

**A B S T R A C T S****EDUCATION: PROBLEMS AND PERSPECTIVES**

УДК 331.108.2:338.2 (571.15)

**Y.N. Nazarkina,  
A.M. Zubakhin****FORMATION OF DEMAND FOR MANAGERS AND SPECIALISTS  
OF AGRICULTURAL ORGANIZATIONS WITH HIGHER EDUCATION**

The paper deals with peculiarities of formation of demand for managers and specialists of agricultural organizations, it provides analysis of the system of personnel development in the Altai Region. Based on the research there are proposed methodology approaches to identify the demand for personnel: monitoring of personnel development; indicative personnel planning; a method combining process and factor approaches.

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**AGRONOMY**

УДК 635.21:631.445.25

**I.T. Trofimov,  
L.A. Stupina,  
M.V. Tolstov,  
O.A. Ivanova****POTATOES ON GRAY FOREST SOILS**

The research has revealed that sugar lime is not only a valuable land improvement agent, but it also contains elements of mineral nutrition. On gray forest soils reclaimed by sugar lime combined with mineral fertilizers yields of potatoes is increased 2 times. Starch content increases from 16 up to 23,8%.

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УДК 633.11

**Y.A. Gladkov,  
Y.V. Yevtefeyev,  
L.V. Kobtseva,  
N.N. Bartaya****FORMING GRAIN OF SPRING SOFT WHEAT OF VARIETIES WITH DIFFERENT PRECOCITY**

As the result of research of grain forming of spring soft wheat of varieties with different precocity it was revealed that under conditions of the year 2005 grain forming of spring wheat started at the stage of milky ripeness and completed at the stage of wax ripeness. The grain forming period in early-ripening and middle- ripening wheat varieties started earlier and continued 5-7 days less than in late-ripening varieties; that is of importance for Siberian conditions because that allows to start harvesting operations one week earlier.

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УДК 582.866:556.124:631.423.2:631.671.1(571.15)

**I.A. Fedotov,  
S.S. Ryakhovskiy,  
L.I. Shalaginova****INCREASE OF SEA-BUCKTHORN YIELD AT VARIOUS STAND THICKNESS DUE TO WINTER PRECIPITATIONS RESOURCES AND IRRIGATION**

Sea-buckthorn is the major strategic fruit crop because of its high stable yield, hardiness, simplicity in its reproduction. As the result of study of snow cover and soil moisture dynamics in various planting schemes of sea-buckthorn it is revealed that thicker planting in a row and in a row-spacing: 1) increases accumulation of snow water compared to the check plot; 2) improves water regime of sea-buckthorn during the first two months of vegetation, thus raising yields under dry and irrigated conditions.

The paper is stated on 8 pages of the computer text. It includes 2 tables, 6 references.

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УДК 581.3.33:633.71

**S.A. Mosunov,  
L.V. Tsatsenko,  
K.I. Ivanitskiy****ANALYSIS OF MALE GAMETOPHYTE OF TOBACCO VARIETIES OF VARIETAL TYPES OSTROLIST AND SAMSUN**

Male gametophyte of 9 varieties of the varietal type Ostrolist and 10 varieties of the varietal type Samsun of tobacco (*Nicotiana tabacum* L.) were investigated. The research problem included determination presence of various types of pollen grains within one variety and their identification. 5 types of pollen grains that occurred with different frequency in each variety were determined. The phenomenon of double gametes in tobacco was found for the first time, that is the proof of polyploid forms occurrence in cultivars under natural conditions. Additional classification items for description of varieties are proposed.

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**AGROECOLOGY**

УДК 502.35:911.35:550.4

**L.G. Kazantseva,  
Y.D. Kosheleva,  
S.A. Zhdanov**

**METHODOLOGICAL FOUNDATIONS OF LAND USE MANAGEMENT ON THE EXAMPLE  
OF THE AREA OF INFLUENCE OF THE BURLA WATER SUPPLY-IRRIGATION SYSTEM**

The area of influence of the Burla water supply-irrigation system is characterized by complex combination, mutual inclusion and intersecting of natural, technical and social-economic systems. Implementation of effective land use management is possible on the basis of the methodology Sufficiently General Theory of Management.

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**ANIMAL PRODUCTION**

УДК 636.5:619:616.9

**M.N. Chernykh,  
S.V. Fedotov,  
Y.G. Yushkov,  
A.A. Kureninov**

**POTENTIAL OPPORTUNITIES OF MICROBIOLOGICAL MONITORING  
IN PREVENTIVE MEASURES OF ASSOCIATED INFECTIONS OF POULTRY FARMING**

On the example of incubator houses the role of microbiological monitoring in preventive measures and elimination of associated infections in commercial poultry farming is revealed.

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УДК 619:616.391:612.4

**N.A. Neumyvakina**

**MORPHOLOGY OF LUNGS OF FOUR MONTH OLD LAMBS**

Bronchi, alveoli, connective-tissue membranes, perivascular connective tissue, blood and lymph vessels are well seen in the lungs of four month old lambs. Differentiation of epithelial cells of glands on mucous and serous ones is distinctly expressed. Most alveoli have formed bases with smooth muscle fibres in them. Differences in size of blood vessels are evinced, arterio-venous anastomosis occur.

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УДК 636.294:636:612.35

**N.T. Silantieva,  
I.N. Zadorozhnaya,  
A.A. Gnemenko**

**HISTOLOGICAL INVESTIGATION OF LIVER OF MARALS' FETUSES**

The special features of liver development in the ontogenesis period are described in the paper.

The investigation revealed the following features typical of marals' liver at five months of age: lobulation of portal zones, presence of hepatic tubules, polymorphism of central

veins, the differentiation of cellular elements of parenchyma, and weak development of connective tissue of stroma.

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**VETERINARY MEDICINE AND PHARMACOLOGY**

УДК 619:636.2:591.133.2

**O.V. Batanova,  
A.A. Elensleger**

**TREATMENT OF COWS SUFFERING OF KETOSIS**

Issues of diagnostics of subclinical ketosis in cows of the black-and-white breed are studied. Diagnostics criteria are identified. Treatment methods are developed using 40% glucose solution, 0,1% solution of  $KmnO_4$  and pantothenic acid.

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УДК 636.2.083.087

**S.A. Shevchenko,  
A.M. Yeranov,  
O.N. Prokhorov**

**SOME BIOCHEMICAL PARAMETERS OF BLOOD OF YOUNG ANIMALS  
OF LARGE HORNED CATTLE AT FEEDING SELENIUM AND IODINE SUPPLEMENTS**

The experiment carried out on fattening young animals of the black-and-white cattle of the age between 6 and 12 months revealed that introduction selenium and iodine supplements into a ration deficient for these microelements has not affected negatively on mechanisms of maintenance of acid-alkaline balance of the organism, and on sodium and potassium content in blood of experimental animals. The supplements insignificantly stimulated processes of carbohydrates exchange.

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УДК 619-084:636.2.082.35

**Y.V. Kraskova**

**PREVENTIVE TREATMENT OF NEWBORN CALVES**

Methodology of preventive treatment of newborn calves in early postnatal life with application of preparations Vetom 1.1 and Extrafer-Complex is developed and studied. The obtained results indicate that Vetom 1.1 combined with Extrafer-Complex affected positively hematogenesis optimization in bone marrow, protein formative, carbohydrate and hematopoietic functions of liver, normalized uptake of biologically active mineral substances in intestines, and metabolic processes in the organism. This method at dyspepsia with preventive purpose is highly effective, the disease either did not occur, or proceeded as mild case with decrease of dehydration and intoxication in the organism.

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**MACHINERY**

УДК 621.6.04:539.551:533.6.013.422

**A.A. Gnezdilov,  
K.A. Pekhterev,  
D.N. Pirozhkov,  
S.A. Sorokin**

**CHANGE OF EFFECTIVE VISCOSITY OF DISPERSED LOOSE MATERIALS  
UNDER VIBRATION IMPACT**

The paper describes in brief the operation of proposed vibro-viscosimetric unit, and provides the results of experimental research that were used as the basis to derive regression equation to determine effective viscosity in various areas of vibration layer of the investigated material. The experimental data are illustrated by graphic characteristic curves.

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УДК 631.372:631.4

**S.A. Belokurenko  
I.O. Heinrich**

**OPTIMIZATION OF CONSTRUCTIVE AND OPERATIONAL PARAMETERS  
OF MACHINE-TRACTOR UNITS WITH CONSIDERATION  
OF SOIL COMPACTION ACTION OF UNDERCARRIAGE SYSTEMS**

The tendency to increase efficiency resulted in creation of highly powered and heavy machinery and implements that caused negative soil compaction action of undercarriage systems. According to some studies, soil compaction exceeds tolerable limit two and more times. Compactness of surface and sub-surface horizons is increased with dangerous rates. In the long run, that reduces effective and potential soil fertility and crops yields.

The purpose of the proposal is to reduce soil compaction action of a wheeled all-wheel-drive propulsion unit by means of load balancing on axles.

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**PROCESSING: TECHNOLOGIES AND EQUIPMENT**

УДК 631.363.636

**I.Y. Fedorenko,  
A.F. Knorr,  
I.A. Naumov**

**TECHNOLOGICAL FEATURES OF ARTEMIA CYSTS AS PROCESSING ITEM**

Technological features of Artemia cysts are studied due to the necessity to enrich formula feed with that protein-vitamin supplement of natural origin. Granulation, angle of natural repose, solid and internal friction coefficients, bulk density and particles' density, dancing speed are determined. It is established that cysts layer differs from other formula feed ingredients by its density and dancing speed. That predetermines difficulties when making a feed mix containing Artemia cysts.

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УДК 576.8.001.8:636.5

**N.M. Mandro,  
Y.Y. Denisovich****STUDY OF METHODS OF MICROFLORA INACTIVATION OF BROILER CHICKENS'  
CARCASSES IN COMMERCIAL CONDITIONS**

Microbiological monitoring of broiler chicken meat by means of organoleptic and microbiological analysis was carried out. The effect level of active sodium hypochlorite solution on the surface microflora of carcasses was studied. Comparative characteristic of broiler chickens' carcasses treatment methods is provided. Aerosol treatment of carcasses surface with active sodium hypochlorite solution reduces the surface microflora by 2-3 exponents, submersion treatment method reduces the surface microflora by 1,5 exponents.

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УДК 633.34:664.0:636.084

**V.I. Zemskov,  
G.M. Kharchenko****SYSTEMIC APPROACH AT THE STUDY OF TECHNOLOGICAL LINES FOR PRODUCTION  
AND REFINING SOYBEAN OIL**

The papers analyses the factors and their parameters, which influence the operation process of technological lines for production and refining soybean oil. The conclusion is made on significant influence on the technological lines' output of their readiness factor characterizing the lines' structure.

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**ECONOMICS AND MANAGEMENT**

УДК 33: 63.058.232.6

**G.M. Gritsenko,  
I.V. Safronova****TO THE ISSUE OF DEVELOPMENT TENDENCIES  
OF INDIVIDUAL FARMERS' ENTERPRISES IN THE ALTAI REGION**

One of the results of reforming of agricultural production directed on strengthening private sector was creation individual farmers' enterprises. Objective necessity of such formation is caused by factors of economic, social and political character. The paper considers advantages individual farms as one of forms of small business, reveals the problems limiting their development, directions of promoting their activity proceeding from social and economic potential are proposed; the paper also considers creation of integrated base of legal standards. The national priority project "Development of Agricultural Industry Complex" is considered, one of its directions provides stimulation and development of small forms of economic activity in agricultural industry complex allowing to more completely realize productive and economic potential, to increase efficiency and social security of a farmer's enterprise itself and each of its members. Directions of further research are suggested.

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УДК 631.15

**A.A. Kaygorodtsev****THE SYSTEM OF FOOD SAFETY**

The paper deals with the problem of securing food safety. Recommendations for improvement government regulation of the agricultural industry complex are proposed.

УДК 331.108

**I.S. Malikov,  
V.I. Belyaev****EVALUATION OF MANAGERS' COMPETENCE AIMED AT A COMPANY'S INTELLECTUAL CAPITAL DEVELOPMENT**

Managers' competence is an important factor in a company's intellectual capital development and ensuring its competitiveness. The authors differentiate the concepts of 'product' and 'outcome' of managerial activity, specify the objectives of integrated evaluation of managers, propose an evaluation algorithm of managerial competence evaluation and a scheme of intellectual capital formation.

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**PHILOSOPHY AND POLITICAL STUDIES**

УДК 1

**M.A. Zimina****IDENTITY OF RIVEN EGO. INSANITY AS A FORM OF EXISTENTIAL SELF-CONSTRUCTING**

The paper investigates conceptology of insanity motive in the novel «The Double» by F.M. Dostoevsky.

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УДК 1

**Y.V. Knyazkina****COMMUNICATIVE DISPOSITION IN THE SYSTEM OF INDIVIDUATION**

The author of the paper makes an attempt to create common conceptual field for Uznadze's theory of set, Jung's personality theory, and theory of communication; the author gives quite detailed and operational description of introvert and extravert communication strategies toward transcendental, social and individual.

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УДК 1

**M.V. Samodurova****TEMPORAL PRONENESS TO CONFLICT IN INDIVIDUALITY DEVELOPMENT**

The paper studies individual's conflict attitudes to time. They may be specified by a metaphysical foundation. Metaphysical system without Absolute creates such types of individual temporal conflicts as infantilism and «megalism». Metaphysical system with Absolute creates such types of temporal conflicts as «like-childhood» and «as-though-adulthood». The society creates those types and, vice versa, it depends on their functioning.

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УДК 1

**V.V. Ostanin****CREATIVITY AS DEMIURGIC IMITATION (BY BHAGAVATA-PURANA)**

The author of the paper studies religious understanding of creativity typical of theology system of Chaitanya.