERIMENTAL STUDY ON THE BEHAVIOR OF INFILLED FRAMES UNDER HORIZONTAL LOADING

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ABSTRACT

In this study, seven steel frame systems which have different geometries were tested. One bay one story steel frame systems were filled with air-holed brick wall. The steel frames which were tested in the study have different span / height (L/H = 0.9, 1.2, 1.4) ratios. Each of the steel frames with different span/height ratio were tested under three different conditions, first the span was empty , in the second condition the span was filled with air holed brick wall and in the third condition the span was filled with air-holed brick wall with plaster. By applying lateral forces, lateral displacements, crack patterns, failure modes and ductility were investigated on the specimens.

Key words: In Filled Steel Frames, Lateral Loads, Lateral Stiffness, Air Holed Brick Wall

216 STRENGTHENING OF RC FRAMES BY EXTERIOR PREFABRICATED PANELS

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ABSTRACT

In this study, a strengthening method that will differ from the others due to its outdoor application and not requiring the vacation of the building was investigated. In this context, the behaviors of these reinforced concrete frames prepared in ⅓ scale with the mistakes commonly encountered in existing buildings of Turkey was researched experimentally under reversed – cyclic lateral loading conditions. The characteristics such as strength, stiffness, energy consumption capacities of the multi – storey and multi – span brittle reinforced concrete frames of insufficient seismic resistance were obtained at the end of the tests and they were compared with the results obtained for the strengthened/improved systems formed by the addition of prefabricated outdoor panels to the existing reinforced concrete building having identical characteristics with the test specimens.

Keywords: Reinforced concrete frame, prefabricated panel, strengthening, seismic effect.

217 INVESTIGATION OF THE DRINKING WATER QUALITY IN THE SOURCES OF HATUNSARAY TOWN OF KONYA CITY

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ABSTRACT

In this study, cation levels of samples taken from the five drinking water source in the Hatunsaray Town of city centre of Konya were measured and the characterisation of chemical results were compared with Turkish Water Regulation by samples collected. The measurements of cations were carried out by the ICP spectrometer method in the laboratory of the Faculty of Agriculture, Selcuk University. The total hardness, nitrate, ammonia, chloride and sulphate concentrations by the Cadas 200 Spectrophotometer apparatus were measured. At the end of the study, some of the samples were seen that their levels were out of the values given in TS 266 standards. Most of the chemical analyse results were observed that they were in acceptable range. According to the analyse results which had been carried out, the well waters from which the samples had been taken, were determined that they were in the hard water category.

Keywords: Water quality, Hatunsaray, Konya, Cation, Anion, Hardness.

218 PROMOTION OF ECOTOURISM IN PROTECTED AREAS OF THE REPUBLIC OF MACEDONIA

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ABSTRACT

Ecotourism as an important pillar of mass tourism should be a function of protection of natural heritage and socio-cultural changes. On the last decades protected areas are in a continuing interest of lovers of nature values therefore it is necessary the managers of these areas, tour operators, local communities, local and central institutions and other stakeholders to promote the natural and cultural values of these areas. The

Republic of Macedonia has 83 protected areas (8.7% of territory), which must be utilized as a basic destination for the development of ecotourism and other similar forms of tourism such as mountain tourism, sustainable tourism, etc and not to be considered just as an idea through which we can preserve natural resources. Low rate of encouraging successful tourist commercial operations and ecological healthy in protected areas of the Republic of Macedonia, may be as a result of poor economic development and not enough involvement of stakeholders. Therefore this study intend to promote opportunities of development of ecotourism in these protected areas

Key words: Ecotourism, protected areas, Republic of Macedonia, natural heritage

219 QR CODE APPLICATIONS IN ENVIRONMENTAL ENGINEERING LABORATORIES

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ABSTRACT

Qr code (Quick Response) is basicaly a two-dimensional matrix code that created by Japan corporation (Denso-Wawe) in 1994. Quick response codes are magnificant barcode type that can store over 2000 characters of text information. Therefore, It has been widely used in many industries. Recently, the QR Code system has become popular in alot of industry due to its fast readability and greater storage capacity compared to standard The Universal Product Code (UPC) barcodes. In this study, a computer software was prepared using visual basic “Qr Code in Environmental Engineering Laboratories” (QRiEEL) with QR code components. Users can make QR code on all environmental engineering laboratory (EEL) equipments, chemicals and users with this software. Several data that compiled by the computer can store in a very small area about 3x3 cm^2 with Qr code by this software. A lot of data about EEL equipments, chemicals and user informations can be stored in a QR code. These are, Identify (Id), data types, manufacturer, volume, quantity, remaining volume or quantity, expiration date, date of production, molecular mass, density, solubility, basic formula etc. And also user informations Such as Id, name, surname, title, contact information, frequency of usage, time information, authority and etc. can stored. In order to access any stored data, user only needs either current computer software or Qr code smartphone application.

Keywords: QR Code, Environmental Engineering

220 AEROGEL DRYING METHOD OF CEMENT PASTE THAT COMBINES SOXHLET EXTRACTION WITH SUPERCRITICAL EVACUATION

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ABSTRACT

We report herewith the development of a new drying method that combines soxhlet extraction with the supercritical evacuation of the resulting solvent (nitrous oxide) -water solution. The specific surface area values of the aerogels obtained with various extraction cycles indicate an optimal extraction time, which is about 64 cycles. This time of extraction which gives an aerogel with the highest specific surface area, can be assumed as the most efficient in order to extract as much as possible physical water content without collapse of the structure. This drying method is the most efficient method for preserving the micro and nanostructure

of hydrated cement gel in order to assess the real porosity and surface area, which are necessary for understanding and controlling the material properties and behaviour.

Keywords*:* Soxhlet extraction; aerogel drying; cement paste; surface area

221 ON THE PROPERTIES OF CONCRETES PRODUCED WITH BLENDED CEMENTS THAT INCORPORATE LOCAL INDUSTRIAL SOLID WASTE

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ABSTRACT

Alternative cement technologies represent increasing interest due to the growing environmental concern and relatively large carbon footprint of the cement industry. This research work contributes with some properties of blended cements that incorporate industrial solid waste found in the area (calcareous fly ash and ferro-nickel slag). Some main properties of the concrete specimens that were produced with those blended cements are given as well. As we have previously demonstrated in similar research works, this technology is a sound economical and environmental alternative of waste management and is in line with the goal of sustainable development of the building and construction sector.

Key words: Industrial solid waste, blended cements, properties of concretes

222 DETERMINATION OF SOME PHYSICO-CHEMICAL PARAMETERS IN OSUMI RIVER

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ABSTRACT

Rivers are important sources of surface waters in Albania. Monitoring and evaluation of environmental conditions of rivers is an indispensable need for determining the quality of aquatic ecosystems. This study was carried out to assess the present status of physic-chemical parameters of Osumi River, such as temperature, pH, Total alkalinity, ammonia ions, COD(IMn), nitrate ions, chloride, TSS, TDS. The samples were collected during March 2012-March 2013.Three sampling stations were established for this study. Comparing the physic-chemical parameters with EU Directive [78/659] and Norwegian Institute for Water Research, resulted that Osumi River was classified in class 1 on the pH and Total alkalinity, mean value of ammonia ions 0.49mg/L exceed the limit of 0.16mg/L $N\text{-}NH_4$ of the EU Directive , according to COD, Osumi River was classified in class 5, mean value of N-NO3 2.23 mg/L is within the norm of 2.63 mg/L for 654 river stations in Europe. Mean concentration of phosphates results 0.624 mg/L, is out of the norm 0.4 mg/L of the EU Directive, value of chloride 208.3 mg/L ranged within the limit of 250 mg/L by USEPA, mean value of TSS 205.57 mg/L classified Osumi River in class 5, max. value of TDS 470.56 mg/L and mean value 232.87mg/L ranged within the limit of 500 mg/L related to WHO 2004 and USEPA, iron ions varies from 0.1-0.3 mg/, Osumi River waters were classified in class 3 by NIVA. This study provides the preliminary data for the evaluation and monitoring of physic –chemical parameters for the current status of Osumi River.

Keywords: physic-chemical parameter, water quality, aquatic system, Osumi River.

223 IMPACT ASSESSMENT OF NUTRITION INDICATORS IN COW MILK PRODUCTION USING THE BACKWARD REGRESSION METHOD

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ABSTRACT

Livestock accounts for over 60% of agricultural production in Albania. In the lower part of our country, most of this agricultural production is bovine milk. The milk production in a national level is low even though the genetic skills of producing of the breeds are high. These low degrees of exploitation of the genetic potentials are conditioned by many factors such as breeding and feeding, with the latter being always brunt. In this context we have launched our study which aims to show the influence of food on production levels in dairy cattle herds, within which are found very different production ranges from 3000 to 5000 kg milk / head / year. For this purpose, mathematical methods were used of such as the multiple selecting backward method to verify the impact of each indicator. The results of the study show that energy and protein levels affected production most.

Key words: cow milk, nutrition indicators, backward regression

224 ENVIRONMENTAL EDUCATION IN THE ELECTRONIC MEDIA IN KOSOVA

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ABSTRACT

Electronic media in our country are numerous and compared with other problems which are treated, certain space occupied by the environmental problems which is diverse as: air pollution, water, waste, pollution prevention and environmental protection. The aim of the research was to create a clear overview for space that dedicate this medium to environmental issues, environmental problems addressed in particular waste management, environmental emissions statistics and knowledge that should be a reporter for the realization of such emissions. We have researched three electronic media: TV-RTK (Radio Television of Kosova-public medium), TV Klan Kosova (private medium) and TV- Koha Vision (private medium).The questionnaires are prepared and they are delivered three media to fulfill with data. Data from the research are processed with SPSS software and Excel and from the results we have worked tables and diagrams for comparisons. In the electronic media the environment has not enough space, the treatment of environmental topics mainly is informative format or responsive to problems and environmental activities. To have a clean environment and healthy, electronic media like TV have responsibility, which should give greater space environmental issues,

which should be included extensive information for the environment protection from pollution and negative impacts that can be affect in health, educational programs for environment and waste management should be included in every electronic medium like TV-s because they are most viewed.

Key words: environmental education, waste, electronic medium, statistics, research, questionnaire.

225 BIO- ECOLOGICAL DATA ON THE HABITATS OF *VIPERA URSINII GRAECA* (NILSON & ANDRÉN 1988) IN ALBANIA

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ABSTRACT

Vipera ursinii graeca as new reptile taxon for Albania were observed during 2000 (2006) carried out in the Cajupi Mt, Gjirokastra region. This subspecies was known only in isolated mountainous of central Greece. The latitude areal in Albania is over 1000 meters and until now this subspecies is met only in the Mts range Trebeshine–Dhembel-Nemercke and Shendelli-Lunxhei-Bureto (in Greece it was found in 1800-2300 meters above sea level). In its actual areal in Albania it is found in subalpine habitats of pastures and meadows with grassy and bushy domination. The pastures of its habitat are covered mainly with grassy vegetation such as: *Asphodelus albus (Miller), Trisetum vlavescens (L), Trifolium pretense (L), Dactylis glomerata (L), Ornithogalum oligophyllum, Corydalis solida, Scilla bifolia,* and bushy vegetation such as: *Carpinus orientalis (Miller), Rosa canina(L), Phlomis fruticosa (L)* etc. The habitats where (*V. u graeca*) occur are often overgrazed and this should be something to be worried about. Habitats similar to the above mentioned are met in other areas of Southern Albania where research is taking place. From the observations done in the field, the subspecies is met very rarely; hence it is proposed to be included in the Red Book of Fauna in Albania with the VU status. The conservation will be based in increasing the awareness of community, local government, shepherds and organizations interested in biodiversity.

Keyword: Vipera ursinii graeca, alpine pasturage, Southern Albania, biodiversity, subspecies in danger.

226 THE LEVEL OF DETECTION OF THE PRESENCE OF POLLUTANTS AND THEIR EFFECT ON AQUATIC ORGANISMS IN THE LAKE OHRID

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ABSTRACT

Ohrid Lake is counted among lakes with special features for periods of geological, geographical location, the presence of relict and endemic forms of flora and fauna, and tourism attractiveness for recreation, etc.This lake is characterized by a unique ecosystem of endemic and relict species, with very ancient geological and other features that make this lake be particular from other lakes in the Balkans and in the world, so that in 1980 it has been declared as the world's cultural heritage and it is protected by UNESCO. To preserve this natural wealth it is required a greater attention by the state and institutions. A special attention should be paid to the environmental protection, namely protection of Lake Ohrid. Biosphere which surrounds us, recently without interruption is exposed to contamination by various toxic substances that are harmful to living organisms. These toxic substances (ksenobionts) from different industrial, municipal and natural reservoirs as

their final repository have the aquatic environment.Aquatic organisms in general and in particular fish have the ability to bio-transform or metabolize these substances to final products, store them in tissue or to connect to macromolecule such as DNA and RNA that can cause genotoxic effects on the body (Williams 1974).Toxins every day reach to pollute the water more and more. Water bodies, in general and in particular fish mandatorily are exposed to the pollution. As safer biomarker for the presence of ksenobionts in the aquatic environment recently is used OFP enzymatic complex (mixed functions oxigenase), which have the capability of ERODE and B (a)) PMO enzymes. Measurement of the enzymatic activity of EROD and B (a) PMO is made in the liver of control fish carp, carp and carp experimental hunt in different localities of Lake Ohrid. Based on these biochemical parameters is determined the presence of contamination of Lake Ohrid. The key marker and very important to identify ksenobionts in the aquatic environment is used the enzymatic complex MOF (mixed oxygenize functions) that has the ability to increase several times (induces) self enzymatic activity in the liver of the fish under the presence of these ksenobionts. (Kurelec, et al. 1977; Paine 1976; Monod 1988; Masfaraud 1990; Vindimian 1991, Arcin et al. 1996, Britvic et al 1996, Kirby et al. 2000, HUO Chuan - Lin 2005, Jonsson. 2003). Such skills have also enzymes EROD (etoksiresorufin o-dethilase) and B(a)PMO (benz(a)piren monooksigenase) (Kurelec, et al. 1977; Paine 1976; Monod 1988; Masfaraud 1990; Vindimian 1991, Arcin et al. 1996, Britvic et al 1996, Kirby et al. 2000, HUO Chuan - Lin 2005, Jonsson. 2003).

Key word: environmental, ecosystem, pollutants, ksenobionts, liver, fish

227 PREVENTIVE MEASURES FOR THE LONG-TERM MANAGEMENT OF THE ENVIRONMENTAL STABILITY OF THE ECOSYSTEM OF LAKE OHRID

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ABSTRACT

Aquatic biotopes in general and especially those in Lake Ohrid are being endangered from the uncontrolled actions of the anthropogenic factors causing immensely its pollution in a direct or indirect way. Therefore, seeing the gradual endanger of this very precious aquatic ecosystem for relatively a short period of time, it is necessary to take measures for monitoring this standstill state. As an authentic indicator to manage this state in this biotope is the analysis of the ecologic, physico-chemical and bacteriological parameters and from the received outcomes was concluded the level of pollution and also there were determined sufficient measures to bring to the standstill the negative ongoing actions which have an influence in the pollution of this ecosystem. The Ohrid Lake presents the greatest biological reservoir in Europe, since it possesses the unique flora and fauna which one cannot find in other countries (Brooks 1950).In this ecosystem one can find unique forms of plankton, benthos, and fish, such as trout of the Ohrid Lake (Sell and Spirovski 2004). Because of the unique flora and fauna, the Ohrid Lake in 1979 has been announced as the world's locality of culture and the natural resource of UNESCO (Matzinger et al. 2006). Unfortunately, this very precious ecosystem is being endangered even more from the negative actions with anthropogenic origin. These negative effects perhaps are the consequence of the population growth, but also it can be the result of the climatic changes, or the global warming (Watzin et al. 2002). A potential risk exists in the long-term to maintain stability of this ecosystem and if there won't be taken any adequate measures to correct this mismanaging with the living environment of the Ohrid Lake by blocking the unload of the pollutants in the Lake, especially in the regions of pouring sewage across the Lake's coasts, then this can lead to a misbalance of this ecosystem.Except sewage, as another source and even greater pollutant is the overflow of nutrients, from the different sources as for example (the earth erosion and the flow of the substances from the agriculture etc). As other potential pollutants can be also pollutants with an urbane origin. On the other hand, the industrial pollution doesn't represent any greater problem because of the reduced industrial activities in this ecosystem.If there aren't going to be undertaken adequate measures for the prevention of the potential pollutants in this ecosystem, in

the very near future the Ohrid Lake can go from the current oligotrophe state to the misanthrope or even to eutrophe state.This article aims to determine the level of water pollution of the Ohrid Lake through the chemical and biological markers.

Key word: environmental, monitoring, ecosystem, pollutants, management, chemical markers, biological markers

228 THE EFFECT OF DIETARY COMPOSITION AND FEED INTAKE ON LACTATING COW PERFORMANCE AND METHANE EMISSION

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ABSTRACT

Ruminant livestock are responsible for the production of a significant proportion of greenhouse gases, particularly methane that contribute to global warming and climate change. Methane is a product that forms during the fermentation of food in the rumen of ruminants, and on average represents a 7% loss of the energy ingested by the animal. At a global scale, livestock farming may contribute 18% of total greenhouse gas emissions (FAO, 2006). Many authors point out that the emission of methane to ruminants and cattle is mainly influenced by the level of nutrition. In this context, we have undertaken this study, aimed to determine the strategies of nutrition and management of ruminants by reducing methane emissions.The aim of this paper is the strategic ways of feeding and managing ruminant livestock to markedly reduce the methane emission. For this study, the data of milk production and the feeding levels of three farms containing Holshtein-race cattle in the district of Fier were analyzed. The analysis confirmed that the production and genetic capacities are not fully utilized due to a number of factors, the most important of which are dietary imbalances and wrong nutritional structures. In these production levels, food usage is low while methane enteric is high. In these conditions, the increase in production levels decreases significantly CH_4, and not the increase in number of the cattle. Going from 3000kg milk per year to 5000kg decreases by 44.5% the methane emission per kg of milk produced. The linear regression analysis proves that there is a close connection between daily milk production and enteric methane emission.

Key words: cow milk, nutrition indicators, feed intake, enteric methane

229 NATURAL RADIOACTIVITY IN CHEMICAL FERTILIZERS USED IN ALBANIA INVESTIGATED WITH A FULLY AUTOMATED GAMMA-RAY SPECTROMETER

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ABSTRACT

A fully automated gamma-ray spectrometer composed by two coupled HPGe detectors p-type with 60% relative efficiency, was developed for monitoring the environmental radioactivity. Through fully automation of operational processes, up to 24 samples can be measured without any human attendance. The absolute efficiency of the MCA_Rad system is estimated by using two point sources ^{152}Eu and ^{56}Co, and validated at 5% relative uncertainty by measuring certified reference materials. The MCA_Rad system was employed in the measurement of the activity concentration of ^{40}K, ^{226}Ra and ^{232}Th in different types of chemical fertilizers used in Albania. The results show a clear correlation between the content of K_2O measured and that labeled for chemical fertilizers. The presence of phosphorus in the chemical fertilizer is not clearly related to the activity concentration of ^{226}Ra and ^{232}Th, confirmed also in other studies. This mainly due to the different origins of the phosphate ores and/or in the chemical processing of the ore during fertilizers manufacture. The activity concentrations of ^{226}Ra and ^{232}Th in NPK samples are found to vary from MDA to 253±14 Bq/kg and MDA to 24±4 Bq/kg, respectively. The calculated radium equivalent activity was found to be comparable or higher than the reference value of 370 Bq/kg varying from 362 Bq/kg to 967 Bq/kg. This, mainly due to high concentration of ^{40}K and also for high concentration of ^{226}Ra (especially for NPK-3, NPK-8 and NPK-9). Based on these results we recommend that controls should be made in order to monitor the radiation exposure rate of workers in a storage warehouse.

Keywords: HPGe gamma-ray spectrometry; Chemical fertilizers; Natural radioactivity

230 MANAGMENT AND MICROBIAL QUALITY OF THE WATER OF DRINO AND VJOSA'S RIVERS

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ABSTRACT

The protection of the environment, the development of tourism, economy and public health has been the regional, national and global main priorities in recent years. In the southern region of Albania, the situation and the quality of surface waters, especially the water of rivers and lakes, have been very problematic recently. The same problematic situation has been noticed in Drino and Vjosa rivers, which come together and flow into Adriatic Sea. From preliminary data analyzed during 2012–2013 in 6 places along these rivers, it results that their microbial quality is bad. This is shown by the results obtained from the analysis of microbial indicators, Fecal coliforms and Fecal streptococci (FC/FS) that vary for FC from 1500 to 4.6x106 bacteria/100 ml water and for FS from 90 to 1.5x104 bacteria/100ml water. Samples have been taken and have been analyzed within 24 hours. The water samples have been transported in a temperature of 40C. The determination of bacteria's numbers (FC/FS) is based on the method of multiple tubes MPN (most probable numbers).We have also studied the chemical – physical parameters such as temperature, pH, salinity, the

quantity of dissolved oxygen in water, conductivity etc. Based on the studies and the data over the years, the population of fish and otter in this area has been reduced. Urban discharges, untreated wastewater and the influence of environmental factors make it necessary to adapt strategies to stop the pollution.

Keywords: Indicator bacteria (FC/FS), pathogenic bacteria, pollution, rivers Drino & Vjosa

231 THE ECONOMIC EFFECT OF ACCESIBILITY MANNERS ON TOURISTIC EXPLOITATION OF DAJTI PARK

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ABSTRACT

Protected areas are specific area with a special landscape value, rich formation and rich in biodiversity. These area have a major historical and cultural values which are protected with a special status provided by law. Dajti National Park, was been declared as a protected area with DCM nr.402, dated 21.06.2006, with an area of 29384.2 ha. It is the closest mountainous area to the district of Tirana, the country's most populated areas. This study is focused on the economic impact that the accessibility manners have on touristic exploitation of Dajti Park. There are two types of access for tourists to arrive in Dajti Park, one is by using the cable car and the other is the automobilist road. For this purpose, the relevant questionnaires have been drafted. The results obtained showed that the efficient utilization and greater incomes comes from the use of the cable car against the use of the road, which were around 10 % more.

Keywords: protected area, economy, Dajti Park, tourism.

232 BODY CONDITION SCORE AND NUTRITION IN DAIRY COWS

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ABSTRACT

Result of BCS in three farms investigated pointed out that bondary condition was between optimal condition and weakly in dairy cows 2 week before calving. BCS decreased in dairy cows 2 week after calving. Decreasing of BCS in dairy cows of Lushnja farm was lower than others farms**.** The lowest BCS is in Kashari farm. BCS shows that have correlative connections verified statically with some feeding components in the ration. The starch level in dietary ration is positively related to the BCS in all physiological conditions. But value of correlatins between BCS and starch decreased gradually from before calving to two months after calving. Although all correlations are statistically confirmed ($P<0001$ to $P<0.05$). This proves that the starch role as an energy source is really important, but in addition to this the neoglucogenesis is intensified. Metabolic energy and proteins have decreasing connections related to the physiological state of cows. Cellulose negatively affects the BCS of cows. This impact is relatively small in two weeks before calving ($r =-0.12$) and not statistically proved ($P >0.05$), where as in other physiological states the negative impact of high content of cellulose in food rations is relatively increased($r =-0.65$ to -0.76) and also statistically verified ($P<0.001$).

Keywords: BCS, metabolic energy, proteins, starch

233 ANNUAL VARIATION OF ZOOPLANKTON OF ARTIFICIAL LAKE OF TIRANA

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ABSTRACT

The assessment of biological productivity of Artificial Lake of Tirana considerably depends from biological and ecological knowledge of specifics taxon of its communities such as reciprocal relationship of planktonic species of the lake community. From this point of view zooplankton represents one of the most important components of the lake ecosystem. Artificial Lake of Tirana and the Grand Park surrounding it, are established in 1957 year mainly as touristic and recreational place for Tirana population, and using its water as technological one (for Tirana Textile Combine), sometime for irrigation purpose. After 90', a lot of changes were happened in Albania including even the surrounded area of the Lake such as illegal and legal residence buildings, recreational ones, and some technical problems related to Dam. The negative impacts of above mentioned human activities have damage the ecologic environment and the lake ecosystem. Our study, aims the knowledge of planktonic community in the pelagic zone of the Lake through their annual variation. During the study, are carried out the assessment of biological productivity of the Artificial Lake of Tirana, where zooplankton is the most relevant component of this ecosystem. Taking into account the data obtained we assessed the trophy status of the lake. Our results will help the experts and the local government to study and propose mitigation measures to rehabilitate the lake ecosystem and its surrounding area, so- called "Lung of the Metropolitan".

Key words: Zooplankton, limnology, trophy state, saprobe level, artificial Lake of Tirana.

234 POTENTIAL USE OF LOW-NOISE ROAD PAVEMENT IN URBAN ROADS OF TIRANA MUNICIPALITY

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ABSTRACT

Acoustic pollution and vibration is one of the major environmental problems in Albania related to roads and one of the less analyzed during the environmental studies until now. The main responsible of this phenomenon are without reservation industrialization and motorization after the 90', together with the lack of inadequate protection regulation in our country. The Environmental Protection Act defines limiting noise emissions at source as a basic principle. The following paper presents and proposed the appropriate strategies for the realization of the control and mitigations measures for acoustic pollution in urban roads. Following the actual roads conditions in Albania and monitoring process until now in this paper we proposed the following appropriate passive measurement that's to say the different manners to limit noise distribution in a given environment. One of the most appropriate traffic noise reduction measures especially for urban roads is the use of different low macro-texture bituminous mix road surfaces, such as asphaltic concrete, slurry seal, open graded asphalt and stone mastic asphalt. These pavements are of particular interest for areas with a high population density, as Tirana municipality which continue to have the greatest shortcomings in terms of noise abatement. Moreover, these are often the only measures which can be taken on roads in urban areas. It was

recognized at a very early stage that the quality of a road pavement has a considerable effect on the level of noise emissions due to road traffic. Laying a low-noise road pavement may represent a measure which is both effective and economical for reducing road noise. Indeed, it has no negative impact on the landscape or on constructed sites, or on road safety.

Key words: decibel, noise reduction, mitigation measure, low-noise road pavement

235 MORTGAGE LOAN AND THE CONSUMER ON THE ALBANIAN BANKING MARKET

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ABSTRACT

The credit risk has an increasing trend and which is seriously affecting the performance of the Albanian banking system. The non performing loans are increasing very quickly. By the end of the year 2011 the volume of the non performing loans in Albania reached 880 million USD or above 18% of the loans portfolio. This indicator has continued to worsen during this year. The Albanian banking system continues to be liquid and this indicator is not close to the limits due to the low lending activity. The banking system in Albania is new as result they don't have a consolidated risk management system. Various methods starting from traditional such as the interest gap (measuring the deposits interest rate risk), measuring exchange rate risk through the "Value at Risk" which is used also for measuring credit risk. VaR results to be very often used for market risk management and sometimes for credit risk due to the availability of the data for interest and exchange rate risk compared to credit risk. Bank of Albania credit policy can be considered conservative approach since it imposes 12 % limit on regulatory capital compared to 8% on majority of the countries. Actually the credit risk is becoming serious for banks in Albania. As the competition increases banks are quite obliged to move toward more crediting which then leads to major exposure of banks to the credit risk. It is easy to note that the banks note the high risk and uncertainty of their client's incomes and as result they require 1.5-2 times collateral to loan coverage Funding on foreign currency is an other factor which exposes the clients on exchange rate risk especially to the clients whose incomes are on local currency. The mortgage loans are 49% in EUR currency favoured mostly by the fact that the real estate market is quoted in this currency. The incomes of the individuals are low and not very easy verifiable as result not very easy to satisfy the general rule that monthly incomes should be at least 3 times higher to the monthly loan instalment. It is to be mentioned also that individuals face a number of procedures on state institutions, which in many cases cost time and money. The banking system should improve the terminology; unify the indicators and units of measure by all means in order to come closer to the consumer. The consumer on his side should not only look to just purchase what is offered but should look for details before the signing contracts because after that everything becomes an obligation which might last up to 30 years.

Keywords: mortgage loan, consumer, banking market, Albania

236 SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES BASED ECOSYSTEMS

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ABSTRACT

A case study has been conducted in Petran Commune, compound by 12 villages with c.a. 3095 inhabitants and extended in c.a. 5025ha, in order to determine contribution of forestry to sustainable development and analyze forest-village relations. With this study, a forest resource in Petran Commune, which is located on Southestrn Albania, was investigated. Two main elements, human and forests are subject of this study. The main goal was the study of the coexistence of these two elements, reciprocal benefits and the improving of situation for both forest and society. In the frame of sustainable development, the concept of the sustained yield principle cover whole ecological system and include non-timber products and values (for instance biodiversity, erosion control, recreate and grazing values) in the objectives of forest management. The main objectives of this study are: the identification of the best managerial alternative for the sustainable management of natural resources, coordinating silvicultural measurements with socio-economic situation and the rehabilitation of degraded ecosystems, increasing the forest productivity and restriction of the erosion and desertification as well as conservation of the biological diversity. We will show how a mathematical model (expert system) can assist on the decision-making process, in terms of sustainable forest management, considering the multi-functionality of natural productive systems. Natural ecosystems, together with society and economy are considered as the components of a natural economic productive system. The detailed analyses of the three components (multivariable analyzes), as the part of a unique system, analyzed of the conflicts within this system and their resolve, in a sustainable way, through the most appropriate scenarios (mathematically determine), is the methodological principle of this study. The factors which affect sustainable management of the ecosystems based on the suitability and relative weight, in four interval classes are classified. New software, concepts and terminologies are used to conduct this study.

Keywords: Natural productive system, sustainable forest management, multi-functionality, biodiversity, ecosystem, FAC, Cluster and GIS analyses.

237 HOSPITAL SOLID WASTES AND ITS EFFECT ON ENVIRONMENT

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Abstract:

The solid waste emerge during diagnosis and treatment, clinical and pharmaceutical research, besides the that emerge in medicine production, hospital waste or in other words they are referred as clinical waste. While 75-90 percent of the wastes that composed during the processes which are related with health are copper bottomed or the wastes that do not threaten people's health and the rest of them composed of risky wastes. Harmful hospital wastes composed of waste group of infectious, pathological, cutter-piercing, genetoxic, pharmaceutical, chemical, heavy metal and radioactive waste. It has been indicated in this study that; because of the hospital waste; hospital staff, clinical waste carriers and people are at risk, also the wastes cause hepatitis A-B-C, AIDS, typhoid, bronchitis, anthrax, infection diseases and allergy *etc*. As well as the wastes spoil the appearance of environment, they have come into question with features such as chemical, radioactive and clinical waste, because of threatening people and environmental health too, removing wastes has taken a variety of precautions that carry weight with it. Since these wastes are hazardous, they must be taken under control, collected safely without giving any danger to the environment and human beings. The wastes must be stored temporarily and must be disposed permanently. With creating a waste minimisation program about hospital waste; the negative impact of the wastes must be eliminated that will affect people health and environmental health or that will be able to reduced has been taught.

Keywords: clinical wastes; hospital wastes; pharmaceutical wastes; harmful hospital wastes; minimisation program

238 CREDIT PROBLEMS IN ALBANIA'S AGRICULTURE SECTOR

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ABSTRACT

Agriculture is an important sector of the Albanian economy not only because of its contribution to the Gross Domestic Product, but more for the fact that half of the population provides the revenue base through this sector. In this context, agricultural development is particular importance for the future of the Albanian economy, and to the welfare of the population in rural areas. In recent years efforts have been made to support the agricultural sector. This happened as indirectly through investments in rural infrastructure, as well as directly through initiatives and regulatory initiatives. Such is the law for the establishment of agricultural holdings and various subsidies given by the government to farmers who planted certain agricultural crops. According to INSTAT, for the period 2005-2012, the Gross Domestic Product has grown on average by 4.4%, while the agriculture sector by 4.1%. From these data, although the agricultural sector has increased over the years, is not where it needs to be. Most efficient solution would be to strengthen the sector through private funding in significant monetary amount for raising medium and large farm. Individual farmers not only seek to have the opportunity to meet the needs for inputs, agricultural machinery or equipment, but intend to make investments in greenhouses, vineyards and orchards. One problem is the lack of credit or low level of lending to the agricultural sector in our country related to the low reliability of financial lending institutions have to loan applicants. Farmers in many cases do not have the title in relation to land or are in litigation, which in this case would serve as collateral for lending financial institutions. A successful farm requires not only abundant land but requires a technological infrastructure of production, which is accompanied by a financial bill. This solution should be provided by the funding mechanisms of the market which would lower production costs.

Key words: Private investment, agricultural credit processes, financing mechanisms, production costs, rural infrastructure.

239 SOLVENT RECOVERY AND CONCENTRATE PAİNT PRODUCTİON FROM WASTE PAİNT OF PACKAGİNG INDUSTRY

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ABSTRACT

Solvents capable of dissolving the other ingredients in other word, redefinition physically gas, liquid, and solid materials that solves other organic and inorganic liquids. One of the most commonly usage of the solvents is in paint industry sectors. A dye is incorporate into the binding of a combination of composite material of different substances. Contents of the paint are binder, pigments, solvents and other additives creates. The first task of solvents used in the paint is paint can be shooting up or sprayed to ensure consistency on materials. Also this solvent can be evaporated after application of the paint leaving a thin layer of paint onto the surface to provide adhesion. Aim of this study is recycling of solvent and re-gaining of concentrate ink by including the paint production process use of recycled solvent and ink from the packaging waste. The maximum amount of solvent recovery was about85% from the waste ink. Concentrated materials prevent or minimize its harmful effects on the environment, and promote the use of recycled solvent in various fields were aimed.

Keywords: solvent, waste ink, paint, packaging industry, recycling.

240 HIRSUTISM AND ITS RELATION WITH HYPERANDROGENISM AND PCOS IN A ALBANIAN FEMALE POPULATION

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ABSTRACT

Eight hundred and twenty four albanian female students, from 18 to 30 years of age, were evaluated by individual interviews bazed on a questionnaire and some of them by further hormonal investigations in order to estimate the prevalence of hirsutism and its relation with hyperandrogenism and PCOS. Hirsutism is common albanian women with a 31.3% %. Testosterone (T) and dehydroepiandrosterone sulphate (DHAES), which stimulate hair follicle and function of sebaceous gland were elevated in most hirsute women. Were found a strong correlation between hirsutism and hyperandrogenism (χ^2 = 10.601, sig. = 0.001 and between hirsutism and PCOS (χ^2 = 40.370 sig.< 0.001).

Key words: hirsutism, hyperandrogenism, PCOS, testosterone, DHAES

241 THE IPMACT OF ALBANIAN LOCAL BOVINE RACES AS PART OF CONSERVATION BIODIVERSITY IN THE ALBANIAN POPULATION HEALTH

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ABSTRACT

The only ecological study to date for Albania (11 districts). The aim of the study was to test the correlation of A^1/capita consumption with ishceamic heart disease mortality 2 and 3 years later. A^1/capita consumption was estimated from cow milk and cream supply (FAO database) and A^1 β-casein fraction from a variety of sources. Milk and cream supply/capita was calculated from nutritional statistical databases at the FAO web site as milk protein/capita/day, excluded goats and sheep's milk. FAO food supply data were converted to nutritional measures using British food composition tables. Cow breed distribution was calculated from Center of Agriculture Technology Transfer, Animal Production Department data. Beta-casein fractions were estimated by breed from dairy science literature for 11 districts. Additionally, milk was tested from 5 breeds. IHD mortality rate data were obtained from INSTAT website. Average milk protein/capita varied across breeds. A1 fraction of milk casein varied from 0.2257 to 0.4732. Here we show that correlation of the calculated consumption of the milk protein, β-casein A^1 (excluding milk protein in cheese) against ischaemic heart disease (IHD) mortality has a r = 0.2145 for 2008 and a r = 0.2236 for 2009.

Key words: β-casein A^1, ishceamic heart disease mortality.

242 REVIEW OF INFORMATION ON EMISSION ON PUBLIC HEALTH ABOUT MUNICIPAL SOLID WASTE AND "SIMILAR WASTE"

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ABSTRACT

Waste management is a very large scale activity which inevitably has consequences for human health and the environment. In this paper, we evidence the emission from different way to treat the municipal solid waste and similar waste. The review considers mainly studies investigating emission on the different media. The various waste management processes such as landfill and incineration are very different in character and give rise to different emission and different kinds of human health hazards. This paper is concerned with reviewing the available evidence the emission on different media and the effects on local populations of waste management activities. This charter of the report reviews available information on the emission in land, air, groundwater, surface water and sewer from the agreed range of waste management facilities. Where possible, we have quantified emissions from each waste management option to relevant media. Where sufficient data are available a release rate for a pollutant per ton of MSW processed at the waste treatment/disposal has been derived. This information along with the methodology and assumptions used during the assessment are presented below. The data underlying the assessment of emissions from waste management operations are less than ideal in many respects. In many cases, the available information is limited in coverage, of uncertain quality, and does not specify the details of the process and waste to which it refers. This sets a limit on the confidence that can be placed in the data. This is reflected in the assessment of uncertainty inherent in the emissions estimates in this chapter. We provide both an estimated uncertainty range, and also an evaluation of the pedigree of the data that is, the reliability of the information underlying the emissions estimates. We also make recommendations for areas where future work would be most valuable to address the current shortcomings in data availability. But for evaluating the estimation in public health is used the Data Pedigree (Funtowitc and Ravetz, 1990, and derived from Van der Sluijs at al 2002).

Key words: Waste management, human health, environment

243 GENETIC RESOURCES OF MEDICINAL AND AROMATIC PLANTS, SURVEYING AND CONSERVING IN ALBANIA

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ABSTRACT

Albania represent a country wich is is distinguished by its rich biological and landscape diversity, with favourable climatic conditions varying from subtropical to continental, has a very rich flora. The mountainous terrain combined with steep cliffs creates ideal conditions for maintaining and protecting a large number of ancient species, some of which are endemic or sub-endemic. More than 300 species are aromatic or medicinal plants, which are very important economic natural resources. Further, they play an important role in everyday life; from all these species, 68 species are endangered (EN). The rate of loss of the Albanian's biodiversity of MAPs during the past 20-30 years is believed to be high and increasing. Moreover, insufficient knowledge and studies on a wide range of flora, especially for MAPs limit an accurate historical evaluation of the biodiversity status of the country. The number of endangered wild species of MAPs of high and expected to increase if appropriate evaluation and conservation measures are not taken. This paper

presents in brief, activities in plant genetic resources (PGR) and also Geographic distribution of prioritized MAPs species has been prepared

Keywords: Genetic resources; Medicinal and Aromatic plants; Albania,

244 DIVERSITY OF WILD POPULATIONS OF *SALVIA OFFICINALIS* L. IN NORTH OF ALBANIA, BASED ON MORPHO-BIOMETRIC TRAITS

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ABSTRACT

Sage (*Salvia officinalis* L.) is one of the most important aromatic species and also its widely used in different types of food and folk medicine are well known for their antioxidant properties in Albania since ancient times. Natural populations of *Salvia officinalis* have been selected to characterized the individual variability to evaluate the valuable genetic potential for sustainable using in the future
The biometrical traits observed in the present study showed a pronounced variation among populations *of Salvia officinalis* grown wild from different natural sites in North region. Principal components analysis was used to group genotypes according to their attributes. Further exploitation and analysis of individual variability seem to be necessary for successful improvement of populations in the future proposed

Key words: Salvia officinalis, PCA, Albania

245 DIVERSITY AND STRUCTURE OF NATURAL POPULATIONS OF HYPERICUM PERFORATUM L. IN NORTH EAST OF ALBANIA

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ABSTRACT

In this study objective was evaluated the diversity of different natural populations of St. John's Wort (Hypericum perforatum L.) in North West Albania, based on morphological markers. The plant materials used for this study will be collected from natural sites in Dibra Region The different morphological characteristics of 12 St. John's Wort populations natural habitats related to the medicinal production of essential oil and also the yield production of biomass were evaluated in 2011. The results showed diversity of important characters among populations.
The highest positive significant correlations were seen between some important traits studied. Principal component analysis (PCA) showed a high variation among populations. The high variation of among the St. John's wort populations in North-west of Albania can be utilized in the breeding programs and medicinal purposes in the future.

Key words: Hypericum perforatum, morphological markers , North West Albania,

246 CARBON SEQUESTRATION PROJECT IN ALBANIA: A TOOL TO GET INCOMES FROM

DEGRADED FOREST LANDS

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ABSTRACT

This article presents the implementation of carbon sequestration project in Albania for more than 7 years. Land degradation has been identified as a major issue related to the natural resources management in Albania. The degradation has been caused by intensive grazing activities in the forest and pasture lands in Albania. The project activity has been implemented to reduce and avoid erosion and to establish forests an degraded lands. The project activity consists of the reforestation of degraded lands, by assisting the natural regeneration of vegetation on degraded lands.The objective of carbon sequestration project in Albania is reducing soil degradation, conserve biodiversity and enable GHG emission reduction. The assisted natural regeneration project aims to restore the vegetation on degraded lands distributed in 24 poorest communes over five regions of the country. To avoid further degradation of the forest lands within project area are implemented several measures, such as: a) protection from the grazing to promote natural regeneration; b) supplementary planting to enrich species diversity and stabilizing eroded areas; c) silvicultural measures to increase forest biomass. After the full verification of carbon sequestration in Albania for the Assisted Natural Regeneration Project in July 2012, the Monitoring Report following Clean Development Mechanism procedures, is submitted to the independent auditor Tüv Nord. Out of the project area of 6,272.36 ha registered under the project, 1,493.36 ha was excluded from the project area as it was found unsuitable for implementing the project. The project is implemented on 3.990.45 ha during five years period. The total GHG over the monitoring period amount of tCERs to 128, 757. 50 ton CO_2 e. The BioCarbon Fund as as a buyer of carbon credits will transfer the payments of carbon credits to Albania within May 2013. The payments of carbon credits will be used for reinvesting in forestry and pasture improvements. The implementation of carbon sequestration is a tool to get financial resources, which can be used for improvement of forests and pastures and in the same time to the improvement of socio–economic conditions of the rural communities.

Key words: carbon sequestration project, degraded forest lands, natural resources, carbon credits, carbon credit payments, tool, incomes, improvement of forest and pastures, rural communities.

247 FAECAL CONTAMINATION INDICATORS OF THE BUTRINTI LAGOON ECOSYSTEM AND SHELLFISH SAFETY

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ABSTRACT

The objective of the study was to evaluate contamination of the Butrinti lagoon ecosystem, Albania, through determinate FC, *E. coli* densities in *Mytilus galloprovincialis* and water, to correlate and to compare with Albanian, and international criteria. The dates obtained during years 2008 - 2011, in total 153 water samples and 293 mollusks samples *Mytilus galloprovincialis*, it is analyzed. The minimum value of FC, *E.coli* recorded in water were respectively 2 cfu/100mL, 1 cfu/100mL, the maximum were 960 cfu/100mL FC vs

480 cfu/100mL of *E.coli.* GM of FC annual counts varied from lowest 5.3 cfu/100mL 2011, to highest value 24.8 2010. Annual GM of *E.coli* is lowest 1.9 cfu/100mL 2011, highest value 9.6 cfu/100mL, recorded 2010. The GM value of FC, *E coli* during 2008, 2010 years exceeds the FC level 14 cfu GM/100 mL, *E coli* level 4 cfu GM/100mL, standard set for approved area. The minimum value of *E.coli* mollusk it was 10 MPN/100g, recorded during the four years, maximum of *E.coli* 16.000 MPN/100g recorded winter 2011, related to high flow condition. GM of *E.coli* annual counts observed varied from lowest 43.1 MPN/100g 2011, to highest 365.9 MPN/100g to 2008. The classification of the Butrinti lagoon belongs to restricted area, based on EU requirements is consider as B area. Has no differences in the classification refer to two different systems, restricted and class B areas, are equivalent. The *E.coli* GM and the distribution of the value indicated by box-Whisker-plot, is less than 230 MPN/100g *E.coli* during the spring- summer.

Key words: *Mytilus galloprovincialis*, shellfish growing water, faecal coliform, *E.coli*, Butrinti lagoon ecosystem.

248 EVALUATION OF COMPLEMENT FIXATION TEST AND IMMUNOFLUORESCENCE FOR DETECTION OF *MYCOPLASMA PNEUMONIAE* ANTIBODIES

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ABSTRACT

Diagnosis of *Mycoplasma pneumoniae* infection in routine clinical practice has been based on serology, since bacterial culture of this organism is slow and lacks sensitivity. Medical diagnostic is working to determine the most sensitive techniques for the detection of *Mycoplasma pneumoniae* antibodies, in the framework of which is developed this scientific work. In these conditions, is worth testing immunologic techniques such as Immunofluorescence or Complement Fixation Test (CFT). Fifty individuals that were identified as positive for *M. pneumonia* and 50 individuals that were identified as negative for *M. pneumonia* were tested by CFT and Immunofluorescence techniques. The results obtained are compared with each other and sensitivity and specificity is estimated for each technique. Based on the results, we defined sensitivity 92%, specificity 96% for CFT and sensitivity 94%, specificity 98% for Immunofluorescence. Low specificity is the limit of CFT in CHORUS instrument. Advantage of CFT is measuring samples one by one (even a single analyse) and short procedure time. Immunofluorescence advantages are high sensitivity and specificity. CFT frequently is found as a method in the testing menus of clinical reference laboratories and is recommended in rapid tests examinations. But in doubtful cases, it's important testing the patients with Immunofluorescence technique.

Keywords: Immunofluorescence, ComplementFixationTest, Mycoplasma pneumonia, Sensitivity, Specificity.

249 THE IMPACT OF MULCHING IN YIELD EARLINESS OF TOMATO (*Solanum lycopersicum L.*) CULTIVARS IN SUN GREENHOUSES

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ABSTRACT

Tomato is one of the most important and most distributed vegetable crops in Kosovo that is being cultivated each year in an area over 1500 ha, with little oscillation throughout years.Tomato hybrids under study were Amati and Big-beef, whereas investigation was undertaken in three variants (with black plasmas, white plasmas and without plasmas). During our investigation we have monitored and analyzed the following indicators: biometric indicators of plant and fruits,indicators of earliness of variants, dynamic of production in sun greenhouses in the region of Dukagini, Kosovo. Planting distance was 100 x 40 cm with crop density of 2.5 crops/m2. Experimental design was complete randomized block system in three replicate for each of the variants. During the experiment with a great care were recorded phenological data and biometric measurements.The highest tomato yield for the Amati hybrid was recorded at the variant using black plastic mulch (285.44), while the lowest at the variant that did not use plastic (249.96). The yield for the Amati hybrid in the variant using white plastic was 256.34. As for the earliness of production of variants in production, with regard to hybrid Amati the first variant (black plasmas) showed the highest earliness compared to other variants. With regard to the mulching in sun glasshouse the best variant showed to be the variant with black plasmas, for both of hybrids in study, Amati and Big-Beef (1998 respectively 2156 kv/ha). Beside this the black plasmas has also the effect on suppressing the growth of weeds. Both of hybrids, Amati, Big-Beef showed to have earliness production, high quality fruits and high yield.

Key words: Tomato, earliness indicator, dynamic of production

250 OLIVE GENETIC RESOURCES IN ALBANIA;

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ABSTRACT

Many archaeological discoveries have shown that olive cultivation in Albania, as in the Mediterranean countries, is very old. Olive. Our ancestors brought olive in marginal areas and highlands where today there are exemplary and populations adapted and with economic, environmental and social value. These olive trees are the source of genetic resources for improvement and direct spread of these ecotypes.The old olive groves around medieval castles represent ancient centers of albanian civilization. The present studies have been focused to the recovery, description and in-situ and ex-situ conservation of the olive biodiversity. According to botanists, the olive tree and oleaster correspond to *Olea europaea* subsp. *europaea* L. var. *europaea* and var. *sylvestris*, respectively.The total number of accessions collected and studied by ATTC Vlore is 91. The creation and completion of a national collection fields has to be considered as one of the major output as it permits to conserve at the national level the olive genetic heritage. The different approaches to conserving biodiversity: on-farm management, in-situ conservation, ex-situ conservation are applied in the ATTC Vlore.

251 MORPHOLOGY AND PHYSIOLOGICAL CHARACTERISTICS OF OLIVE OIL IN ALBANIA

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ABSTRACT

More than 22 cultivars have been described, in ATTC Vlore, Albania, for *Olea europaea* L. using morphologic analyzes (Rugini & Lavee, 1992), although within 91 renovated accessions, many of them might be synonyms, homonyms, ecotypes or the result of crosses between neighboring olive cultivars (Barranco et

al., 2000). Traditionally diversity within and between olive tree cultivars was determined by assessing differences in olive tree, namely leaf shape and color, and olive fruits morphology. A scheme for describing/discriminating cultivars, a database has adopted and has been utilized to record the passport data and the entire primary characterization of the Albanian autochthonous olive genetic resources. To complete the description of the accessions recovered a methodology has been. Adopted also for the secondary characterization (agronomic, phonological and pomological) of the varieties held in the collections.

252 PRELIMINARY CHARACTERIZATION OF MONOVARIETAL EXTRA-VIRGIN OLIVE OIL OBTENED FROM DIFFERENT ALBANIAN CULTIVARS.

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ABSTRACT

Chemical characterisation was carried out on 12 virgin olive oil samples obtained from 12 olive cultivars (*Mixan, Kotruvs, Frengu (Prez), U. Bardhe Pobrat, Frengu (Kruje), Boc, U. Bardhe Tirane, Marks, U. i Zi Tirane, Kushan, Krypsi i Krujes, Kalinjot*.). The olives, that came from different groves in Albania, were processed by centrifugation system in sperimental mill. Several qualitative parameters were evaluated (free acidity) and analyses of major (fatty acids) and minor components (phenolic fraction and their antioxidant power) was also carried out. The results have shown belonging to category of extra virgin olive oil, depending on analysed analytical parameters. Moreover, the oils had very good storage capacity, depending on fatty acid composition, and also very good phenols content.

Key words: preliminary characterization, monovarietal extra-virgin, olive oil, obtained, albanian cultivars

253 ORGANOLEPTIC CHARACTERISTICS OF MONOVARIETAL EXTRA-VIRGIN OLIVE OILS OBTAINED FROM DIFFERENT CULTIVARS IN ALBANIA

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ABSTRACT

Organoleptic characterisation was carried out on 12 virgin olive oil samples obtained from 12 olive cultivars (*Mixan, Kotruvs, Frengu (Preze), U.Bardhe pobrat, Frengu (Kruje), Boc, U. Bardhe Tirane, Marks, U. i Zi Tirane, Kushan, Krypsi i Krujes, Kalinjot*). Organoleptic evaluation of oil is made from the official tasting group. Characteristics have been identified for fruity, their bitter and pungent. There is evidence that Albanian oils are sweet and balanced, with fruit flavor.

Key words: organoleptic characteristics, monovarietal extra-virgin olive oils, cultivars, Albania

254 PROBLEMS AND ACCOUNTING ASPECTS OF AGRICULTURAL COMPANIES IN TERMS OF GLOBAL FINANCIAL CRISIS

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ABSTRACT

Agriculture is one of the most important sectors of our country, with a significant impact on the economy of Albania. A significant part of the population is employed in this sector, bringing a significant added value for all domestic economic and financial indicators. Agricultural companies large and small throughout the territory of Albania realize diversified products which are sold on local markets today and in foreign markets. However, agricultural companies in the country today face many difficulties and problems which arise naturally in terms of the global financial crisis and significant changes in terms of legislation and standards in the context of integration into the European Union. Accounting problems affecting agricultural companies make financial management and financial reporting even more difficult. Another problem associated with financial management and accounting practices of agriculture companies today relates to the implementation of modern software in order to create appropriate facilities recording and reporting of information in appropriate ways and in accordance with relevant standards. This paper aims to bring attention to certain specific aspects and some problems of agriculture companies accounting practices today in Albania. Also, this paper aims to achieve some useful approaches to relieve the problems created in terms of global financial crisis in the context of the implementation of standards of practice for contemporary accounting Albanian on agricultural companies. Finally this paper aims to achieve a comparison of the problems faced today from local agricultural companies and foreign agricultural companies of the region.

Keywords: Agriculture Sector, Global Financial Crisis, International Accounting Standards; Agricultural Companies; European Union.

255 COMPARATIVE STUDY OF PESTICIDE RESIDUE LEVELS IN WATER FROM IRIGATION CANAL WITH LC-MS/MS AND BIOLOGICAL METHODS

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ABSTRACT

The intensive use of pesticides during recent decades has led to the accumulation of their residues in the environment which especially endangers water in canals. Since the water of rivers and canals are used for drinking and irrigation purposes it has become imperative to study the extent and magnitude of pesticides in these water bodies. The aim of this paper was to determine the trace levels of twenty-one pesticides and their transformation products in irrigation canal (Kovilj, Serbia), belonging to the classes of triazine and urea herbicides which are present in the commercially available NE7500 standard solution, LGC Standards. A simple multiresidue method was used for the determination of triazine and urea herbicides in surface water using liquid chromatography coupled with a triple quadrupole mass analyzer (LC-MS/MS) with electron spray ionisation (ESI). Biological effects were assessed on physiological and morphological traits of Sorghum bicolor (L.) according to ISTA regulations, with distilled water as control. Some herbicides (atrazine, desethylatrazine, desisopropyl-atrazine, metolachlor, simazine, terbutilazine, desethylterbuthylazine, propazine, linuron, cyazine and chloridazon) were detected in water sample. Manly, the detected concentrations were below maximum allowable concentrations (MACs), but atrazine concentration was

3.01µg/L, which is above MAC of 2.0µg/L. Germination energy of sorghum seeds was stimulated in water from irrigation canal, while germination was not affected by total chemistry of water sample. Water also inhibited seedlings root elongation and fresh root weight, as well as shoot fresh and dry weights, while shoot length of sorghum seedlings was stimulated by this sample.

Keywords: Herbicide residues, surface water, LC-MS/MS, Sorghum bicolor (L.), bioindicator

256 VALIDATION OF MULTIRESIDUE METHOD FOR DETERMINATION OF PERSISTENCE HERBICIDES IN SURFACE WATER BY LC-MS/MS

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ABSTRACT

The use of agrichemicals has been steadily increasing during three last decades and continues to grow in recent years. The fate of pesticides in the environment depends, above all, on their persistence, but also on the characteristics of soil and water. Surface waters located in agricultural areas are vulnerable to the pesticides contamination. That is a reason of concern about long-term possibility of water supply contamination. A simple multiresidue method was evaluated for the determination of twenty-one pesticides triazine and urea herbicides in surface water using liquid chromatography coupled with a triple quadrupole mass analyzer (LC-MS/MS) with electron spray ionisation (ESI). The method was evaluated in terms of recoveries, reproducibility, limits of detection, and matrix effects with the isoproturon-D6 and atrazine-D5 as internal standards. The water samples were cleaned up and concentrated by ***XTerra*** RP C18 column. The obtained LOQs for all pesticides investigated were 0.020 µg/L. The accuracy and precision were determined via recovery experiments, spiking reagent water at 20, 100 and 200 ng/L, at six replicates per level and the mean recoveries were 67.3 – 109.2% with the RSD of 0.2 – 12.6% for all compounds. The developed LC-MS/MS chromatografic procedure exhibits linearity (R^2> 0.99) in the range from 10 to 200 ng/mL with RSD less than 15%. An efficient, sensitive and reliable method is developed which can be applied in the analysis of real samples to atrazine, carbetamide, chloridazon, chlorotoluron, cyanazine, desetilatrazin, desisopropyl-atrazin, dimefuron, diuron, ethidimuron, isoproturon, linuron, metabromuron, metamitron, metazachlor, methabenzthiazuron, metolahlor, propazine, simazin, terbuthylazine, terbuthylazine-desethyl residues in surface water.

Keywords: Herbicide residues, surface water, LC-MS/MS

257 EVALUATION OF FAO – 56 PENMAN-MONTEITH IN ESTIMATING REFERENCE EVAPOTRANSPIRATION AND REAL EVAPOTRANSPIRATION BY SOME MODEL, APPLICATION IN ALBANIA

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ABSTRACT

The principal weather parameters affecting evapotranspiration are radiation, air temperature, humidity, wind

speed. Several procedures have been developed to assess to evapotranspiration rate from this parameters. The evaporation powered at the atmosphere is expressed by the reference crop evapotranspiration (ET_0). The reference crop evapotranspiration represents the evapotranspiration from standardized vegetated surface. Several models have been used in computing reference evapotranspiration and they require local calibratiation in order to validate their usage. Climatic data used in computing reference evapotranspiration (ET_0) in some region with diverse climate condition in Albania. Some models had been proposed by many authors include original Penman, Thornthweit, Blaney Cridel, Turc, Penman Monteith etc. In this study the FAO-56 Penman- Monteith method used to estimate Reference Evapotranspiration (ET_o) over a range of climate in Albania based on weather data time period. The values of Reference Evapotranspiration vary 500-800 mm on the field area, 800-1000 mm on the hilly area and 1000-12000 mm on the mountain area. The values of Real Evapotranspiration for the field area vary about 500 mm, 600 mm on the hilly area and 800 mm on the mountain area.Pluviometric deficit (DE) in Albania varies about 200mm on the coastal area to 2500 ÷ 3000mm on the mountain. FAO The evaluation of the reference evapotranspiration, real evapotranspiration ,pluviometric deficit, including the evapotranspiration regionalization are presented. The evapotranspiration values have been updated and plotted on the 3D digital map, by employing G.I.S system.

Key words: Evapotranspiration, empirical method, FAO-56 PM, G.I.S.

258 STUDY OF DEGRADATION OF POLYETHYLENE DURING RECYCLING PROCESS BY USING FT-IR AND RAMAN SPECTROSCOPY

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ABSTRACT

The aim of this paper was the recycling of low-density polyethylene LDPE using the extrusion method in industrial scale up to four stages and the study of its degradation using vibration spectroscopic methods FT-IR and Raman. Given the large volume of low-density polyethylene in plastic solid waste, this study was conducted to assess the degradation of LDPE during a number recycling cycles, however not using additives that are added during the recycling processes for the recovery of its properties.For recycling of LDPE an industrial extruder was used with 2kg capacity per cycle. For obtaining FT-IR spectra and Raman 20-30mgr polymer pellets were formed. The instruments used were infrared spectrometer with Fourier transformation - Perkin Elmer GX1 and Raman microspectrometer - RamaScope Renishaw RM1000. From the spectra analysis, vibration peaks of polar and non-polar bonds of polyethylene were identified, as well as the changes in the intensities of vibration peaks and the movement of spectra background as a result of LDPE degradation. Moreover, using the optical microscope the surface structure for the presence of any foreign element was studied, before and after each recycling cycle.

Keywords: Recycling process, LDPE, FT-IR and Raman Spectroscopy, Optic microscophy

259 STUDY PALINOLOGYC OF POLLEN GRAINS, *GYMNOSPERMIUM MALOI* (KIT-TAN & SHUKA) THE ENDEMIC SPECIES IN ALBANIA

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ABSTRACT

The article provides data on the morphologic study of pollen grains of the endemic species of our country *Gymnospermium maloi Kit-Tan & Shuka (2011)*. At the same time the data are compared with the other endemic specie of our country, *Gymnospermium shqipëtarum Paparisto & Qosja (1976)* synonim *Gymnospermium scipetarum E. Mayer & Pulevic (1984), Gymnospermium altaicum (Pall.) Spach subsp. scipetarum (E.Mayer & Pulević) Kit Tan & Mullaj,* and with other Gymnospermium species taken from the literature. The polen grains of *Gymnospermium maloi* are tricolpate, with elongated elliptical shape, long colpus, narrowed and directed to the poles. Exina is composed of a reticular sculpture. The data related to *Gymnospermium maloi*, are provided for the first time in the palinologic literautre of our country and of foreign countries. Through this study there is provided more information on the morphological features of pollen grains, the manner of collection, storage and processing of pollen in laboratory.

Key words: *Gymnospermium*, pollen grains, ribs, exina nets.

260 THE HARMONIZATION OF ALBANIAN FOREST LAWS WITH THE EU STANDARDS AND THE ALBANIAN REALITY

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ABSTRACT

Forest areas in Albania constitute 62% of the national territory. The more common species are peer, beech, fir ect. The annual growth is evaluated of $2m^3$ha wood for year while the ratio of conifers/foliar is 31.7 /68.3%. Forests are considered an important resource for the national economy and are essential for the wood industry, exports, fuel, construction industry, tourist guides ect. When it comes to ownership 51% of the forest area is occupied by state forests, 46% by municipal forests and only 3 % is occupied by the private sector although there is a tendency to increase the private administration. The forest system has been part of the national legislation since the creation of the Albanian state in 1912. We should mention that the first law to address the forest reality belongs in the year 1923, supported later with parliamentary decisions or decrees that organize the administration, multiplication and protection of the forest fund. From 1945 to 1990 for the forest management 27 forest enterprises and 112 nurseries (for the growth of forest trees) were created. Since 1992 till today attempts have been made to integrate the forest system in the free market economy, while the legislation is being harmonized with the normative framework of the European Union. According to the national heritage and the IUCN criteria more than 370 000 ha forest have been declared as national parks, national reserves or protected areas where rehabilitation projects are implemented with the assistance of The World Bank EBRD and USAID financial help. But regardless to the present legal framework, the forest areas have become a source of illegal profit and annual arson while the physical surfaces have decreased in percentage causing problems in environment and massive erosion in concerning levels. The situation in the field proves that some basic indices are in lower levels than 30 years ago. This situation induce concern to the citizens, that must considered as a national obligation and a heritage for future generations.

Key Words: forest, resources, national park, legal framework, administration

261 HEMATOLOGIC STUDIES OF HUMANS EXPOSED TO SULPHUR DIOXIDE

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ABSTRACT

The detrimental effects of air pollution on health have been recognized for most of the last years. The outdoor environment in industrial country without strong effective legislation remains a major health hazard. This papers discusses the effect sulphur dioxide in hematologic parameters of humans. The study investigates venus blood samples of 106 habitant of two areas in Albania, an industrial region where the observed ambient air included sulphur dioxide, and the other a non polluted one. The factors that can be effective as risk of hematological problems among habitants have been listed and regarding that, a database is taken. The parameters of blood samples of two areas are compared using ANOVA method and as result, no statistically significant changes are seen in erythrocytes or immunologic parameters examined and in leukocyte. The mean of erythrocytes is at minimum normal value. All parameters of leukocytes formula are examined and using statistical methods is studied the role of independent variables on these parameters. A possibly significant decrease is found in monocytes of rezidents that have only 20 years of timestay, but this is recovered after 40 years timestay. A decrease effect (statistically significant) was noted in lymphocyte.

Keywords: hematological problems, erythrocytes, lymphocytes, monocytes

262 SOIL ECOSYSTEM MANAGEMENT FOR FOOD SECURITY IN THE MEDITERRANEAN

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ABSTRACT

Land area of the Mediterranean region is about 854 Million ha, but only 118 Million (or 14 per cent) are suitable for agricultural production. In North Africa and the Middle East (MENA) agricultural land accounts for 5 per cent but in Egypt and Algeria is less than 4 per cent and in Libya less than 2 per cent of all nation's land. Region wide land cover include also natural pastures/rangelands (15 per cent) and forests/woodlands (8 per cent). The remaining 63 per cent consists of desert sands, shallow, rocky, saline, sodic soils and areas sealed by urbanization. Land degradation is severe in most countries. The average agricultural land area per capita in the Mediterranean EU countries is 0.30 ha and the agricultural land per agricultural worker is 11.4 ha. In the South Eastern Mediterranean countries, these areas reduce to 0.25 ha and 1.9 ha respectively indicating less agricultural land and more rural people (about 41 per cent of the population). Estimates for the period 1961 - 2020 show that while the Mediterranean population is likely to more than double, 8.3 million ha of agricultural land may be lost (7 per cent) if the present rates of urbanization and degradation remain unchanged. Agricultural land per capita would drop from 0,48 ha in 1961 to an estimated 0,21 ha in 2020. MENA countries are already water stressed but climate change will worsen the situation with consequences on food security and socio-economic disturbances. This situation requires a major reassessment of Mediterranean agricultural policy.

Key words: soil, ecosystem, management, food security, Mediterranean

263 COMPOSTING: A PROCESS TO REPLACE LANDFILLING IN KOSOVO

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ABSTRACT

Concerns with waste management in Kosovo are linked with issues deriving from illegal landfills, which pose a potential for generating serious health and environmental problems. Burning biomass such as grasslands and agricultural wastes releases particulate matter and contributes to air pollution. Furthermore, treatment and disposal of waste is a major concern, reflecting the poor implementation of existing waste regulations. Landfill waste management practices at Kosovo's seven regional landfills are inadequate; for instance, without soil covers, wastes are blown out of the landfill into communities and surface waters. Uncontrolled burning at these facilities is a practice and this activity releases toxic substances into the air. One of the ways that can help reduce the amount of waste in Kosovo is composting. As concerns about landfill space increases, worldwide interest in recycling by means of composting is growing; the major reason for this interest is due to composting being a process for converting decomposable organic materials into useful stable products. Organic wastes can be put back into the agro-fields in the form of compost, can assist in reducing non-renewable mineral fertilizer applications maintaining the quality of soils, conserve water and decrease the volume of wastes entering landfills. Instead of going to a landfill these wastes might become a valuable resource in Kosovo as Compost and be used in such areas as agro-fields. Composting is an economical and environmentally friendly waste management tool in compliance with local standards and an effort toward implementation of the national law in compliance with EU Directive's.

Keywords: Compost, Landfill, Agro-Fields, Waste, Waste Management

264 STUDY OF REPAIR ALTERNATIVE TECHNIQUES OF RAFTER-TIE BEAM IN CONVENTIONAL TIMBER TRUSSES

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ABSTRACT

Timber trusses have been widely use in the medieval buildings, but also in the modern ones. In the timber trusses structure the most important connection is the so-called rafter-tie beam. The destruction of the connections and as a consequence the diffraction of the timber trusses normally occurs because of the overload or natural degradation by biological agents of the truss structure. In those cases there is a need of connections repair and the identification of simple and efficient repair techniques is very important for the normal function of the truss for a long period of time. The evaluation of two repair techniques of rafter-tie beam is in the focus of this study. Tests are conducted in connections composed of elements with 15x15 cm of section, from several timber species namely, poplar (Populus sp.), white fir (Abies alba Mill.), spruce (Picea abies Carst.) and chestnut (Castanea sativa Mill.). The connections tested originate partly from beams used in old/medieval buildings and partly from new beams. After the mechanical tests, the rafter-tie connections were repaired and tested again, which allowed us to compare the functional performance of the original and the repaired connections. We evaluated two repair techniques, one consisting in adhesive bonding of heel above parts separated during the mechanical tests, using a special wood adhesive and the second technique consisting in using metal tie elements, which don't affect the dynamics of the connection. Tests results are showing that all the repaired rafter-tie beam connections, despite the repair techniques used are functional under the same and in some tests under higher forces that the ones measured during the destructive mechanical tests.

Keywods: timber truss structure, connections, rafter-tie beam, repair techniques

265 MONITORING AND EVALUATION OF NATURAL RECOURSES OF PRESPA LAKE BASIN

WITH EMPHASIS ON SPATIAL DISTRIBUTION AND IMPACT FROM NATURAL AND ANTHROPOGENIC FACTORS

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ABSTRACT

Lake Prespa is situated on the border between Macedonia, Albania and Greece. Governments of the three countries have agreed to work together to reduce pollution in the Prespa Lake Basin, and introduce environmental management practices by integrating ecological, economic and social goals. Some of the main factors of anthropogenic origin are causing impacts on Air, Soil and Water. Impacts on air are caused by usage of fire wood; open burning of agriculture wastes and household related waste. A total of 720 kg per season of fungicides, pesticides and herbicides are used in the Prespa Lake Basin (Albania portion), approximately 50% is assumed to be washed in the lake due to the fact that the majority of the chemical used are "non-contact". The objectives of this research were to (i) establish a baseline for air, water and soil pollutants contributing to the PLB through a monitoring network; (i) assess their impact these pollutants on the biodiversity and ecosystem functions; and (iii) develop a spatially explicit soil potential erosion map for the PLB using digital soil modeling (DSM) techniques. The results are showing significant correlations to the rate of urbanization. While in municipalities the specific waste production rate ranges between 0,65 and 0,95 kg per person and day is the range in the center of communes much tighter from 0,45 until 0,55 kg in almost stabile in villages (0,35 until 0,42kg).

Key words: Prespa Lake Basin (PLB), Monitoring, Evaluation, Anthropogenic factors.

266 DYNAMICS OF NITROGEN (N) AND PHOSPHORUS (P) DISCHARGE BY THE RIVER SHKUMBINI IN DIFFERENT PERIODS

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ABSTRACT

There are few published sources in Albania about the amount of nitrogen and phosphorus transported by river flows.The purpose of this paper is to evaluate these nutrients transport from the river Shkumbini based on the perennial database.These data are used to study the dynamics of the yearly distribution according to seasons in the region of our study.The calculations performed in this study show that Shkumbini river discharges into the Sea approximately 7.19 t nitrogen and 0.642 t phosphorus each year.Coefficient of these nutrients discharge varies on average 25-32 kg N ha^{-1} yr^{-1}, and 1.8-2.8 kg P ha^{-1} yr^{-1}.By using these perennial data and our experimental measurements in the field for many years it is noted that the values of phosphorus discharge are mainly in summer when the flow are low, while its very low concentration are observed during winter and spring.There is also repeated the same legitimacy in the case of nitrogen notes in the river Shkumbini.The change of nutrients' concentration reflects fully the different sources of discharge in Shkumbini river such as: industrial, urban, agricultural etc.So the contents of nitrogen and phosphorus in Shkumbini river are lower in the upstream of the river, while in its downstream is higher.Also referring to the estuary study data of Shkumbini river it noted that indicators of nitrogen and phosphorus content transported were higher than the two above references.

Key words: Shkumbini river, nutrient concentration (nitrogen and phosphorus), seasonal change, water flow, nutrient discharged coefficient.

267 HUMAN HEALTH IN MOUNTAIN AREAS, CASE STUDY IN ALBANIA

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ABSTRACT

In this paper we will be given some teorical, metodological and practical assessment about potential of mountain areas to the Human Health, refer to international literatures and some cases from Albania as well, like: Qaf-Shtama; Thethi; Voskopoja, Dardha and so on.. about this topic. Even though the lack of statistical dates in this new field, we can give some considerations and drawing up some conclusions and recomandations as well for Albania. As we know more than 28% of albanian territory belongs to the highlands. So, this is a big natural resourses potential in general but refer to the Human Health is still less known and using. In general up to now, this topic is involved and practisise in the mountain tourism framework. But in the few cases this topic is more special as practic, like mountain "*sanatoriume"* in some places, very big profitable. In this paper will be given through the diagrams and some comparative cases, potentials and possibilities for the further development in some places in Albania.

Keywords: Albania, Human health, mountain areas, development, tourism framework

268 THE INFLUENCE OF WOOD TEXTURE IN SURFACE QUALITY

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ABSTRACT

Wood species, thus its anatomy, is the primary factor that determines surface properties of wood. A study is carry out in the Laboratory of Wood Study in Forest Science Faculty to determine the brightness of wood surface after the planing process of seven different wood species such as fir, pine, beech, oak, walnut, mahogany and teak. There are prepared 5 samples for each species and is processed with planning and sanding with three types of flint paper. After a very careful observation and measurements it resulted that the best brightness was obtained from fir as a representative of "no transition" or gradual-transition, and for beech as the representative of diffuse-porous hardwoods. It was moderately value of brightness for walnut as a representative of semi-ring-porous hardwoods. It was taken a lower value of brightness for Pine as the representative of abrupt-transition softwoods, and for oak as the representative of ring-porous hardwoods.

Key words: wood species, fir, pine, beech, oak, walnut, mahogany and teak

269 AGRICULTURE DIRECT GOVERNMENT SUPPORT

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ABSTRACT

We identify several types of support for agriculture, where it occupies a special place directly in our agricultural practice since 2007. There is a strong legal basis to activate and some ingredient as to the non-bank bank financing resulting minimal too. It is considered as a practice efficient, transparent and takes into account the reliability of the recipients of subsidies, which is subject to a verification of control on the use of target amount. Realized on principles of clearly defined criteria, this direct support has made progress over the years, expressed in increasing the number of subsidized sectors, in addition to the operation and support measures in the variety of content, increasing the size of the support for some measures and the fund as a whole, the increase of applicants, the beneficiaries and territorial presence by giving priority to mitigating criteria mountainous areas, etc. Originally implemented by the 2 KR project, now is as Paying Agency CAP instrument that performs this function to us. This type of support is used in place of regionalization and concentration of production, working in groups of farmers and agricultural intensification, in favor of rational land use in general and particularly those inherent in technological upgrading of production, growth exports, the Welfare of rural households, etc. In perspective support schemes should be built on the basis of production as more effective and transparent, expressed in quantitative-qualitative indexes, food safety, etc.

Key words: Subsidies, agricultural credit, supportive measures, the size of support, project applicants and beneficiaries, principles and criteria.

270 THE METHODOLOGY OF THE CARBON FOOTPRINT TO THE OLIVE SECTOR: POTENTIAL APPLICATION IN ITALIAN AND ALBANIAN REGIONS

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ABSTRACT

Various initiatives are being taken to reduce CO2 emissions in all sectors. IOC (International Olive Oil Council) is currently involved in the definition of a protocol for the quantification of CO2 emissions throughout the all life cycle of the olive oil.In this work was made a theorical application of the methodology of Carbon Footprint to production relating Italian (Abruzzo) and Albanians realities. We analyzed production process in several entities located in central Italy and Albania. The methodology has been applied on the basis of existing data. The chosen functional unit is 100 liters of extra virgin olive oil, obtained from conventional agriculture. The agricultural phase, the extraction and the bottling process together with primary and secondary packaging was analyzed referring to average data. It has been excluded the use phase and the end of life. The analysis showed that in both nations, the agricultural phase appears to be the most impactful. However, also the extraction phase, cause of the olive mill waste waters represents a major item within the total CO2 balance (from 15% to 25%). It was found that the packaging (glass bottle) is the largest contributor to the greenhouse effect (about 35%). The improvement prospective are represented in part by using renewable energy sources and on the other hand by a revision of the packaging. A preferential path must be given to the reuse of by-product (olive stone) that after a mechanical treatment of separation from the pulp it becomes ready as fuel for thermal and thermoelectric power plant.

Key words: methodology, carbon footprint, italian and albanian regions

271 THE MAIN CHANGES BETWEEN WESTERN MODEL OF COOPERATIVES AND SOCIALIST MODEL APPLIED IN ALBANIA

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ABSTRACT

Still there is no a pure cooperative movement. The farmers are sceptic referring to the negative tradition in the dictatorial system. Some models of cooperatives are established in different agriculture areas but still are not competitive in the market and to provide quality services for their members obstructive factors of the development of cooperative sector in Albania could classified in some types: Factor of social nature, factors of economical nature, factors of entrepreneurs' factors of institutional nature. The cooperatives will influence directly in the increase of agriculture and livestock production enabling the vertical integration of farmers in the food chain, enhance the employment and will reduce the informality level in the rural areas, will improve the quality of life .Through defined programme would enable the preparation of woman as manger in the rural areas, professional /management education of young farmers in order to establish successful social business. Also will enable the conservation and sustainability of environment.

Key words: Cooperative, management, production, prosperity.

272 TRENDS OF LIVESTOCK FARMS DEVELOPMENT AND EVALUATION OF BIOGAS PRODUCTION

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ABSTRACT

Livestock production in Albania accounts about 50% of agriculture production. The sustainable economic development in rural areas increases the demand for electric energy. One of the alternatives with a positive impact on the environment and economical and social development of these areas is the use of the green energy as biogas. In this contest the objective of the study are: To find out the tendency of livestock farms development and the possibilities of biogas production from these farms in Albania. The study was undertaken in Shkodra district. It analyses the data from 192 farms. According to this data the daily quantity of animal waste, the daily quantity of biogas as well as the theoretical and practical potential energy, was calculated. The calculation was done based on ASAE 2003 and NRCS 1998 standards. In conclusion we can say that the use of biogas as an energy resource is a real potential for our farms. It can cover 15% of heating and cooking needs of families living in farms, as well as heating and lighting needs of school and kinder garden. The system of biogas implant for the farmers of this commune can be family type, or in cooperation cases, a middle sized system

Key words: farm, livestock, animal waste, biogas, energy.

273 CULTIVATION AND NUTRIENT ANALYSIS OF THE MUSHROOM *PLEUROTUS SP*

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ABSTRACT

Pleurotus sp,a member of oyster mushrooms, has been successfully cultivated in the last few decades due to its ability to grow on a broad range of temperatures, humidity, light and simple cultivation methods on lignocelluloses substrates. This study was conducted in the *Research Laboratory of Mycelium* in the Department of Plant Protection, Faculty of Agriculture and Environment and in the private farm of "Divjaka Mushroom". The purpose of the study was assessing the nutritive values of two edible mushrooms namely: *Pleurotus ostreatus (DO - VT, JOM)* and *Pleurotus eryngii (PE-MT, PE-IT)*. Both types of mushrooms were rich sources of proteins and fibers were: 25.83%, 7.01% and 27.41%, 6.74% on dry weight basis; average of the results respectively. Moisture content, lipid, ash and carbohydrates were relatively low 88.77%, 89.01% and 2.03%, 1.79% and 6.55%, 6.99% and 47.81%, 48.81%; average of the results respectively. *Pleurotus eryngii (PE-MT)* strain showed maximum protein 35.2% and maximum moisture 90.21 %. The crude fiber content and the lipids in the fruiting bodies were recorded 8.10% and 2.8% in strain *Pleurotus ostreatus (DO – VT)*.

Key-word: Pleurotus ostreatus, Pleurotus eryngii, nutrients, protein, moisture, lipid.

274 YIELD FORECASTING OF OLIVE TREE BY METEOROLOGICAL FACTORS AND POLLEN EMISSION

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ABSTRACT

The paper aims to forecast olive production based on the application of a statistical model by use of meteorological factors and pollen emission. Nowadays there a number of models and approaches related to the yield forecasting. All of them have their advantages and disadvantages and different behaviours for climate conditions of Albania. As a result, after a preliminary evaluation, the best fitted model was chosen and the results were analysed. The chosen model is based on the multiple equations of regression, which take into consideration some climate factors such as; rainfall during May and June, minimum temperatures during spring and summer. The latter were considered important due to the influence of night temperature on energy collected for fruit development. The use of pollen emission and monthly meteorological data from 1985-2004 as predictive variables enabled the production of a forecast up to 8 month prior to the end of harvesting. The yield production was forecasted in November for the study period, which reflected the EPP and the meteorological factors like minimum temperature, maximum temperature and rainfall from May to October. In addition, as the model requires, the most significant periods for this plant were chosen, and were evaluated for the Vlora region of Albania with the highest productivity in the country. Results were compared with real olive crop data and estimates from the equation resulted to have a correlation coefficient about 0.77 and SE=3.0.

Keywords: Forecasting, yield product, meteorological factor, equations of regression, olive.

275 URBAN AIR QUALITY, A COMPARATIVE STUDY IN MAJOR ALBANIAN CITIES

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Abstract

The air quality in Albania has been deteriorated due to the urbanization, industrial development, lack of awareness, poor maintenance of vehicles and road conditions. In order to assess the impact of human activity at the major Albania cities was evaluated air quality form 2002 to 2010. The annual average of suspended particulate matter (SPM), respirable particulate matter (PM_{10}), sulfur dioxide (SO_2) and nitrogen oxides (NO_2) were used for the calculation of the air quality index (AQI). Evaluation of exccedance factors (EF), shows that PM_{10} and SPM (generally higher than 1.0, even higher than of 1.5) are the most significant polluting agents, significantly contributing toward the deterioration of the air quality. The EFs of SO_2 and NO_2 of less than 0.5 signify its contribution in deteriorating the ambient air quality is not considered to be critical. The AQI values with a range of over 75, signify prevalence of high and critical pollution levels.

Keywords: air pollution, air quality index, exceedance factor, monitoring, PM_{10}, SPM.

276 TRACE ELEMENTS IN LIGNITE OF THE KOSOVA BASIN AND ENVIRONMENTAL SIGNIFICANCE

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ABSTRACT

Coals contain diverse amounts of trace elements their overall compositions. Certain trace elements such as lead, arsenic, cadmium, chromium and mercury, if present in high amounts, could preclude the coal from being used in environmentally sensitive situations. Others have detrimental effects on the metallurgical industry: these include boron-titanium-vanadium and zinc. Coal is an important component in enabling energy demands in Kosovo. Kosovo coal is lignite type. Production of electricity in Kosovo, until now, is mainly realized in power plant with lignite (Kosova A and B), 98% and the small part (approximately 2%), in hydroelectric power plant. As a result of the high tonnages of coal used in industry, significant amounts of trace elements may be concentrated in residues after combustion. This paper focuses on the selected trace elements (Sb, As, Pb, Ba, Be, B, Cd, Co, Cu, Hg, Cr, Mo, Ni, V, Sn and Zn) released by the combustion of coal. There are four trace elements which occur in concentrations greater than 100 mg/kg d.m in lignite. These are barium (550.42 mg/kg d.m), boron (263.54 mg/kg d.m), chromium (142.21 mg/kg d.m) and nickel (219.88 mg/kg d.m). The environmental impact of trace elements is related, in the first instance, to their modes of occurrence in the coal. The presence of trace elements in fly ash can lead to serious environmental impacts and consequently have an impact on the inhabitants of the environment if the disposal of the fly ash is not performed correctly.

Key words: lignite, trace elements, lignite combustion, environmental concern

277 THE RESULTS OF MINT CULTIVATION IN GREENHOUSES AND FIELDS

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ABSTRACT

The gender "mint" includes several subspecies that contain etheric and aromatic oils, with diversified use values (food industry, cosmetics, perfumery and medicine). From the leaves of the mint is extracted *carotene* that is used for seasoning of some food products. The main components by which is named are *Menthon* and *Menthol.* Their concentration and ratio determines the strength of essence and the value of the mint uses. Extend use of etheric oil of Mentha piperita and Mentha spicata has made it to be considered as a broad consumer goods. So, today mint is cultivated in many countries and its production is increasingly required. In our country, it is consumed a large quantity of mint herbs, therefore it is cultivated more and more. The study of mint cultivation in fields and greenhouses serves for increasing of production and ensure the fresh production, even during the winter period. In this study are included two species: *Mentha piperita* and *Mentha spicata*, that are the most required by the market.

Key words: Mint, etheric oil, menthol, menthon, cultivation

278 STUDY OF THE PHYSICO- CHEMICAL CHARACTERISTICS OF THE HAZELNUT FRUIT (*CORYLUS AVELLANA* L.) CULTIVATED IN KRUJA REGION

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ABSTRACT

Hazelnut belongs to the *Corylaceae* family, order *Fagales*, genera *Corylus* L. and species *Corylus avellana* L. Corylus avellana L. is considered as an indigenous species in Europe and Western Asia. The hazelnut cultivation varies from 37-750 m above sea level. Statistical data for the cultivation of this plant in Albania dates from 1926, located in the South-Western hilly region of Mallakastra. The plant is a shrub type, self-pollinating, the general high vary to 3 - 4.5 m, and the maximum height established to 7m. The trunk is slender and developed, the branches are coated with fluff. Hazelnut is a culture with great interest for modern intensive agriculture,. The process of fructification begins in May. It is aken of different shapes, round, wearing a strong peel. The average dimensions of 100 grains hazelnut fruits (in cm) are: length 1.6-2.2cm, width 1.5-2.0 cm, and thickness 1.3-1.8 cm. Fruits' base is flat and sharp top. The husk is very strong, and its color changes during growth and ripening stage from open green to brown. The average dimensions of 100 hazelnut kernels vary: length 1.5-2.0 cm, width 1.3-1.6 cm, and high 1.0-1.4 cm. in some cases the kernel is wrapped in a thin brown membrane. The yield can reach 25 quintals per ha. The major constituents of the hazelnut are: 16% carbohydrate, 17% protein, 66% fats, minerals 2:21%.

Keywords: Hazelnut, Corylus avellana L., physico-chemical characteristics, fruit, carbohydrates, proteins, fats

279 BIOASSESSMENT OF WATER QUALITY OF OSUMI, DEVOLLI AND SHKUMBINI RIVER

USING SOME DIFFERENT BIOTIC INDEX OF BENTHIC MACROINVERTEBRATES ON SPRING 2012

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ABSTRACT

Many Europe countries have a long history of using macro invertebrates to evaluate the ecological status of river and stream ecosystems. Albania is not a member of EU, even though as all European waters, according to WFD have to achieve 'good ecological and chemical status' by 2015. Nowadays in Albania threat to water quality of rivers come from organic pollution, chemical and physical changes to water courses, such as new dams. Our study was focused on assessment of some biotic index based on benthic macro-invertebrates of Osumi, Devolli and Shkumbini River during period spring 2012. The biodiversity of species represents different value of biotic index related that with impact level. During investigation based on the collection in 3 different stations of each river we identified out that: Osumi River 596 individuals, (26 taxon), Devolli River 374 individuals (19 taxon) and Shkumbini River 308 individuals (25 taxon). The results shows*: ASPT-Biotic Index* represent values: Osumi River St 1 =6.93, St 2=5.90, St 3 =6.92; Devoll River: St 1 =6.67, St 2=6.27, St 3 =5.44; Shkumbini River: St 1 =7.13, St 2=7.18, St 3 =6.09. Following the obtained data the water quality of each river is still good. Also others parameters (*EPT-Biotic Index, FBI - Family Biotic Index,)* are in accordance with EPT- Biotic Index. Three Rivers have still good water quality with a slight impact.

Keywords: Macro-invertebrates, Family Biotic Index, EPT -Biotic Index, ASPT.

280 NATIONAL PARK "BJESHKËT E NEMUNA" THE BIGGEST DEVELOPMENT IN NATURE CONSERVATION IN KOSOVO

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ABSTRACT

This paper presents process, benefits and challenges of the biggest undertaking so far for the protection of biodiversity in the Republic of Kosovo. In December 2012, Assembly of Kosovo, after nearly 43 years long process, passed the law on designation of the second national park "Bjeshket e Nemuna". This is the first park declared in the independent Kosovo and the largest one with an area of 62,488 ha. With the new park, the total of protected areas at the country level is increased significantly, more exactly in about 109.794 ha or 10.03% of the territory of Kosovo. This park is one of the floristic centers of Europe and designation as national park aims to ensure better conservation of over 1,500 plant taxa, 8 species of fish, 13 species of amphibians, 10 species of reptiles, 148 species of birds, 37 species of mammals and 129 types of butterflies. Legal protection after adoption of the law provides protection only in paper. Now the real challenge starts for the protection of biodiversity in the area that has been under long, wild and intense degradation during these years that procedure of designation lasted. There are many accumulated problems that represent difficult challenges for the administration that will manage the national park: loss of rare and threatened plant and animal species, unplanned and non-legal interventions and constructions, low level of economic development and investments in the area etc.

Key words: National Park, endemic, biodiversity, law.

281 MUTAGENIC POTENCY ASSESMENT OF NICKEL SHORT-TERM EXPOSURE ON *Allium cepa* L.

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ABSTRACT

The environmental discharge of Nickel by human activities and natural processes is getting a problematic concern. In the present study the mutagenic potency of Nickel was assessed using *Allium cepa* L. test. Onion roots were exposed for 12, 24 and 48 h to three doses of $Ni(NO_3)_2$ salt, representing ¼ EC_{50}, ½ EC_{50} and EC_{50} metal concentrations. Microscopic endpoints as: mitotic and phase indexes, interphase nuclear volume and DNA content, interphase micronuclei frequency and chromosomal aberration rate and types on root meristematic tissue, were evaluated. The results showed obvious metal concentration-dependence of all parameters. Mitotic index decreased substantially at ½ and EC_{50} at both treatment times, while it was noticed a change in the percentage of different mitotic phases especially after 48 h. There was observed insignificant decrease of interphase nuclear volume and DNA content with concentration increasing and treatment duration. The frequency of micronuclei and chromosomal abnormalities was notably higher after 48 h compared to 24 h exposure of onion roots. This approach resulted to be a simple and sensitive experimental tool, which could be applied to recognize and predict metal stress in the environment, particularly in case of water pollution increase.

Key words: Water pollution, Nickel, *Allium cepa* test, mutagenicity, EC_{50}, micronuclei formation

282 INVESTIGATION OF CYTO-PHYSIOLOGICAL REACTION OF *Allium cepa* L. TO ROUNDUP

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ABSTRACT

The continuous use of agrochemicals has an obvious impact on crop production, but their residues remain one of the most problematic soil and water pollution causes, especially in developing countries as Albania. The pesticides possess biological activity including toxic influence. Roundup is a widespread and non specific herbicide commonly applied in Albanian agriculture, public areas and private gardens, being a potential risk for biota and human health. The present study made an investigation of cytological and physiological reaction of *Allium cepa* L. seeds exposed for 4, 12 and 24 h to 0.05, 0.1, 0.5 and 1% of roundup,. Seed germination percentage and fresh and dry weight, chlorophyll *a* and *b* and carotenoids content, root length, mitotic and phase indexes of root meristem were evaluated. The results showed that the exposure to roundup significantly reduced the germination percentage, root length and seedling fresh and dry weight, photosynthetic pigments content (especially chlorophyll *a* and carotenoids) in all the treatment doses and duration period. It was noticed a mito-depressive effect of the herbicide on onion root meristematic tissue, decreasing the mitotic index and causing alteration of phase index second the applied dose and exposure time. The data of this paper indicated that the investigated herbicide could potentially induce cyto/physiological effects on non target organisms and adversely affects humans.

Key words: agrochemicals, roundup, *Allium cepa*, toxicity, cyto-physiological effects

283 THE IMPACT OF POPULATION GROWTH ON THE ENVIRONMENT

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ABSTRACT

In this study we examined two stringly different views of what the future holds for the world economic system.At the heart of those views lie rather divergents views of the world population problem.One view sees population growth as comntinuing relentlessly,putting enormous pressure on food and environmental resources.the over view sees the world as being in the period of transition from hight rates of natural increase to strikingly louer ones,culminanting eventually in zero population growth.Because of abundant technological possibilities for satisfying the temporarily increasing,but eventually stable,population.we examine the maner in which population affects and is affected by development process,as well as the microeconomic issues dealing with economic determinants of fertility.This economc prespective provides one basis for understanding the causes and cosenquences of population growth and provides an approach for controlling population.No long ago,the world population passed 6 billion and was growing at an annual rate around 1.5 percent per year.In recent years the averages rate of population growth has declined.This slow-down has been experienced in both developed and less developed countries,although rates remain higher in the less developed countries. We study dhe Albania fertility,through a survey of some 700 women in 10 several cities ,found several apparent causes,including increased use of contraception,a growing preference for fewer children ,and later marrieges displayed mainly in the developed city .we are ficused and in the population growth,the most problem ,effects of population growth on economic development in the world and in Albania in particular,several possible source that can be changed as e means of cotrolling population. A number of questions guide our inquiry.What is the relationship between population growth and economic growth?Does population growth enhance or inhibit the opportunities of a country's citizens?How an the rate of population growth be altered,which are the public policies geared toward manipulatiomg the rate of population growth, when it is desirable to do so.the best stratedy that fermer must be adptive ,techniques to improve fertility,conserve water,manage trees,increase livestock and take avantage of changing markets

Keywords: population growth, environment, economies of scale, fertility rate, marginal produktiities, emigration, comparative advantages, economic growth, microeonomi theory of fertility, global population.

284 MONUMENTS OF NATURE OF DRENICA RIVER BASIN

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ABSTRACT

Drenica River Basin is located in the central part of Kosova, between Dukagjini Plane (Adriatic Sea basin) in

west and Kosova plane (Black Sea basin) in east. It is in the left branch of Sitnica River, with surface of watershed of 447 km^2 or 4.1 % of Kosova surface. North part of basin is hilly mountainous landscape, whereas central and south part is field landscape. Drenica river basin is specified by variety of monuments of nature, in creation of which it has impacted, geographic position, geological, pedologic composition, landscape, climatic conditions, hydrography and vegetation. Monuments of nature are important part of nature heritage in the local and national level. About 20 monuments of nature are protected and also in procedure for legal protection in Drenica river basin. Monuments of nature are objects of live and dead nature with special values: scientific, educational, landscape, cultural, touristic values, etc. Monuments of nature to be treated in this paper are:

- Geo-monuments: Kishnareka cave, Nakovci cave, Guri i Gradinës, Guri i Plakës.
- Hydro-monuments: thermo-mineral spring (vrella) e Baicës, mineral spring of Poklek and
- Bio-monuments: Likoshani *Oak* trees (*Quercus pubescens)*, Krajovë *Oak* tree *(Quercus sp.), Oaks* trees Tersteniku (*Quercus sp.)*.

Key words: Kosova, Drenica, basin, monuments of nature, caves, *Oak* tree, etc.

285 CHEMICAL PROPERTIES OF COAL IN KOSOVA BASIN AND ENVIRONMENTAL ASPECTS OF MINING

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ABSTRACT

Kosovo is rich in coal resources/reserves.. Geological coal reserves and resources in Kosovo are estimated in 12.5 billion tons (INKOS 2008).The coal in Kosovo is used mainly in power (electricity) generation and less amount for heating. The extensive basic sampling on the Kosovo coal basin resource in the 1970´s comprised only the general analysis of the heat value, volatiles, moisture, ash and sulphur contents. Institut INKOS sh.a. in the 2007 conducted the samples from the field. The samples were transferred to Swedish laboratory Analycen in Lindköping that is accredited laboratory according to ISO/IEC 17025.From the assay data have been determined chemical composition of coal. The first was given a criterion. Are used assay data from sample on "as received basis".Kosovo's basin coal belongs to typical lignite types with dark grey color. Chemical properties of lignite are given from ultimate and proximate analysis. The heating value of lignite is 9.28 MJ/kg. Ash of this lignite has a typical composition for lignite coal ashes.The impacts of opencast mining are considerable. Main impacts on the environment by coal mining and production of significant quantities of ash is reflected in following main aspects: huge overburden dumps; influences on surrounding terrain by excavation; total loss of naturally grown environmental contents and relations; change of hydro-geological regime in wider area; soil pollution and ground-/surface water pollution (wider area in the water shed) owing to soil alterations and coal processing (ash deposits, processing water release); air pollution due to dust expositions while excavating and conveying; influences on terrain stability within mine (working slopes) and surface deformation (subsidence of the soil); noise due to working conveyor belts.

Key words: lignite, ultimate analysis, proximate analysis, opencast mining, environment.

286 GENETIC DIVERSITY ASSESMENT OF PEA (*PISUM SATIVUM* L.) GERMPLASM BASED ON QUANTITATIVE MORPHOLOGICAL AND QUALITATIVE TRAITS

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ABSTRACT

In order to investigate the genetic diversity present in the pea germplasm stored in Albanian genebank 12 local genotypes were analysed for 23 quantitative morphological traits and 15 qualitative characters. The study was carried out in the regeneration field of Albania genebank, during three years. ANOVA and correlation analysis reveal considerable extent of diversity, and the association among different traits. Most of the quantitative morphological traits showed significant differences and correlation analysis showed high significant positive correlation among different important agro economic traits. Comparisons of means for all pairs using Tukey-Kramer HSD ($q^* = 3.60563$ and $\alpha = 0.05$) show the significant differences between and within genotypes at the $P_{0.05}$ and $P_{0.01}$ levels of the probability. PCA and cluster analysis (Ward's method) carried out separately for morphological data and qualitative data divide the whole germplasm into three groups in respect of genetic diversity and similarity and identifying traits with agronomic interest which account for genetic diversity and the demarcation of distinguishable morphological groups will facilitate the maintenance and agronomic evaluation of the collections.

Keywords: Pea, *Pisum sativum* genotypes, quantitative-qualitative traits, cluster analysis.

287 DATA ON MALACOFAUNA OF THE RADHIMA COAST, VLORA BAY, ALBANIA

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ABSTRACT

Malacofauna of shallow rocky coast of Radhima area (south-eastern part of Vlora Bay, Albania) has been studied, focusing on the supralittoral, mediolittoral and upper limit of the infralittoral during 2006 – 2008. Replicated quantitative samples have been taken in April and October each year, by using a reticulated frame as a standard sampling area unit. This study gives data on species composition of malacofauna and a general assessment of quantitative characteristics, seasonal variations and stability of molluscan population in the studied area. A total of 49 molluscs has been recorded, with a high dominance of gastropoda, besides other species of polyplacophora and bivalvia. It is worthy to note the presence of the gastropod *Cellana rota*, an alien species for the Mediterranenan Sea, 21 endangered species in national scale and 1 endangered species in regional scale (*Lithophaga lithophaga*). Seasonal variations were high, with a higher number of species and higher abundance in autumn season. 17 species have been found in spring and 45 in autumn. Algal coverage seems to play an important role for the species composition and abundance of malacofauna in Radhima coast. Stability of malacofauna community was low and this situation may be related to the high human impact in the recent years and degradation of macrovegetation cover (algae and seagrass) at the coast. The presence of species of national and regional concern highlights the importance of the studied area and the whole Vlora Bay in the aspects of biodiversity and environmental conservation and management.

Keywords: Malacofauna, rocky coast, Vlora Bay, Albania.

288 EVALUATION OF THE PROTECTION EFFIECIENCY OF VITAMINE C AND B6 IN THE CORROSION OF 36CrMo STEEL IN ACID ENVIRONMENT

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ABSTRACT

The use in many industrial processes of acid solutions can sevearly damage the pipelines and other metallic parts due to corrosion process. This can not only be of economical, but also environmental concern. Therefore, finding the appropriate protection method is of great importance and a continuous challenge. Lately, research work has been focused on identification and testing of the so called green inhibitors, which are environmental friendly and preferably with low cost. The aim of this paper is to report on the corrosion stability of 36CrMo steel in acid environment in the presence of vitamine C and B6. The corrosion rate and inhibition efficiency was calculated for solutions of HCl of different concentrations and different temperatures using the weight loss method. The results for vitamin B6 show that the inhibition efficiency reached 85% when increasing the inhibitor concentration up to 1.0% by mass. The protection mechanism for the inhibitors is also discussed.

Keywords: corrosion, carbon steel, vitamine C, vitamine B6, green inhibitors

289 EVALUATION OF THE PROTECTION EFFICIENCY OF 1-DECYL-3-METHYLIMIDAZOLIUM CHLORIDE IN THE CORROSION OF 36CrMo STEEL IN ACID SOLUTION (HCl)

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ABSTRACT

Corrosion is an important factor affecting considerably not only the time of use, but also the mechanical properties of metal objects in general. Moreover, corrosion causes economical loses and has an impact on the environment. This phenomenon is of greater importance for steel equipments and materials used in industry. In many industrial processes acid solutions are used which accelerate corrosion. In order to minimize this phenomenon different approaches have been taken, inhibitor use beeing one of them. This paper reports on the protection efficiency of an ionic liquid, 1-decyl-3- methylimidazolium chloride in the corrosion protection of 36CrMo steel in HCl solutions of different concentrations and temperatures. The corrosion velocity and protection efficiency have been assessed using the gravimetric method. The results show that an increase in the 1-decyl-3-methylimidazolium chloride concentration results in lower corrosion velocity of the 36CrMo steel in acid environment. The protection efficiency decreased with the increase of temperature. The mechanism of corrosion protection for this inhibitor is also discussed in the paper.

Keywords: corrosion, carbon steel, 1-decyl-3-methylimidazolium chloride, ionic liquid, inhibitor

290 EVALUATION OF THE CORROSION STABILITY OF 36CrMo STEEL IN ACID ENVIRONMENT IN THE PRESENCE OF VITAMIN B1

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ABSTRACT

Metal corrosion is a process that can be initiated by many factors. The electrochemical corrosion, as a special case, is caused by the metal contact with the acidic water solutions. Acid solutions are widely used in petroleum industry in many important processes such as in water treatment plants and pipeline cleaning. However, these solutions damage the metal materials and as a result cause considerable economic losses and environment impact. Therefore, when choosing the protection method the focus has been in finding inhibitors with low cost and environmental friendly. The inhibitor selection has been done taking the consideration the solutions used in the petroleum industry. This paper presents results on the inhibition role of vitamine B1 in the corrosion process of 36CrMo steel in acid solutions. The corrosion rate and inhibition efficiency of the vitamine has been studied for different acid solutions and at different temperatures, using the gravimetric method. The experimental results show that the inhibitor decreases the corrosion rate. A comparison of the corrosion rate at high and low temperature indicate the adsorption
of B1 on the metal surface as the inhibiton mechanism in this case.

Keywords: corrosion, 36CrMo steel, vitamina B1, green inhibitor

291 THE STUDY OF ORGANO CHLORINE PESTICIDES IN BREAST MILK AND THE IMPACT IN HEALTH, IN TIRANA ALBANIA

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ABSTRACT

Organochlorine pesticides are highly lipophilic and stable resulting both in their persistence in the environment and their tendency to pass up the food chain. Residues of these compounds are detectable in breast milk and have been monitored since the 1950s. Exposure data to organochlorine pesticides (OCPs) of mothers' breast milk samples were measured in different locations in Tirana and mothers have completed questionnaires about their diet. Milk samples were collected from mothers aged 18-40 years mothers involved in the study were nursing either their first or second child. The samples are taken at random. There are set 21 organochlorine pesticides including: dieldrin, aldrin, endrin, lindan, chlordane, heptachlor, DDT, α HCH, β-HCH, γ- HCH, BCH, Heptachlor epoxide, op-DDE, α Endosulfan, pp-DDE, op-DDT, pp-DDD, pp-DDT, β -Endosulfan, Captane, Methoxychlor, Mirex. In this work, we have detected PCB 36.84%, lindan 31.5%, α HCH31.5%, Heptachlor15.78%, α Endosulfan 15.78%, endrin 10.52%, dieldrin 10.52%. The samples have been examiated by the methods of FAO, with gaschromatography ECD detector, and the results are frequently used to assess degradation in the environment as well as risks to recipient infants. The measurements have been calculated in mg/kg levels.Numerious studies have linked organochlorine pesticides exposures with cancer and other health effects. Exposure of DDT is linked with the cancer of breast in women. As a food, breast milk is unique. It is manufactured entirely for an individual consumer with some of its constituents driven by its recipient. It can form the sole source of nutrition for a considerable period of an infant's life.

Keywords: Organochlorine pesticides, breast milk

292 EVALUATION OF WATER QUALITY TRENDS USING WATER DISCHARGE NORMALIZTION

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ABSTRACT

Water quality studies often deal with an important questation: The quality of a water body is getting better or worse? Detection of trends of stream water quality is not a simple case. Usually, during a year period, concetration of chemical species or compounds which are dispersed in water change by a few scale of concentration. This slight trends are covered by large fluctuation of water charges, by seasonal effects and by variability of analytical methods. This paper presents an approach to evaluating trends in stream water quality. This method use data normalization through water discharges to evaluate trends of water quality. During the period 2004-2009 the data for COD (chemical oxygen demand), BOD_5 (biological oxygen demand) and Oxygen content are collected. The analysis are done in IGEWE (Institute of Geoscience, Environment and Water Economy) laboratory, which is responsable for water quality monitoring in Albania. The standart analytical methods for analyzing water samples are used. Data normalization for COD, BOD_5 and Oxygen content of Vjosa river water are maded. These data from the Vjosa river show considerable scatter. Sesonal variation of all parameters had a sinusoidal patern. Maximum values for NKO and NBO_5 occur during summer time, while minimum values of these parameters occur in winter. Conversally, the Oxygen content maximum values are founded during the winter and minimum values are founded in summer time. Normalization values for COD, BOD_5 and Oxygen content, show no trends, respectively, because of both reasons, the large fluctuation of water discharges, and stationary situation of this water body.

Key words: Water quality, trends, water discharges fluctuacions, data normalization, BOD_5, COD, Oxygen content.

293 WOOD-BASED BOARDS AS ECOLOGICAL PRODUCTS- THEIR QUALITY CONTROL

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ABSTRACT

Mechanic Processing of timber is inevitably associated with technological waste, a fact that brings forth the concern about increasing the coefficient of beneficial use of wood. This problem is resolved, in a somehow satisfactory matter, through the production of goods using such wastes as raw materials, such as the tiles (slabs) chosen for this study. This is a factor that significantly affects their marketing. Albanian industry of furniture manufacturing uses massively particleboards (Pb) and medium density fibreboards (MDF) as raw materials. A study was carried out to analyze the properties that determine the use of these panels in joinery. Tests included the most important physical and mechanical-technological properties. The study focused on 18 mm thickness particleboard and 19 mm MDF. The whole process of panels sampling, test pieces preparation and their testing was performed according to EN standards. Results showed that panels fulfilled quality requirements specified by European standards. Bending strength of particleboards resulted 87% higher than EN reference value, whereas MDF about 50%. Tensile strength perpendicular to board's plane resulted 23% higher than the minimum limit for particleboard and 26% for MDF. Unlike veneer which increased somewhat mechanical properties of the board, melamine didn't present any positive impact on its properties. MDF presented higher capability in screw holding than particleboard. Screw holding resistance in edge wasn't satisfactory for particleboard, but in plane presented values which must be taken into consideration. Quality of melamine lamination in particleboard resulted higher than veneer overlaying in MDF.

Key words: particleboard, MDF, properties, furniture.

294 BIODIVERSITY AND PROTECTED AREAS IN KOSOVO

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ABSTRACT

Kosovo even a small country, it is distinguished with rich biodiversity. Its geographical position, geological factors, hydrology and climate are some of factors that enabled Kosovo to have rich biological diversity, rich flora, fauna and vegetation as well as presence relict, endemic and other important species. Based on researches made so far, in Kosovo are inventoried about 2.000 species of vascular flora, but it is supposed this number is much higher and reaches about 2.500 species. It means the Kosovo species inventory is not completed yet. According to the researches made so far, in Kosovo are identified more than 250 wild vertebrate species (215 bird species) as well as a number of invertebrates (so far recognized 200 butterfly species, over 500 macrozoobentos species).The nature protection through protected areas is an important legal tool that enables protecting the values of natural heritage and biodiversity. Currently the national network of protected areas is consisted by 98 nature areas with the total surface of 124.204 ha (11.5 % of the territory of Kosovo). Greatest territory of protected area is taken up by the "Sharri" and "Bjeshket e Nemuna" National Parks, with 94 % of the total territory of protected areas. Recently over 160 new areas of various categories of protection were proposed for protection. Several gaps and problems within protected areas in Kosovo which even now most of them continue to follow the nature conservation. If we are going with those steps and dynamic, in a few years' highly valued natural areas in Kosovo will lose their values and many endangered species of fauna and flora will be extinct as a result of the conversion of land for agricultural purposes, infrastructure development, infrastructure (unplanned and uncontrolled constructions), fragmentation of habitats (especially by streets and quarries), unsustainable exploitation of forest ecosystems, herbs, certain animals, etc.

Keywords: Protected areas, Kosovo, biodiversity, National Parks, Nature Reserves, Nature Monuments, problems, flora, fauna.

295 OXYGEN IN THE BOTTLE NECK

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Abstract

Oxidation or other exposure to air beer is one of the defects met at beer to be stored for a relatively long time. Beer various types break down at different speeds and emit unpleasant odors. Oxidation causes changes in taste, flavor and color also. It should be noted that the most critical points in the production process is packaging beer because beer goes in a container full of air. The less oxygen is absorbed especially during the process of filling and maintaining more stable beer would be the smell.Reducing contact with oxygen during the transfer and packaging of beer leads to reduction of oxidation but actually oxidation is inevitable. In the early stages of oxidation beer gets a bad smell and a further oxidation as it has flavor of honey and finally flavor as wine and dried fruit as mature too many.

Keywords: beer, oxygen, measure, bottle.

296 EVALUATION OF DURUM WHEAT GENOTYPES UNDER DIFFERENT ENVIRONMENTS FOR TESTING STABILITY AND RANGE OF ADAPTATIONS

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ABSTRACT

Twenty varieties and lines of durum wheat were tested in five sites and during three consecutive growing seasons 2007 to 2010. The experimental layout was a randomized complete block design trials of three replicates. The objective of this investigation was to study the stability parameters under different environments. The combined analysis of variance for environment (E), genotype (G) and (GxE) interaction was highly significant for all studied traits, suggesting differential responses of the genotypes and the need to stability analysis. Results according to stability parameters, revealed that highly yielding genotypes can also be stable. The genotype L-5\11-1 and Valforte had desired performance (grain weight/spike) compared to the grand mean, regression coefficient (bi) did not differ significantly from unity and least deviation from regression (S2d), indicating the role of linear portion of GxE interaction in the performance of this genotype. The value of regression coefficient (bi) of genotype Ç-178 for No. of grains/spike, was less than one (bi<1), indicating that these genotypes were considered specially adopted to unfavorable environments. Meanwhile, the value of regression coefficient of genotypes Senator capelli x Im-6R-2-3 for plant height, L- 4-2 for No. of grains/spike, L-7-1 and L-12 for grain weight/spike and all this lines for grain yield\plant had bi values more than unity (bi>1) and could be adapted to optimum environment.

Key words: evaluation, durum wheat genotypes, different environments

297 INTRODUCING RECYCLING PLASTICS IN PRIMARY SCHOOL CHILDREN

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ABSTRACT

Giving good knowledge expected to be a stimulus to bring good behavior as well in the present and future. Elementary school students are students who have a strong desire to learn and a great curiosity. Knowledge about plastics recycling is a new thing that will attract attention. Objectives by providing knowledge about recycling elementary school children will know and understand that the plastic of eating snacks in it can produce other useful objects. The method is carried out by way of promotion through talk shows, games, posters, films and other media that can attract attention with recycling practices in elementary school children. Submitted materials are lightweight and easy to understand. The expected result is the establishment of knowledge about waste, plastic waste problem awareness, willingness and ability to recycle plastic waste.

Key words: Recycling Plastics, Promotion, Knowledge, Primary School Children

298 COMPARISON OF DEKOKCIONIT AND INFUSION METHODS TO BEER PRODUCTION

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ABSTRACT

The most important process in beer production is the fermentation of the sugars contained in the wort to form alcohol and carbon diokside.To provide the necessary conditions for this, the initially insoluble components in malt must be converted into soluble products, and in particular soluble fermentable sugars must be produced. The formation and dissolving of these compounds is the purpose of wort production. It provides the starting point for fermentation of the wort in the fermentation and storage cellars. In this work I have studied different metods of mashing: single mash process, two mash process and infusion method of mashing. According to the results achieved I can conclude that the single mash process has shown the best results in apparent degree of attenuation, 82,33%, at the two mash process the apparent degree of attenuation is 80.96% and at the infusion method of mashing the apparent degree of attenuation is 80.61%.
Other results of fermentation are presented in the work. The work has been carried in the Brewery of Birra Peja. All chemical analyses have been carried in the laboratory of Peja Brewery, Birra Peja, according to the EBC methods (European Brewing Convention).

Key words: mashing, infusion, fermentation, beer, attenuation.

299 BIOREGULATOR INFLUENCE IN SHAPING OF THE "KNIP" APPLE TREE NURSERY

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ABSTRACT

This research work presents the results of a field trial with managed nursery trees including apple cultivar Gala Galaxy on the two different rootstocks M9 and MM 106.In April 2011, the saplings (copulated in March 2011) were planted in the distance 100 cm x 35 cm. In the second period of vegetations (2012) the field demonstrate separated in randomized block system in five combinations of treatments (Control, removal of terminal leaves, Progerbalin (GA4+7)1.8%, 2.2%, and 2.5%,) with three repetitions (in total 150 saplings for each apple rootstock combinations). We examined following parameters: trunk diameter 10 cm below and above the graft place, diameter of branches, length of apple tree nursery, number of lateral shots, length of branches and crotch angle of branches. Application of treatments was done three times in 14 days interval, starting when the main axis reached the length of 15 cm above cutting scion (70 cm on the ground). All parameters are shown differences between treatments and removal of terminal leaves compare control (untreated). But the treatment with Progerbalin (GA4+7) 2.5% resulted in the lower tree height, in the higher number of branches, and in the greater branch length compare with other variants in particular control, for two rootstocks M9 and MM106. While the removal of terminal leaves has displayed more influence width crotch angles.

Key words: apple nursery tree, rootstock, Progerbalin (GA4+7), removal of terminal leaves,

300 ON PERFORMANCE IMPROVEMENT AND POLLUTION DEGREE OF USED VEHICLES THROUGH MAGNETIC TREATMENT OF FUEL

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ABSTRACT

This study analyzes the problem of vehicle performance change and their pollution degree during the use and their impact on the human and nature. The study analyzes the causes of the performance reduction and the increase of vehicles pollution level and their improvement ways. In the study it is taken the influence of the magnetic field on the fuel, before entering in the combustion chamber by taking the influence of the field strength in the burning process of fuel and vehicle engine performance. For this study were obtained in 3 diesel vehicles, in which magnets are placed with the different powers. The influence of magnetic effect on vehicle performance seems on the changing of engine revolutions and pollution reduction. For this we have measured the work period, when the performance difference occurs for case of the placement and removal of magnetic devices. Results of the study showed, that the influence of the magnetic field, increases fuel efficiency, making a faster and complete combustion, providing the performance preservation and the pollution degree on new vehicles. To used vehicles the performance increase goes up 15% and reducing pollution to 4 times, but the action effect starts late and depends from carbon deposit amount. The period of performance storage and the pollution degree by removing the magnetic field is the same. Magnetic device can use with interest for agricultural tractors and their maintenance during use.

Keywords: engine performance, vehicle use, pollution reduction

301 INSECTICIDE EVALUATIONS AGAINST APHIDS IN PEPPER CROP CULTIVATED IN GREENHOUSE

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ABSTRACT

About 30 different species of aphids can be found in greenhouses, depending on the crop. Aphids are generally less than 3 mm long, soft-bodied insects with long legs, long antennae and a pair of tube-like structures call cornicles projecting from the posterior end. Aphids may occur in large colonies on new growth, the base of buds, or the undersides of mature leaves. The aphids damage the plants directly by sucking plant sap from the plants and indirectly as a vector of different plant viruses. The aim of this paper was to identify the most abundant aphid species causing damages to pepper cultivated in greenhouse and the evaluation of the efficacy of different insecticides to control these aphids. The two year (2011 an 2012) experiment was set up in greenhouse located in village Godanci, municipality of Shtimje, while the experiment design was according to randomized Fisher blocks in three replications. Insecticides were from three groups of chemicals: Actara 25 WG (*Thiametoksan*), Dimetogal (*Dimetoat*) and Deltarin 2,5 (*Deltametrin*) and control as well. The insecticides were used in minimal and maximal doses recommended by the producer, shown in the chemical labels. From the total number of aphids recorded the following percentage belongs to the different aphids: *Aphis nasturtii* (64%), *Myzus persicae* (18%), *Macrosiphum euphorbiae* (2%), *Aphis gossypii* (5%) and other non identified aphids (11%). As for the insecticide efficacy the highest value was recorded with Deltarin used in maximal doses (94.11%), while the lowest one with insecticide Dimetogal used in maximal doses (9.86%). According to the ANOVA there were shown to exist statistical significant differences with regard to the number of aphids species compared to control and different insecticide efficacy to control aphids in pepper crop cultivated in greenhouse.

Keywords: greenhouse, aphids, pepper crop, insecticide efficacy, chemical doses

302 INVESTIGATING OF CORRELATION BETWEEN YIELD AND NDVI IN CORNFIELD WITH A BASIC KITE SYSTEM

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ABSTRACT

In this study, it is aim the determination of NDVI (Normalized Difference Vegetation Index) using a parachute-type kite system in cornfield in Selcuk University Sarıcalar Research and Application Farm in province of Konya. The study was caried out on three cornfield plot named as Plot-1, Plot-2 and Plot-3. The component of this system was parachute-type kite, multispectral camera (Red, Green, and NIR), RTK- GPS (Real Time Kinematic Global Position System) for positioning images. Coefficient of determination value (R2) between yields and NDVI was obtained as 0.9659. The results showed that the system is usable for long-term data acquisition in favorable weather conditions (such us 10-15km/h wind speed, clear weather), obtained data are suitable for determinig field properties of NDVI and field is adequate accurately possitioned.

Keywords: RS, NDVI, GPS, Agriculture.

303 ECOTURISTIC DEVELOPMENT IN DISTRICT OF DELVINA AND IT' S IMPACT ON SOCIO – ECONOMIC LIFE

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ABSTRACT

District of Delvina lies in a very favorable geographical position and also in a rich territory with a lot of natural and cultural potentials. We can say with no doubt that the nature is affluent. But there are a lot of problems associated to the use of the environment that has an impact on people's lives, in their economic status and theirs social life too. What impresses us mostly is lack of exploitation and ill-treatment of environment. It is clearly seen in the inconsistency between social- economic life and natural resources. Natural resources are indisputable asset that should be used as soon as possible, and this exploitation should be based on environmental criteria, otherwise will have environmental pollution and abandonment of the territory from the local population. Controlled exploitation of environment and application of tourism in nature based on environmental criteria would bring economic growth and social welfare. Ecotourism development in Delvina can be seen as one of the priority economic branches, as an indication of economic growth and better social conditions, this will help this district to transcend economic problems that exist. Ecological spaces lies everywhere; they are all very unique and special, a good reason to be seen and to be visited

Keywords: tourism, ecotourism, ecology, tourist, region, enviroment etc.

304 DETERMINATION OF OPTIMAL CONDITIONS FOR THE INSTALLATION OF A BIOGAS PLANT

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ABSTRACT

The objective of this study is to promote green technology and zero waste concepts on animal farming as well as to mitigate adverse effects on the environment due to unsystematic management of animal waste disposal. Installation of biogas plant with the capacity of digester $2m^3$ was realized in our Experimental Didactic Economy (EDE) near Agricultural University of Tirana (AUT) near the stables. The determination of optimal conditions for the installation of biogas plant was realized: based on topographic survey to enable gravitational flow of digester waste, optimizing the ambient temperature for the development of biochemical processes in digester and possibility of using biogas produced not only storage but also the flow in pipes under pressure and user equipment. The biogas produced was used as fuel for biogas lamp, biogas stove, biogas rice cooker and 1 kW biogas generator. Furthermore, the residual solid waste produced at the end of the process can be dried to be used as organic fertilizer.

Keywords: biogas plant, animal waste, green technology

305 OVERVIEW OF FUNGI SPECIES IN PRESPA NATIONAL PARK (ALBANIA)

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ABSTRACT

This paper includes a list – a preliminary inventory of macromycete species in NP Prespa. The source of these data is exclusively based on our own field studies performed in October 2012. Fungi play a critical role in National Park. They are key in recycling dead vegetation and making the nutrients available for the next generation of plant life. They act also as plant pathogens and they form symbioses with the vast majority of herbaceous and woody plants, allowing them to colonize poor soils and pull otherwise unavailable nutrients from the soil. There are very few published data on fungi in Albania. Area of National Park Prespa was never studied from the mycological standpoint and there are no previously published data on fungi from this area. Our field studies have included sites with representative vegetation, represented by meadows and pastures, forests of oak belt, forests of beech belt and specific forest stands with three species of junipers. Valuable results were obtained within a short period of time, a large number of specimens were collected and it was possible to assess habitat quality with high level of precision. The 174 listed species-level taxa of fungi were recorded. Although it is still not possible to determine with precision the final number of species recorded for the first time at territory of Albania, it seems that it is the case with most species recorded at the territory of National Park during our research.

Key words: Fungi inventory, Prespa NP, Albania

306 THE Cu MICROELEMENT AND ITS FRACTIONS

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ABSTRACT

Cu is included in the group of important microelements, but is widely used today for the preparation of lots of insecticides and fungicides , so it remains an indicator to be analysed and valuated in all the agricultural soils. The analyses made, valuate that the soil of our country has shown an average level in containing this microelement. The changed fraction and the organic fraction (excracted by NaOH), are contained in different levels of the soil. Between the content of the changed fraction and the pH exists a such confirmed bond : the increase of pH, has a tendency to affect in the decrease of the content of this fraction in the soil. Carbonatic fraction is distinguished more clearly the tendency that it has, and its content is reduced with the increase of pH. The unchanged fraction results with only a bond with the total of the fractions of Cu and also with the Cu Lab (assimilable Cu). The content of Cu in the soil of the area Lushnje-Fier, can't be valuated high,seen as a environmental pollution, whereas in the food crop point of view, it is in average levels. For this reason, the need of using the Cu fertilizers, is not a necessity.

Key Words: Cu microelement, , organic fraction, level, assimilable Cu, .

307 ASSESSING GENETIC VARIATION FOR MORPHOLOGICAL TRAITS OF WHEAT (*Triticum aestivum* L.), IN BASE COLLECTIONS

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ABSTRACT

In Albania Gene Bank, is preserved a rich collection of wheat (*Triticum aestivum* L.), and the study of base collection is one of main purposes of plant genetic resources. For this reason, during the last three years twenty wheat accessions repatriated from Germany have been studied. Field tests took place at the Agricultural University of Tirana. The morphological data were taken and analyzed for characteristic such as: plant height (PH), spikelet for spike (SS), grain weight per spike (GWS), spike weight (SW), 1000 grain weight, days to maturity (DM). Results indicated the genotypes present significant differences for PH. Four genotypes present heights from 89 to 91 cm, while 16 other genotypes are from 122 to 184 cm; the number of SS is low, but there is a high difference of GWS (1.43-2.91 g per spike). Considerable differences were noticed in terms of days to maturity (DM 17 days). Some genotypes have high content of proteins (14-16%) and of gluten with an average of 28%. Results taken were analyzed for possible relations between characters in wheat genotypes. Hierarchical Cluster Statistical Method was used to observe relation and distance among genotypes. The results of this study will serve as additional information for Gene Bank and for future plant improvement programs.

Keywords: accessions, cluster, genotypes, maturity, spike.

308 GENETIC DIVERSITY OF OREGANO (Origanum vulgare L.) POPULATIONS IN NORTH ALBANIA

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ABSTRACT

Oregano (Origanum vulgare L.) is one of major aromatic plant that belongs to Lamiaceae family in Albania. In the last years, there is a destructive trend of genetic resources in Albania, especially related to the medical and aromatic plants. Fourteen oregano samples were collected in North Albania during the full flowering stage, from the end of July to 10 September, over a 120-1393 m altitude range. During 2011-212, they were planted in the field. One year after planting, from the observations based on morph-biometric traits was analyzed in order to determine the valuable morphological characters. A second harvest was carried out fresh weight and dry weight (g/plant) was registered. ANOVA indicated significant differences for majority of variables. Correlation analysis of the genetic distance matrix and the Euclidian distance matrix revealed significant correlation between them. The high level of morphological variability among the studied populations suggests approach attractive for the pharmaceutical industry, to the variability of cultivated material and for breeding programs in the future.

Key words: correlation, genetic distance,oregano, variability.

309 GENERAL DATA ON ASTER ALBANICUS, SHKOPET AREAL IN MAT REGION

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ABSTRACT

This paper, for the first time, provides data on the determination of morphological characteristics, number of chromosomes, as well as chromosomal formula, cariograma and idiograma, and morphological features of the pollen granules of *Aster albanicus* Degen. This species has been studied in its natural habitat in the area of Shkopet, Alt. 110 - 111m/T; N. 41°41'19,3"; E.0,19°50'24,1" in Mat region. The aim of the paper is the assessment of the probability of the existence of changes in the morphological, caryological and palinological features of this plant. The data obtained are compared with the evidences provided from different scientific resources and research references. Our research work shows that there are not observed changes in the morphological level related to the overall length of the plants of this population. There is also found an accordance of the palinological characteristics with the data of the research references. The number of chromosomes 2n = 18 and the chromosomal formula 2n = 2x = 6M + 8m + 2m° + 2sm° = 18 of this species is also determined.

Key words: Aster albanicus, number of chromosomes, chromosomal formula, palinological characteristics, caryological features.

310 THE ROLE OF NUTRIENT LOADINGS IN WATER QUALITY

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ABSTRACT

Water is a precious natural resource, an essential component for the life of every cell, individual organism, ecosystem, etc. However, because of the intensive use, a considerable quantity of water is discharged in the

natural environment as polluted water. Therefore, the overuse, the bad management of water resources, water pollution, eutrophication and the consummation of water resources are some of the problems concerned with water quality. One of the most important issues related to water quality nowadays is the high quantity of the nutrients in water bodies. Nitrogen and phosphorus, the most important nutrients, are essential elements for the growth and metabolism of plants and animals. Small quantities of nitrogen and phosphorous compounds can be found in all natural ecosystems and they preserve the equilibrium of biological growth in these systems. However, these nutrients can be added anthropogenically from different sources into water bodies, and thus deteriorating the water quality. The aim of the paper is the assessment of the role of the nutrient loadings from different anthropogenical sources in freshwater systems. This research paper takes in consideration some carstic lakes in Dumre region. Water samples taken periodically and are analysed for nutrients and other chemical and physical parameters, which allow determination of the water quality. The data obtained show that agriculture activities and the discharge of untreated wastewaters are the main contributors for the high nutrient levels in these lakes. The data are presented through graphs and tables, which show the overall situation of water quality for these natural and particular ecosystems.

Key words: nutrient, nitrogen, phosphorus, water quality, eutrophication.

311 EFFICIENCY OF PHOTOSYNTHETIC APPARATUS IN POLLUTION CONDITIONS OF METALLURGICAL FACTORY

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ABSTRACT

Different specialized institutions have noticed a serious problem with contaminant emissions in atmosphere in Elbasan city and surrounding area. Air pollution is generated by Albania's largest industrial complex comprise Steel, FerroChrome and Cement Factories. Pollutions of metalurgical complex as all biotic and abiotic stressors affect the photosynthetic performance of leaves either directly or indirectly. Chl fluorescence signature of leaves as an efficient tool and a nondestructive method for the *in vivo* analysis of plant stress is applying to investigate the photosynthetic light processes and quantum conversion to detect stress on the photosynthetic apparatus. The aim of this paper is to assess changes of photosynthetic activity of the plants by in the presence of industrial pollution from metallurgical complex through chlorophyll fluorescence imaging technique. Fluorescence images of leaves were measured using the FluorCam 700MF imaging system that offers the possibility to study the distribution and patchiness of fluorescence signatures over the whole leaf area. Fluorescence images and measured parameters during the induction kinetics show a reduction of photosynthetic activity apparatus of endemic spontaneous plant Poplar. Fluorescence parameters demonstrate that the degree of reduction of photosynthetic activity depends from the distance of the plant grown areas to the source of pollution.

Keywords: spontaneous plants, chlorophyll fluorescence imaging, induction kinetics, photosynthetic apparatus

312 STUDY OF BACTERIA CAUSING URINARY TRACT INFECTIONS AT HEALTH DIRECTORY, DURRËS, ALBANIA

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ABSTRACT

Introduction: Urinary tract infections (UTI) are characterized by the presence of infectious agents in the genito-urinary tract that cannot be explained by contamination. These agents have the potential to invade the tissues of the urinary tract and adjacent structures. Settings and Design: Prospective study was done in the Health Directory in Durrës. Methods and Material: The study included all the patients who were admitted or visited the outpatient departments in the Health Directory and had urinary tract infection confirmed by positive urine culture reports. Results: A total 3160 urine samples were analyzed for isolation and identification of bacterial isolates. Out of which 956 (30.25%) samples were found to have significant bacteriuria and remaining 2204 samples were found to have either non significant bacteriuria or very low bacterial count or sterile urine. In the present study, out of 223 isolated pathogens the most common isolate was Escherichia coli (25.89%), followed by Staphylococcus aureus (2.94%), Proteus vulgaris (1.04%) and Pseudomonas aeruginosa (0.38 %). Age group most affected by Escherichia coli is 61-75 years (38.8%). Conclusions: Women are more susceptible to urinary tract infections, especially against Escherichia coli, resulting positive in 52.4% of cases; While Proteus vulgaris have a female percentage of 57.7%. This percentage increased slightly among women infected with Staphylococcus saprophyticus in 58% and low in 61.5% infected with Pseudomonas aeruginosa.

Keywords: Escherichia coli, Staphylococcus aureus, Proteus vulgaris, Pseudomonas aeruginosa

313 WEAKNESSES IN SKADAR/SHKODRA LAKE WATERSHED ASSESSMENT AND MANAGEMENT

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Abstract:

A review of assessments and managements of Skadar/Shkodra Lake ecosystem in past is analyzed and highlighted main weaknesses, in a mirror of contemporary standard scientific approaches in this field. A holistic approach is recommended based on a comprehensive watershed basis with highly interdisciplinary and international team. An international institute of Skadar/Shkodra Lake watershed is proposed as the most cost-effective solution.

Keywords: watershed Skadar/Shkodra Lake, ecosystem, assessment, management, flooding

314 INFLUENCE OF DIFFERENT SUBSTRATES AND CONTAINER CELL CAPACITY ON THE DEVELOPMENT OF PEPPER SEEDLINGS (CAPSICUM ANNUUM L.)

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ABSTRACT

The objective of this study was to assess the growth and development of seedlings of a hybrid pepper as affected by ten growing media formulas developed from commercially available peat, inorganic media and from on-farm organic media (1st experiment: peat 100% + vermiculite 0%; peat 75% + vermiculite 25%; peat50% + vermiculite 50%; peat 25% + vermiculite 75% and peat 25% + vermiculite 25% + organic media 50% and 2nd experiment by using perlit instead of vermiculite). The quality of seedlings is impacted by different substrates used during the seedling production. The major effect on growth parameters of pepper seedlings was obtained on substrate with on-farm organic media. This research presents data on height of stalk, height of root, leaf number per plant, leaf surface.

Keywords: commercially peat, organic media, vermiculite, perlit, container.

315 FORMALDEHYDES RELEASE FROM UREA-FORMALDEHYDE ADHESIVES PROBLEM (CONCERN)

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ABSTRACT

The study shows that there are two types of exposure to formaldehyde release: In working environments at factories producing glued wooden constructions, where the major release occurs at the stages (processes) of pressing, acclimatization and storage. For these environments should be performed the so called "environment Check-up"; In residential and social objects fully or partially build by wood tiles. Formaldehyde is recognized as a substance relatively hazardous to health and life. Its potential hazard is associated with its extreme instability, which makes the presence of formaldehydes in residential facilities a matter of concern, even in very small quantities. Exposure for a relatively long time can have effects of carcinogen nature. Its irritating effect appears in different individual limits.

Key words: environment, formaldehyde, stages, acclimatization

316 SOME RESULTANTS OF STUDY OF CIRCADIAN FEEDING RHYTHMS AND FEED UTILIZATION EFFICIENCY BY TROUT *ONCORHYNCHUS MYKISS* WALBAUM,1792 IN CASES OF SELF-FEEDERS USE

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ABSTRACT

The circadian rhythms of eating, the daily portions and the index of food conservation in the groups of rainbow trouts have been studied which were fed for 75 days using the Demand Feeder and Belt Feeder equipment. For the study of the circadian rhythms of eating from 50 trouts with an individual weight of 62.4±2.2 g were kept for 21 days in fiberglass tanks with a volume of 5m³. For the trouts of the three groups of the experiment the daily portion calculated in one day was served only in one meal, but in different interval of the 24 hours; at 6ºº, 19ºº and 24ºº. The proof showed that the trouts ate during the whole day but the feeding intensity is not similar in different moments of the 24 hours. Before noon trouts manifest more

appetite while at night time the "pasture" activity is reduced. A significant change has been proved in the intensity of eating between morning and evening, on one side and midnight on the other side (P≥0.999). For the study of daily portions and FCR three groups of rainbow trout composed of 100 individuals with a specific weight of 50.67±1.954 g have been fed for 75 days applying three feeding methods. The highest values of the final weight (Wg=198.13±3.46) and the lower values of the index of food conservation (FCR=1.11±0.125) were achieved in the option where trouts were fed according to the request of the equipment Demand Feeder.

Key words: rainbow trout, self-feeders, circadian feeding rhythms

317 RISE OF THE ENVIRONMENTAL EDUCATION THROUGH THE EDUCATION LECTURES AT THE EEMENTARY SCHOOLS FOR A SUSTAINABLE DEVELOPEMENT IN KOSOVO DURING THE PERIOD 2008-2013

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Abstract

Environmental education today is not only one of the human rights but it is prerequisite for a sustainable development. One of the calusole of the Arhus Convention is the establishment of the environment education based on the three fundamental pillars of the Convention; public access to information about the environment, public participation in certain environmentally relevant decisions, access to courts of law / tribunals in environmental matters, wich are the rights of environmental democracy and these rights are protected by international legislation. Seeing the environmental problems in the Republic of Kosovo today, which are the result of uncontrolled development and degrading the environment, environmental education is seen as an advantage, as a key tool for a rational use of the natural resources. Through the environmental education in schools we can achieve to create new values to students and create a new model behavior on the road, school, home and society. Students should be partners with teachers in carrying out various activities, discussion and decision-making. The survey covered the period 2008 to 2013, the organization and lessions were given almost in all regions of Kosovo.The number of schools and also the number of participants (students), and number of participants (teaching staff), was as follow; during 2008 in Kamenica with 68 participants, in 2009 the Municipality of Vushtrri with 107 participants, the 2010 in Pristina Municipality with 274 participants, in 2011 Peja municipality with 180 participants, in 2012 in Klina municipality with 124 participants in 2013 in Juniku municipality with 107 participants.

Key words: Environmental education, information, sustainable development, rational, lectures etc..

318 STUDY OF VARIOUS ENVIRONMENTAL CHANGES IMPACT ON PACKAGED FOOD SAFETY

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ABSTRACT

This research examines the current knowledge on food safety risks from packaging materials during their storage. Food-

packaging system and human health are interrelated. It is known that the migration of chemicals from packaging into food and bad influence to the consumer. The study of this migration has become an integral part of food security. Special attention is given to the most promising scientific achievements exposure assessment, technical barriers, etc.. which should be addressed. It is EU and FDA legislation that determine the limits to some chemicals, polymers, monomers and additives containing packaging materials for food contact.

Key words: food security, packaging materials, human health

319 THE STUDY OF EAR CHARACTERISTICS OF SOME *AEGILOPS* ACCESSIONS COLLECTED IN ALBANIA TERRITORY

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ABSTRACT

Aegilops, as wheat relatives, actually are attracting attention to their morphological, physiological and genetic studies. These aim to create the opportunity for their results using in classic taxonomic, cytological and evolutionary studies in one side, and the application of chromosomal and molecular biology methods in cultivated plants genetic improvement, on the other side. The plant materials used in this study consist in 24 accessions of *Aegilops* collected in different regions of Albania. The studied parameters include ear characteristics like ear length, ear weight, number of grain per spike etc. The results showed that the *Aegilops* accessions collected in different parts of Albania show a relative wide variability for ear morphological parameters. These results could become a very useful material as a source for more deep genetic and molecular studies of *Aegilops* accessions collected.

Key words: *Aegilops* accessions, ear characteristics, taxonomic studies.

320 EFFICACY EVALUATION OF SOME INSECTICIDES AGAINST APHIDS IN PEPPER CROP CULTIVATED IN GREENHOUSE

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ABSTRACT

Several aphid species attack the pepper crop cultivated both in open fields and in greenhouses as well. The aphids damage the plants directly by sucking plant sap from the plants and indirectly as a vector of different plant viruses. The aim of this paper was to identify the most abundant aphid species causing damages to pepper cultivated in greenhouse and the evaluation of the efficacy of different insecticides to control these aphids. The experiment was set up in greenhouse located in village Godanci, municipality of Shtimje, while the experiment design was according to randomized Fisher blocks in three replications. Insecticides were from three groups of chemicals: Actara 25 WG (*Thiametoksan*), Dimetogal (*Dimetoat*) and Deltarin 2,5 (*Deltametrin*) and control as well. The insecticides were used in minimal and maximal doses recommended by the producer, shown in the chemical labels. From the total number of aphids recorded the following percentage belongs to the different aphids: *Aphis nasturtii* (64%), *Myzus persicae* (17%), *Macrosiphum euphorbiae* (6%), *Aphis gossypii* (2%) and other non identified aphids (11%). As for the insecticide efficacy

the highest value was recorded with Deltarin used in maximal doses (95.35%), while the lowest one with insecticide Dimetogal used in maximal doses (49.83%). According to the ANOVA there were shown to exist statistical significant differences with regard to the number of aphids species compared to control and different insecticide efficacy to control aphids in pepper crop cultivated in greenhouse.

Keywords: pepper, greenhouse, aphid species, insecticide efficacy, chemical doses

321 PRELIMINARY DATA ON ZOOPLANKTON ON BELSHI LAKE.

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ABSTRACT

This study present a brief description of quality state of Rotifera species, as a biological parameter to be count in the evaluation processes for trophic state on Belshi Lake. The hydrographic network of Dumrea, part of which Belshi Lake is, consists of the existence of the many carstic lakes. Carstic processes that have been modifying the land, are responsible agents of these (85) lakes formation. Several times in summer this number comes down to 60. Lakes do not have the same height from the sea level and do not communicate with each other. Their form is generally circular. The transparency of lakes water is small. These lakes are generally not leak and are fed by rainfall.

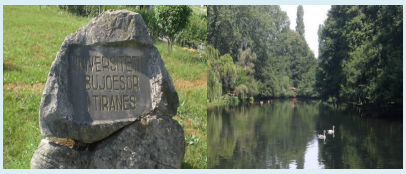
Key words: Rotifera species, biological parameter, carstic lakes.

3rd INTERNATIONAL
CONFERENCE OF ECOSYSTEMS

TIRANA _ ALBANIA, May 31 - June 5, 2013

ABSTRACT BOOK

Essays on Ecosystem and Environmental Research



ISBN: 978-9928-4068-6-6

ICE-2013,
Tirana, ALBANIA

ISBN 978-9928-4068-6-6

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