

PLANT LECTINS: BIOCHEMICAL CHARACTERIZATION AND FUNCTION

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The present paper is dedicated to plant lectins, their classification, molecular structure, distribution in different plant organs and involvement in such biological functions as: cell to cell communication, phytoimmunity, symbiotic relationships, also cytotoxic action, mitogenic activity and participation in the immune reactions (system of complement). The future use of lectins in medical practice has been considered.

PHOSPHATE STATE OF THE SOILS OF ABSHERON AND ITS CONTROL REGULATION

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has been revealed that application of organic and mineral fertilizers in the soil under agricultural plants (bean, grape) increases content of the mobile form of phosphorus in the soil. It is established that organic fertilizers promote the process of transition of phosphate-ions from a hard phase in the soil solution, the same replenishment occurs with the new portions of phosphorus which are necessary for a plant nourishment. It is established that an application of the organic and mineral fertilizers in the soil increases content of the supposed humus, the same provides the soil with nourishing elements and soil fertility improves. Mobilization of phosphate from soils depends on plant nature, peculiarities of soils, chemical, biological and biochemical process proceeding in it. That's why it is very important to reveal the methods of use of soil supplies of phosphates for drawing into the last in agricultural production. A great part of phosphorus of the soil and applied fertilizers is in the form of mineral phosphates. On contemporary presentations, main mobilizing factors of mineral phosphates and in particular mineral phosphates are acids forming in process of oxidation of organic matter of the soil microflora. The transformation of the little part of total supplies of mineral phosphorus of soil into assimilating condition for plants occurs as a result of chemical (change of environment of acidity), and biological (secretion of acids by plants) process.

THE INFLUENCE OF PERENNIAL LEGUMINOUS PLANTS ON THE STRUCTURE AGGREGATE COMPOSITION AND AGROPHYSICAL PROPERTIES OF ERODED CINNAMONIC SOILS

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The effect of perennial leguminous grass to some water-physical features of eroded steppe carbonated mountain brown soil appoints its physical features, water-weather norm that it depends on all processes which occurs in soil. The importance of water-physical features of soils in the improvement of fertility of lands that were eroded, the preparation and development of struggle measures against erosion, the implementation of land preserving agro-technical measures and in carrying out planting, sowing and cultivation works. Water-physical features of lands plays an important role in the occurrence of erosion process and its covering wide area. Perennial leguminous grass, especially bean, getting bushy by being well developed in the fields that was eroded, shadows the surface of the land by covering it fully, preserves it from the destroying effect of rain drops, and the burning effect of sun rays and collects organic residues in great amount in land, and this improves the structure of land that is closely related to the fertility of the land.

EFFECT OF SEPARATE AND COMBINED APPLICATION OF CHEMICAL AND ORGANIC FERTILIZERS ON POTATO YIELD QUANTITY AND QUALITY

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The paper is dedicated to the studying the effect of separate and combined application of chemical and organic fertilizers on the yield and quality of potato. The results of field experiments on applying chemical fertilizers at equal rates and different doses of organic fertilizers, as well as their combined use showed that the best effect can be obtained at treatments: 7 t/ha biohumus and 5 t/ha biohumus + N₅₀P₅₀K₅₀, which, compared with control, provided increase in the yield by 185,0 and 195,8 c/ha, respectively, or 95,4 and 100,9 % (while in control the yield made 194,0 c/ha) with quite higher taste and quality of potato.

USE OF KLINOPTILOLITH IN AGRICULTURE

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In the present research the role of the natural klinoptilolith from Tedzami open-cast mine is investigated. The main task consists in research of the natural klinoptilolith's ability as the regulatory tool in conditions of the unirrigated soils of Alazani valley. It is concluded that application of the natural klinoptilolith makes it possible to increase the soil moisture in experimental areas in comparison with the control one.

RESULTS OF STUDY OF MICROELEMENT COMPOSITION OF TEA

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Contents of zinc, copper, arsenic, manganese, iron and iodine are determined in the raw tea leaves and in end product produced and imported in Georgia. According to analysis of tea extract it is shown that tea plays an important role in the adjustment of microelement balance in the body.

THE ESTIMATION AND THE BIOCHEMICAL CONTENTS OF THE SILO MADE OF CORN AND CLOVER

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The paper gives the results of the estimation and biochemical contents of the silo made of corn and clover.

INFLUENCE OF SALINITY ON THE YIELD OF RICE (*ORYZA SATIVA L.*)

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In order to compare and survey salinity tolerance of 10 rice varieties including: *Dorfak*, *Tabesh*, *Amol3*, *Gharibsiyahreyhani*, *Hasansaraieatashgah*, *Tarompakutah*, *Dom sepid*, *Taromamiri*, *Pokkali* and *IR29* two separate field experiments (salinity and non salinity conditions) were carried out under randomized complete block design in three replications in Iran (Gilan- Astara), 2007. The traits of day until flowering, viability%, plant height, number of tiller in bush, fertilizing, panicle length and paddy yield were measured in two separate conditions of field. The result showed that there was a significant difference between the varieties for any trait, and salinity condition in comparison to non salinity condition increased the period of flowering and reduced the other traits. Paddy yield had a negative meaningful correlation with day until flowering and had positive meaningful correlation with the other traits at 1% probability. Among the studied varieties, the *Gharibsiyahreyhani* and *Pokkali* varieties due to high resistance to salinity stress have highest yield.

THE OVER- AND UNDER-GROUND INFLUENCE OF THE SOIL ANIMALS AS BIOINDICATORS IN BIOGEOCENOSIS AROUND CHERNOBYL

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The paper shows the use of the soil invertebrates in the bioindicational determination of the condition of natural soil types of the pine and birch forests. Bryansk is the region of Russia most contaminated by the Chernobyl accident (1986). In 2008-2012, 74 test sites were selected to represent zones of low to high radioactivity (1- more 40 Ci km²) and uncontaminated territory. Effects of radiation on the invertebrates' condition were studied in 13 species. Increased radioactivity caused marked effects in different soil types. Mesofauna of soil are good indicators of radionuclide contamination. We conclude that this method used with some species of invertebrates can be used to monitor levels of radiation. We have established that it is possible to use earthworms not only, as bioindicators, but also as recultivators of soil polluted with the radionuclide cesium-137.

TYOLOGY AND DISTRIBUTION REGULARITIES OF THE VEGETATION OF TBILISI ENVIRONS (EAST GEORGIA, SOUTH CAUCASUS)

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Typological composition of the vegetation of the Tbilisi environs has been studied. A type of vegetation of completely different structure and ecology, which is connected to the floristic centre by its origin and florogenetic connection, is developed. By the standpoint of creation landscapes and taken space, deciduous forests, xeromezophilous shrubbery, hemixerophilous shrubbery of shibliak type and Steppes, which is characterized by the rich typological composition, are the most important. In addition, plant community of arid forest (arid open woodland), riparian forest and coniferous forest of middle mountain belt, meadow-steppe, tragacanthic, subalpine meadow, desert (semi desert), saline meadow and hygrophilous vegetation is spread as smaller plots. Florocoenotic complexes that are characteristic for rocky and scree-stony ecotypes can be seen as well. Distribution regularities of the vegetation in connection with the climate and relief-edaphic conditions are established. The main areas of the apportioned syntaxa are given.

CALCULATIONS FOR SAFE EXPLOITATION OF PIPELINES LAID IN SLOPE GROUND

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The paper deals with the problem of pipeline safety exploitation, laid in the small depth in slope grounds. At large degree of slopes and increasing humidity of grounds there is probability that the ground jointly with pipeline will slide downward as a result of creeps. The method which allows to set the tension-deformation state of pipeline and check up the real terms of its durability loss has been developed.

THE SELF-REGENERATION ABILITIES OF LAKE SEVAN BASIN NATURAL LANDSCAPES AND NATURE CONSERVATION ISSUES

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Understanding of natural and anthropogenic alternations of natural landscapes is key to learn about self-regeneration abilities of natural landscapes and its components. Such kind of investigation could objectively promote the productivity of different landscape units or its components and play crucial role in establishment or enlargement of conservation areas. In the article such try is done for the landscapes of lake Sevan basin.

THE COMPARATIVE CHARACTERISTIC OF THE POLLUTED BY OIL AND NORMALLY DEVELOPED GRAY-BROWN SOILS OF ABSHERON PENINSULA

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The paper gives a detailed description of contaminated and apparently normally gray-brown soils in a particular territory - area along the old road Baku-Mardakiany, located on the Absheron peninsula. Such an analysis allows us to compare the performance of disturbed and normally developed soils and make recommendations for improvement. It was revealed that the normally developed gray-brown soils study area characterized by low rates of fertility. Thus, the humus content of the gray-brown salt-marsh soils averaged 1.72% in the upper layer, a gray-brown marsh from 1.11 to 2.14%. So normally developed gray-brown soils of the studied areas require first of all ameliorative measures (saline flushing and draining waterlogged soils), and the application of organic and mineral fertilizers for their more effective use. Oil-contaminated soil must first be cleaned of bitumen, fuel oil and other oil pollution, the content of which in some areas reaches 45.67% in the upper layers, and then carry out agronomic and ameliorative measures to improve their quality.

PECULIARITIES OF ECO-SUSTAINABLE TOURISM DEVELOPMENT IN THE RURAL REGIONS IN UKRAINE

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The paper defines the essence and peculiarities of the eco-sustainable types of tourism in the rural regions of Ukraine. It also gives the definitions of notions: rural and agritourism and analyzes their role in the solution of socio-economic and ecological problems.

TREATMENT OF CLOSTRIDIUM GAS GANGRENE WITH NEW BRAIN CYTOKINES

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The effectivity of prevention and treatment of oedema malignant depend on early diagnosing and application of antibacterial preparations. According to scientific sources there are no effective preparations to be used against this disease. In our investigation we applied "Ggalarmin" for treatment of animals with oedema malignant. The polypeptide galarmin is rich in prolin. It increases natural immune system of infected organism, stimulates immune cells and promotes epitalisation of tissues.

PROCESSING ON ALCOHOL OF WHEAT GRAIN DEPRIVED OF BAKERY PROPERTIES DUE TO AGRICULTURAL SYSTEMS

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On the basis of our experimental research it has been stated that the highest yield of alcohol from the winter wheat grain was received in the conditions of Northern Forest-steppe, using the biological agricultural system. We recommend such grain for the production the best kinds of alcohol such as "Lucks" and "Extra" that go on preparation of high-quality alcoholic production. The grain grown in ecological and intensive systems of agriculture, in case of losing its high bakery qualities, is more expedient to be used in other branches of the food-processing industry.

CHANGE OF MICRO FLORA IN CHEESE "LORI" DURING ITS MATURING PRODUCED BY TWO-SIDED PRESSING

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In the paper the change of micro flora in rectangular cheese "Lori" during its ripening produced by twosided pressing is examined with simultaneous excluding of re-pressing with shortening of duration of pressing as well as the results of the examination are represented.

THE MAIN DIRECTIONS OF THE TAX REFORMS AND THE ISSUES OF MEASURING THE TAX BURDEN IN REPUBLIC OF ARMENIA

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Based on the analysis provided in the article, the author states that indirect taxes ensure the largest share of tax revenues of the budget, and the value added tax still continues to play a crucial role. The author backs this argument with the study of the structure of taxes paid by the large Armenian tax payers: prevalence of indirect taxes over direct taxes in composition of taxes with no reasonable economic explanation to support that evidence. The author stresses the need for changes in the tax legislation of Armenia, and concludes that the required legislative reforms that would regulate tax administration need to be undertaken.

EDUCATION AND ECONOMIC GROWTH: IRAN-ARMENIA COMPARATIVE INTERPRETATION

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Generally, a professional educated person makes better decisions for their families, increasing their economic security and well-being. Secure families are better able to contribute to vital, thriving communities, further fostering community economic development. The public economic benefits from educated personality are also obvious. But identifying and measuring those links is difficult. This paper provides a snapshot of the current state of education in Iran and Armenia as it relates to community and economic development. In the process, we look at a variety of issues: Why is tertiary education important? What is conceptual framework of education and economic growth relation? What proportion of private and public investment in education are underway?