

# ABSTRACTS

## AGRONOMY

УДК 634.721/724:581.145(571.15)

**V.V. Kandaurova,  
V.F. Severin**

### **POSSIBILITY OF GROWING STANDARD SEEDLINGS OF BLACK CURRANTS OUT OF LIGNIFIED CUTTINGS DURING ONE YEAR**

Possibility of achieving standard seedlings of black currants out of lignified cuttings for one growing season was investigated. The conclusion is made, that cuttings for duplication may be prepared of all parts of one-year branches: basal, middle, and apical. With combined application of mulch as polyethylene film and peat-humic fertilizer Phoenix to stimulate cuttings rootage and growth the output of standard seedlings, specified by State Standard, can make 69.9 of the rooted cuttings, and in the most favorable conditions to reach up to 78.4%.

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УДК 582

**O.A. Yelchininova,  
L.I. Vetlugina**

### **EFFECT OF PLANTING DEPTH ON GROWTH AND PRODUCTIVITY OF HORSEHEAL WHEN CULTIVATING IN THE CONDITIONS OF LOW-HILL TERRAINS OF THE ALTAI MOUNTAINS**

Effect of planting depth on growth and productivity of horseheal when cultivating in the conditions of low-hill terrains of the Altai Mountains as herbal medicine was studied. It was revealed that optimum planting depth in the soils of heavy granulometric composition is 2 cm which provides favorable conditions for seed germination and maximum productivity of horseheal plants.

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УДК 631

**N.N. Popelyayeva,  
Y.P. Shtabel**

**YIELD CAPACITY OF LONG-FIBRED FLAX OF THE PSKOV VARIETIES  
IN THE CONDITIONS OF LOW-HILL TERRAINS OF THE ALTAI MOUNTAINS**

In the conditions of low-hill terrains of the northern Altai Mountains there was the study of new long-fibred flax varieties of various ripeness groups: Voskhod – early-maturing, Antey, Rusich, Priboy and Krom – mid-season varieties (bred by the Pskov Research Institute of Agriculture), Tomskiy-16 – early-maturing variety (bred by the Tomsk State Regional Agricultural Experiment Station).

The research results revealed that when planting on the 15th of May with planting rate of 21 million seeds per 1 ha the best by yield capacity in 2005-2006 was the Krom variety; yielding 3.98 tons of straw per ha, and 0.25 tons of seed per ha.

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УДК 635.9

**A.N. Tseplyayev**

**INFLUENCE OF ROOT FORMATION STIMULATORS ON ROOTING OF GREEN CUTTINGS OF  
ORNAMENTAL PLANTS IN CONDITIONS OF THE CENTRAL CHERNOZEM BELT**

Influence of root formation stimulators on rooting of green cuttings of ornamental plants in conditions of the Central Chernozem Belt is studied. Results of use of 6 stimulators on 15 plant species are received. Recommendations on effective application of preparations in optimal agronomic terms are given.

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**AGRICULTURAL ECOLOGY**

УДК 631.466.1:631.95

**L.N. Korobova**

**POTENTIALLY PATHOGENIC FOR A HUMAN AND PHYTOTOXIC FUNGI IN ARABLE  
AND NON-ARABLE CHERNOZEMS OF THE WESTERN SIBERIA**

It is revealed that the chernozems of the Western Siberia within myco-cenosis contain more toxic forms of fungi than in the European part of the country. Toxic types of micro-mycetes occur more often in the tilled soils. The complex of toxic formers regardless of the difference in agricultural practices in the investigated agri-cenosis is of marked similarity. The features of zonal differences appear in about 10 years of chernozems' restoration.

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УДК 631.411.4;631.4:551.3

**N. Raupova,  
G. Sodikova,  
N. Sagdullayeva****THE PHYSICAL-CHEMICAL FEATURES AND HUMUS STATE OF TYPICAL SEROZEM SOIL**

Having taken into consideration the great significance of humus in the process of soil formation and soil fertility and the lack of information on the qualitative structure of typical serozem formed on neogen tertiaries and also on influence of erosion process to humus state of certain soil the research of the soils formed on tertiary deposits taking into account their liability to erosions researched genetic characteristics of the content and deposits of humus, substance of the soil and their changes in the process of erosion. The research ascertained group and fractional structure, certain physical-chemical features and humus state of the soil subject to degree of erosion's and to exposure of the slope.

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УДК 577.112.3:632.9

**S.G. Spivak,  
Y.B. Yaronskaya,  
I.V. Vershilovskaya,  
V.Y. Davydov,  
I.V. Trostyanko,  
V.I. Dolgopaletz,  
N.G. Averina,  
M.A. Kisel****THE EFFECT OF LIPOPHILIC ESTERS OF 5-AMINOLEVULINIC ACID  
ON THE PLANT GROWTH AND DEVELOPMENT**

A comparative study of growth regulating activity of 5-aminolevulinic acid (ALA) and its lipophilic hexyl ester (H-ALA) was performed. H-ALA was shown to stimulate growth and development of barley plants in much lower concentrations than ALA. The effect observed was determined to be due to facilitated transport of lipophilic derivatives of ALA into the plant cells.

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**VETERINARY MEDICINE**

УДК 636.39:591.147

**A.I. Afanasyeva****CLINICAL DISPLAY OF PREGNANCY ENDOCRINE REGULATION DISORDERS IN GOATS  
OF THE GORNO-ALTAI DOWNY BREED**

The research revealed that combing-out the down of 3-3.5 months pregnant goats results in drastic increase of adrenocortical hormones, hormones of thyroid gland, in disorder of sex steroids correlation, which is clinically revealed by abortions.

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УДК 619:598.2/.9:578

**A.Y. Bondarev,  
P.I. Baryshnikov,  
B.V. Novikov**

**MONITORING OF INFECTIOUS LARYNGOTRACHEITIS IN WILD BIRDS  
OF THE FOREST-STEPPE AREA OF THE ALTAI REGION**

The results of monitoring research of infectious laryngotracheitis in wild and synatropic birds in 10 districts of the forest-steppe area of the Altai Region are presented.

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УДК 619:(616.98:579,841,93Б:612.017.Н/.12:612.112):636.22/.28

**G.I. Dzhamanova**

**ACTIVITY OF ACELLULAR SUPERNATANT FRACTION  
OF SENSITIZED LYMPHOCYTE CULTURE ON ROSETTE FORMATION  
OF INTACT LYMPHOCYTES AND THEIR SUB-POPULATIONS**

Accumulation of factor influencing rosette formation of intact cells in the culture of sensitized lymphocytes with brucellin is established. Effect of supernatant fluid of culture of non-sensitized cells with brucellin on rosette formation of T-lymphocytes is revealed.

Antigen, introduced into the culture of sensitized lymphocytes, contributes to accumulation of agents influencing rosette formation of intact cells. The research results reveal another mechanism of interaction of brucellin-reactive T-lymphocytes of one pool with different clones of T-cells.

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УДК 619:616.981.48-08

**A.S. Alimardanov**

**ANTIBIOTIC SENSITIVITY AND ANTIBIOTIC RESISTANCE  
OF ESCHERICHIA STRAINS CIRCULATING ON POULTRY FARMS**

The studies on four poultry farms by separation of Escherichia strains and determination their antibiotic resistance showed that the number of resistant and poly-resistant strains continues to increase. Low effect is achieved by preparations used by the farms for a long time: tetracycline, streptomycin, neomycin, furasolidon. Of the 50 investigated strains none revealed resistance to new preparations of cephalosporin.

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## TECHNOLOGIES AND MEANS OF AGRICULTURE MECHANIZATION

УДК 631.371:621.365 (075)

**A.A. Bagayev,  
A.I. Bagayev,  
P.P. Zubov**

### **FOUNDATIONS OF MAGNETOHYDRODYNAMIC TRANSFER OF CONDUCTING LIQUID IN SINUSOIDAL ELECTRICAL AND MAGNETIC FIELDS**

The factors influencing the speed of magnetohydrodynamic transfer of conducting liquid are examined.

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УДК 631.372:631.4

**V.M. Shcherbakov,  
N.I. Strikunov**

### **BALANCING OF THE CLEANING SYSTEM OF DON-1500B COMBINE HARVESTER**

A method of vibration reduction in a modern combine harvester is proposed. It is important in present day conditions connected to vibration reduction of a combine harvester, and especially of the operator's workplace. In modern combine harvesters to improve the quality of the chaff thrashing extended cleaning system is used, that results in increase of moving weight. Division of the upper part of the cleaning system into two components allows to balance the weights moving towards each other. The proposed method does not require additional weight increase.

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УДК 633.34:664.0:636.084

**G.M. Kharchenko**

### **CONSUMER AND TECHNOLOGICAL PROPERTIES OF SOYBEAN OIL**

Organoleptic and physicochemical parameters of soybean oil produced for food purposes are presented.

The presented experimental data characterize soybean oil as dispersive system. Dependence of density and viscosity of soybean oil on temperature is presented, the dependence describes the ability of soybean oil to be separated (ability to remove mechanical and other impurities).

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УДК 631.372.001.66:331.101.1

**A.K. Kislenko,  
P.D. Veretennikov,  
M.A. Arkhilayev**

**INFLUENCE OF VIBRO-ACOUSTIC FACTORS  
OF PRODUCTION PROCESS ON AN EMPLOYEE'S ORGANISM**

The influence of vibro-acoustic factors on human organism, experimental values of noise levels and vibration on workplaces of the operators of mobile equipment performing basic technological operations are described, as well as basic measures to reduce the level of harmful vibro-acoustic factors' effect.

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**ECONOMICS OF AGRICULTURAL INDUSTRY COMPLEX**

УДК 657.31. (072)

**I.A. Arykova**

**REAPPRAISAL OF CAPITAL ASSETS IN THE INSTITUTIONS WITHIN THE JURISDICTION  
OF THE MINISTRY OF AGRICULTURE OF RUSSIA**

The procedures of reappraisal of capital and intangible assets of state budget supported institutions are considered.

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УДК 331

**A.M. Zubakhin,  
T.V. Vishnyakova**

**PROBLEM OF REDUCTION OF LABOR**

The reduction of labor is objectively proved bringing of work of different quality to work homogeneous; this is definition of the amount of the abstract work containing in this or that specific type. The reduction of work carries out two functions: allows to finish calculations of public labour input of production in equivalent units and forms the basis of diverse economic calculations according to problems of economic planning. Considered are the methodology approaches at definition of factors of the reduction of experts of the top skills, factor of complexity of industrial work in relation to agricultural one.

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УДК 331.5:334.75

**M.V. Noskova****THE MECHANISM OF FUNCTIONING OF THE AGRICULTURAL LABOUR MARKET**

The major component of the labour market is the mechanism of its functioning. Mechanism of functioning of the labour market is understood as interaction and coordination of various interests of the employers and able-bodied population wishing to work at presence of workplaces and changes of the prices of the right on work.

Functioning of the agricultural labour market is interconnected to the certain features, which form balance of supply and demand. Labour offer is formed depending on social-demographic structure of the rural population, structure of employment by labour and public activity, vocational structure of the manpower, and the demand for labour will depend on natural, raw and regional features, development of science, equipment and technologies, investment and social policy, economic and ecological conditions.

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УДК 331.2:63(571.15)

**A.I. Kolobova,  
S.P. Vorobyov****CONDITION OF WORK MOTIVATION OF THE AGRICULTURAL ENTERPRISES' EMPLOYEES**

The analysis of motivation sphere of the agricultural enterprises of the Altai Region is carried out. The interrelation of work motivation and incomes of the employees is determined, the measures on improvement of intra-economic relations are proved on the basis of formation of the new economic mechanism.

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УДК 631.74

**V.P. Tur,  
N.S. Rogalyova****STEADINESS AND STABILITY OF LARGE AGRICULTURAL ENTERPRISES  
OF THE SVERDLOVSK REGION**

The experience of stable operation of agricultural enterprises of the Sverdlovsk Region is summarized. The effectiveness of their activity is presented.

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