

# ABSTRACTS

## AGRICULTURAL EDUCATION: PROBLEMS AND PROSPECTS

УДК 33.001.301.152

V.A. Sheshin

### ON IDEOLOGICAL FUNCTION OF ECONOMIC THEORY COURSE

The paper deals in details with various view points of scientists economists of Russian and foreign universities on the issue of ideological confrontation between classical political economy and neoclassical economic theory.

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УДК 37.01

G.G. Rumyantseva

### EXPERIMENTAL WORK ON CONTROLLING EFFECTIVENESS OF FORMATION OF COGNITIVE INDEPENDENCE OF AGRICULTURAL UNIVERSITIES' STUDENTS IN THE PROCESS OF STUDYING A FOREIGN LANGUAGE

The paper provides description of experimental work on controlling effectiveness of formation of cognitive independence of agricultural universities' students in the process of studying a foreign language. The peculiarities of conducting the experiment, especially in foreign languages, are described in the paper. The abilities and skills of students useful for making readiness to conduct experimental work are described. The forms and methods of conducting experimental work are indicated.

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УДК 619.618.2.17

M.G. Khalipayev

### ON IMPORTANCE OF WRITING COURSE PAPER IN OBSTETRICS

Involving students in writing course paper in Obstetrics by the results of operation, various experiments and laboratory research raises their responsibility, stimulates medical thinking, and raises level of knowledge.

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**AGROECOLOGY**

УДК 631.445.4:631.417.2(571.15)

**M.Y. Ivanova,  
G.G. Morkovkin,  
D.A. Taylashev****RESEARCH OF PROCESSES OF REMOVAL OF  $Ca^{2+}$  AND  $Mg^{2+}$   
FROM TOP SOIL HORIZONS OF LEACHED CHERNOZEMS OF THE MEADOW STEPPE  
OF THE ALTAI REGION UNDER EFFECT OF LONG-DURATION USE IN CROPLANDS**

The paper provides results of research of ploughing-up influence on content of exchange calcium and magnesium in leached chernozems of the meadow steppe of the Altai Region. It is revealed that in the investigated soils ploughing-up results in removal of cations of calcium and magnesium from top soil horizons, in old idle soils their content return to initial values. Decrease of  $Ca^{2+}$  and  $Mg^{2+}$  content in investigated samples is accompanied by increase of migration of black humic and fulvic acids downwards along soil profile.

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УДК 633.111:631.559

**Y.V. Kvasnik,  
N.I. Korobeynikov****PECULIARITIES OF GRAIN QUALITY AND YIELDS FORMATION OF SOFT SPRING WHEAT  
DEPENDING ON AGROECOLOGICAL CONDITIONS IN THE ALTAI REGION**

In plant breeding to develop varieties combining high quality of grain and productivity it is necessary to have appropriate initial material, which can be formed by studying varieties in contrast, varying by nutrition and moistening agricultural background, i.e. fore-crops. The experiment was based on placing variety samples on three fore-crops (fallow land, peas, wheat), on 10 m<sup>2</sup> plots. The grain of the variety samples was evaluated by content of protein, gluten, 1000 grains' weight and yield potential according to methodology recommendations. As the result of the research, it was revealed, that nutritional regime is important, but not the only factor of grain quality formation.

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УДК 631.674.1:633.174

**S.S. Omariyev,  
M.R. Musayev****ECOLOGICALLY SAFE REGIME OF GRAIN SORGHUM IRRIGATION  
ON SALINE LANDS OF WEST PRIKASPIY**

Issues of selecting ecologically safe regime of grain sorghum irrigation on the lands of West Prikaspiy are considered, as well as issues of selection varieties of grain sorghum most adapted to those conditions.

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УДК 631.44.52:633.62

**A.O. Mamalayeva,  
G.N. Gasanov,  
M.R. Musayev****INCREASE OF ADAPTIVE POTENTIAL OF SUGAR SORGHUM TO SALINE SOILS  
OF THE FLAT AREAS OF DAGESTAN**

The paper deals with the issues of adaptive potential of sugar sorghum to saline environment, ways of rational management of that potential, tillage practices, and possibilities of biological melioration of weak and highly saline soils.

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**ANIMAL PRODUCTION**

УДК 619:616.71-007.151-085

**L.V. Chernyshova****FEATURES OF TREATMENT OF RICKETS IN BROILER CHICKENS IN CONDITIONS  
OF TECHNOGENIC PROVINCE**

In technogenic provinces when there is high content of nickel and lead salts in the diet, there is high occurrence of rickets in broiler chickens. As treatment and preventive measures it is appropriate to apply mineral enterosorbent vermikulitum at the rate of 2% of standard dry substance of the diet.

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УДК 619:595.773.4 (470.52)

**A.M. Okunev****ECOLOGICAL PECULIARITIES OF FLIES OF OXFLIES IN CONDITIONS  
OF THEIR LOW POPULATION IN THE URAL REGION**

The paper reveals changes in seasonal and day activity of females of oxflies in conditions of their population decrease caused by anthropogenic influence. The data provided proves there is shift of start of oxflies flying and of optimization of temperature threshold of flies' activity during the period of animal infection. Dates and possibility are substantiated to combine treatments against flies and other bloodsucking insects.

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УДК 619:613.88:636.3 (571.54)

**S.G. Dolganova****ANATOMICAL AND HISTOLOGICAL STRUCTURE  
OF GOATS' OVARIES IN POSTNATAL ONTOGENESIS**

Histological structure of ovaries of goats in various age periods of postnatal ontogenesis was studied. It was found that new follicles were formed intensively in ovaries of newborn she-goats, and then all follicles were subject to atresia. There was significant amount of follicles ready for ovulation and blood vessels in ovaries of goats in pubertal period. Significant changes in ovaries' structure were observed in adult goats. These changes were related to the ovary functional condition.

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**VETERINARY MEDICINE**

УДК 619:636.52/58:591.2:636.084

**S.V. Fedotov****DIAGNOSTICS AND TREATMENT OF OOPHORITIS IN HENS OF PARENTAL FLOCK**

The research was carried out from March till May of 2002 on poultry farm Molodyozhnaya, the Pervomayskiy District of the Altai Region with participation of the poultry farm specialist. Layer hens of cross-breed Hisex White were observed. With diagnostic purpose 130 hens were examined, 11 bodies of dead birds were dissected. In all of them signs of oophoritis were observed.

During the experiment with administering amoxicillin and clavulanic acid there were no cases with oophoritis signs among culled and dead hens of the experiment group.

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УДК 619.616

**C.T. Aybykova****ON NEMATODIROSIS OF SHEEP OF THE ALTAI MOUNTAINS**

Nematodirosis is a widely spread disease of sheep of the Altai Mountains which is caused by number of morphological and biological features of the disease agent. Nematodirus helminths are represented in the Altai Mountains by the following species: *Nematodirus oiratianus* (Rajewskaja, 1929), *Nematodirus spathiger* (Railliet, 1896), *Nematodirus abnormalis* (May, 1920), *Nematodirus filicolis* (Rudolphi, 1802).

The species *Nematodirus abnormalis* and *Nematodirus filicolis* are registered in the Altai Mountains for the first time. The highest dissemination of the Altai Mountains natural environment by eggs of the parasites takes place in spring and summer. Topping rams are more invaded by the parasites than sheep younger than 18 months and breeding ewes.

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УДК 619:616.24-002.153-085:615

**A.V. Miftakhutdinov****COMPARATIVE EFFECTIVENESS OF ZIMUN 4.24 PROBIOTIC AND ANTIBIOTIC CIPROFLOXACIN WHEN TREATING BRONCHOPNEUMONIA IN CALVES**

The author analyses effectiveness of antibiotic therapy and administering Zimun 4.24 when treating non-specific bronchopneumonia in calves, observing dynamics of blood morpho-biochemical values changes, factors of natural resistance and indices of calves' productivity before and after treatment.

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**TECHNOLOGIES AND MECHANIZATION OF AGRICULTURE**

УДК 388.432

**V.A. Zavora,  
V.I. Tolokolnikov****ON THE ISSUE OF SUBSTANTIATION OF MECHANISED OPERATIONS DURATION IN CROP PRODUCTION**

The paper deals with the influence of technical equipment availability, crop yields in agricultural production, and parameters of the equipment on costs of crop losses depending on duration of performance of technological operations in crop production.

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## **ECONOMICS OF AGRI-INDUSTRIAL COMPLEX**

УДК 631/635.115

**A.I. Kolobova,  
D.V. Musiyenko**

### **ON THE ISSUE OF TURNOVER OF AGRICULTURAL PURPOSE LANDS**

The paper reveals major problems of formation of modern market of agricultural purpose lands, it analyses use of land shares as basic objects of land market. By means of correlation analysis the extent of influence of natural-economic factors on the status of land shares is revealed. The problems at involving land shares into market land turnover are revealed, some ways of their solution are proposed.

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УДК 332.33:338.431

**O.V. Kozhevina**

### **STRATEGIC MANAGEMENT OF SUSTAINABLE DEVELOPMENT OF AGRICULTURAL USE OF NATURAL RESOURCES**

Revelation of reasons and analysis of unbalanced development of agricultural use of natural resources, indirect influence of disbalanced economy. Theoretical substantiation of mechanisms of strategic management of sustainable development of agricultural use of natural resources. Strategic factors of 'self-sustaining' of agricultural use of natural resources. Scientific model of balanced development of agricultural use of natural resources. Economic forecasting of sustainable development of agricultural use of natural resources based on social-ecologic-economic indicators.

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УДК 334.5:63

**M.L. Akishina,  
N.I. Glotova**

### **PRECONDITIONS AND PROSPECTS OF AGRICULTURAL CONSUMER COOPERATION DEVELOPMENT IN THE ALTAI REGION**

Private household farms belonging to population have practically exhausted their potential for further development and significant growth of agricultural production output, thus search of new forms of economic management is required. The research enabled to reveal preconditions and prospects of agricultural consumer cooperation development in the Altai Region.

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УДК 63.058.232.6 (571.15)

**A.A. Fannenshtil,  
M.L. Akishina**

### **FACTORS OF DEVELOPMENT OF PRIVATE HOUSEHOLD FARMS OF THE ALTAI REGION POPULATION**

Functions of private household farms belonging to population are considered, and results of their evaluation by residents of rural areas of the Altai Region in ranked order are provided, based on the accomplished research. The role of local administrations in development of rural territories, including private household farms of the population, is determined based of their cooperation and integration into the territorial economic system.

УДК 336.76:633.1:334.75:657.244.5

**Y.I. Rogovskiy,  
Y.A. Bugay****WAREHOUSE WARRANT AS ECONOMIC TOOL OF GRAIN MARKET REGULATION**

The paper deals with the issues of warehouse warrants' use in grain turnover. Advantages of their use for individual subjects of the market are revealed. Mechanism of warehouse warrants' use in the regional grain market with participation of grain exchange is provided.

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УДК 339.187.62

**Y.L. Putnikova,  
M.Y. Spitsyna****LEASING AS ONE OF ECONOMIC MECHANISMS OF AGRICULTURE DEVELOPMENT**

In conditions of crisis state of economic environment and, in particular, of agricultural sector, when many organisations are not capable to invest substantial funds in technical re-equipment and in intensification of production, it is a necessity to apply leasing operations, which are the basic way of purchasing equipment and a source of technical re-equipment of agricultural organisations in present situation.

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УДК 65.01(075.8)

**V.V. Zhdanov****CRITERIA AND INDICATORS OF SECURING PAYING CAPACITY  
OF AN AGRICULTURAL ENTERPRISE**

Criterion of securing paying capacity of an agricultural enterprise, by the author's opinion, should be co-ordinated to indicators of effectiveness of organisational-economic mechanism of agricultural industry complex, take into consideration the influence of external and internal factors of development of an agricultural enterprise, and probability of insolvency risks. The author carries out correlation-regression evaluation of influence of various factors on paying capacity of an agricultural enterprise.

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**QUALITY AND EFFICIENCY**

УДК 338.436.33

**A.V. Smirnova****OPTIMISATION OF RESOURCE PROPORTIONS OF AGRICULTURAL PRODUCTION**

The paper presents a model of formation of optimum resource proportions of agricultural enterprises of cattle-breeding specialization with the purpose of more effective utilization of their resource-industrial potential in conditions of limitation of investment funds. The paper also proposes an economic-mathematical model of a narrow-specialized forage production for enterprises with low profit crop production operation.

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УДК 631.1:338.436(476)

**G.V. Mirenkova,  
Y.A. Gusentsova****AGRICULTURAL INDUSTRY INTEGRATION AS THE BASIC WAY OF OVERCOMING  
INSUFFICIENT TECHNICAL EQUIPMENT OF AGRICULTURAL PRODUCTION**

The main reason of the effectiveness decrease of the agricultural industry complex for the last ten years is the transition from the old principles of management to new ones. Not many enterprises were able to reform in the current conditions. Creation of integrated structures with inclusion of agricultural and servicing enterprises is capable to reduce role of unprofitable agricultural enterprises, and to raise efficiency of agricultural production.

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УДК 635.1/.8:339.137

**G.I. Ganush,  
N.N. Davidovich****FORMATION OF COMPETITIVE ADVANTAGES OF VEGETABLE PRODUCTION OUTPUT**

Competitiveness is a complex of qualitative and cost characteristics, which provide satisfaction of interests of consumers (high quality products at reasonable price) and producers (effective production-marketing activity). The current primary goals of the vegetable production sector of the Republic include reduction of vegetable production costs and improvement of quality of vegetable production output. Reduction of vegetable production costs enables some reduction of prices, which, together with high quality, is the main component of competitive advantage of a product. High quality of vegetables acts as an important precondition of satisfaction of consumers' demand, and allows to effectively sell the output.

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**JUBILEES**

УДК 92

**G.M. Kazantsev****LIFE OF WORK OF A SCIENTIST-AGRONOMST  
(ON 70TH ANNIVERSARY OF N.D. IOST)**

The paper is dedicated to the creative and industrious path of Nikolay Davydovich Iost, a scientist-agronomist, Candidate of Agricultural Sciences.

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