

# ABSTRACTS

## AGRONOMY

УДК 631.527:633.11

I.V. Kurkova,  
M.V. Teryokhin

### **EFFECT OF SEEDING QUALITIES ON GRAIN YIELDS BY CULTIVATION OF SOFT SPRING WHEAT VARIETIES OF VARIOUS ECOLOGIC GROUPS IN THE CONDITIONS OF THE AMUR REGION**

The results of three-year long studies of seeding qualities' effect on grain yields of cultivated spring wheat varieties of various ecologic groups in the conditions of the Amur Region are presented. The varieties' evaluation revealed that the varieties of the Amur selection demonstrated the best indicators of germinating energy. There was no significant deviation between the groups on field emergence. The following groups were distinguished by high yields: the Amur selection (3.48 t/ha) and the Primorye selection (3.47 t/ha); the yields of the Khabarovsk group were insignificantly lower.

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УДК 633.111.1«321»(571.1)

V.L. Yershov,  
A.Y. Bychek

### **IMPROVEMENT OF SOFT SPRING WHEAT CULTIVATION TECHNOLOGY IN RESOWINGS IN THE CONDITIONS OF THE SOUTH FOREST-STEPPE OF THE WEST SIBERIA**

Based on three-year long studies the conclusion is made that cultivation of spring wheat in the conditions of south forest-steppe of the West Siberia is economically profitable provided certain level of cultivation technology's intensification is achieved.

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УДК 635.21:631.82:658.562

S.M. Sirota

### **ADJUSTMENT OF POTATO TUBERS' QUALITY DEPENDING ON ITS PURPOSE**

Requirements of biochemical composition of potato tubers depend on its purpose. Starch content is important for industrial processing. The greatest starch content in potato grown in leached chernozem is accumulated when paired combination of PK fertilizers is applied.

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## AGRICULTURAL ECOLOGY

УДК 634.743:632.116.2:631.4(571.15)

S.V. Makarychev,  
A.V. Shishkin,  
I.A. Fedotov

### EFFECT OF GARDEN-PROTECTION FOREST BELTS ON SNOW ACCUMULATION AND SOIL TEMPERATURE REGIME IN SEA-BUCKTHORN PLANTATIONS

Garden-protection forest belts make determining impact on the processes of snow accumulation and temperature regime formation of soil profile of chernozems in sea-buckthorn plantations in winter.

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УДК 631.3.004

V.Y. Musokhranov,  
Y.A. Streltsova

### AGRICULTURAL-ECOLOGIC PECULIARITIES OF NATURAL RESOURCES MANAGEMENT IN THE CHARYSHSKIY DISTRICT IN THE ECONOMIC TOURIST-RECREATIONAL AREA OF ALTAI

Analytical material of the current state of nature, production and social situation in the Charysh District of the Altai Region, the area perspective for tourism and recreation, is presented. Prospects of agricultural natural resources management are demonstrated, preventive measures to neutralize negative results of more intensive use of the area are proposed.

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## ANIMAL PRODUCTION

УДК 636.5/6.636.087.73:612.017.1

V.N. Khaustov

### EFFECTIVENESS OF ASCORBIC ACID AND IODINE USE IN DIETS OF HENS OF COMMERCIAL FLOCK

Some doses of ascorbic acid (150 mg/kg) and iodine (1.4 mg/kg) were tested in diets of hens of commercial flock both separately and in combination. It is revealed that combined use of vitamin C and iodine provided higher productivity, natural resistance and economic effectiveness compared to separate use in feeding.

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УДК 636.933.2

N.D. Ovcharenko,  
N.N. Opaleva

### COMPARATIVE EVALUATION OF MORPHOLOGIC INDICATORS OF CUTANEOUS COVERING OF THE KULUNDINSKAYA SHEEP AND THEIR CROSS-BREEDS

The features of histologic structure of cutaneous covering of the Kulundinskaya breed and cross-bred rams obtained by cross-breeding of the Kulundinskaya ewes with Texel rams

are considered. The research revealed that such cross-breeding has positive effect on the skin of cross-bred animals; thickness of their reticular layer increases, which may be connected with improvement of such skin quality as durability; epidermis thickness increase may be considered as manifestation of adaptive reactions.

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УДК 636.32/.38.082.4:57.082.26

**A.I. Afanasyeva,  
S.G. Katamanov,  
N.V. Simonova**

#### **EFFECT OF RAMS OF THE TEXEL AND NORTH-CAUCASIAN BREEDS ON REPRODUCTIVE QUALITIES OF THE ALTAISKAYA BREED SHEEP**

The use of purebred rams of the North-Caucasian breed and half-bred rams of the Texel breed has positive effect on reproductive features of breeding stock of the Altaiskaya sheep, but the rams (1/2 of pure blood) better increase the ewes' reproductive qualities.

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УДК 619:591.461.2:636.084

**M.N. Gonokhova**

#### **STRUCTURAL CHANGES IN KIDNEYS OF ANIMALS UNDER THE INFLUENCE OF CADMIUM ON THE ORGANISM**

It is revealed that in kidneys of the animals that were given the feed grown in meadow chernozem soil of the Southern forest-steppe of the Omsk Region by artificial modeling of technogenic cadmium pollution there are some morphological changes, severity of which depends on many factors, in particular, on the animal species and on the rate of trace element applied to the soil, on growing conditions of the plants and their species.

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### **PROCESSING: TECHNOLOGIES AND EQUIPMENT**

УДК 664:621.929.9

**V.I. Lobanov,  
V.V. Trushnikov**

#### **DEVELOPMENT OF CONTINUOUS ACTION MIXER WITH SELF-CLEANING OPERATING ELEMENTS**

Operational design of a mixer, which allows minimizing adhesion process of material, is proposed. The system of equations is provided, which can be applied to compute and graphically draw cross-section profile of the mixer's operating elements.

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УДК 631.365.22.003.13

**I.Y. Fedorenko,  
V.I. Lobanov,  
A.V. Sinogeikin**

#### **EFFICIENCY UPGRADING OF DRUM DRIERS**

Analysis of drum driers used for drying loose materials in agriculture and processing industry is presented. Imperfections of existing designs are revealed, and design of a drum

drier with cyclic heating of dried material is proposed. Novelty of the design lies in successive heating and cooling of the material.

The proposed design allows increasing drying process efficiency and increasing moisture takeoff during one passage.

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УДК 664.7

V.V. Gorshkov,  
A.S. Pokutnev

### **EFFECTIVENESS OF GRAIN PROCESSING BY HYDRODYNAMIC CAVITATION AT BREAD PRODUCTION**

Possibility of hydrodynamic cavitation at bread production when obtaining grain suspension was studied. The resulted product possesses high flavouring qualities, and meets the necessary requirements on organoleptic parameters, moisture content is 48%, acidity is 2°, porosity is 68%. Calculation of economic effectiveness of introduction hydrodynamic cavitation into technologic process of grain production at milling stage revealed that economic effectiveness by 1 ton of finished product would make 2139 roubles.

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### **ECONOMICS OF AGRICULTURAL INDUSTRY COMPLEX**

УДК 631.16

O.S. Ruff,  
V.S. Lozinskiy,  
S.R. Lozinskiy

### **EVALUATION OF EXISTING MECHANISM OF FINANCIAL SUPPORT OF PEASANT (FARMERS) ENTERPRISES**

Evaluation of specific elements of financial support of peasant (farmers) enterprises of the Novosibirsk Region is presented, necessity is described, directions of creation of new unified system of private commodity producers are proposed.

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УДК 634.003.13 (571.151)

A.I. Kolobova,  
A.S. Kudashkin

### **EFFECTIVENESS OF GARDENING CONDUCTION IN THE REPUBLIC OF ALTAI**

Factual effectiveness of gardening development in the Republic of Altai is revealed, specifying factors and the restraining causes are studied, possible directions of growth of its competitiveness are summarized.

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УДК 336.14

V.V. Mishchenko,  
A.G. Medvedeva

**INTER-BUDGETARY REGULATION AS A TOOL OF EVENING-OUT TERRITORIAL DIFFERENTIATION IN A REGION (BY THE EXAMPLE OF THE ALTAI REGION)**

Budgetary regulation tools of territorial development in the region are studied. By the example of the Altai Region the issues of territorial policy of regional state authorities are revealed, differentiation of social-economic development of municipal districts is analyzed, the methods of its evening-out are proposed.

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УДК 338.8

Y.V. Kasatkina,  
Y.P. Volkov

**OPTIMIZATION OF PRODUCTION VOLUME AS THE BASIS OF MODELING OF ASSETS FORMATION PROCESS OF AGRICULTURAL PROCESSING ENTERPRISES**

Issues of determination of optimal production volume by the example of specific agricultural processing enterprise are considered. Optimality criterion is substantiated, and it is shown that modeling of assets formation should be based on determination of optimal production program.

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УДК 336.14:352

S.V. Pakshenkova

**EVALUATION OF EXISTING OF SINGLE-LEVEL MODEL OF BUDGET-TERRITORIAL ORGANIZATION OF LOCAL GOVERNMENT (BY THE EXAMPLE OF A LARGE CITY DISTRICT OF THE ALTAI REGION)**

Insufficiently developed optimal model of budget organization of local government requires adjustments in territorial-budget status of large cities of the Russian Federation.

It is important to identify optimal model of budget organization of local government in large cities by means of comparative evaluation of budget system functioning in the conditions of various level organization models.

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**MANAGEMENT AND MARKETING**

УДК 316.334.2

N.V. Panchenko

**FROM PARTNERSHIP TO PATERNALISM. THE ANALYSIS OF PHENOMENA AND PROCESSES IN THE SPHERE OF SOCIAL AND LABOUR RELATIONS OF A RUSSIAN REGION**

Research of the employee-employer relationship transformation is presented: from state paternalism through social partnership to privately owned enterprises paternalism. Corporate culture of large private enterprises optimizes relationship between employees and employers. The paper is based on the author's empiric studies (1999-2007).

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УДК 338.24

Y.V. Kuratchenko

**MONITORING AS ADMINISTRATION TOOL OF SOCIAL-ECONOMIC DEVELOPMENT  
OF MUNICIPAL FORMATION**

The essence of monitoring and its role in providing administration of social-economic development of municipal formation is discussed. Various view-points on that issue are presented, it is emphasized that existence of large number of indicators characterizing social-economic development of municipal formation prevents from unique evaluation of effectiveness of administration system of a territory.

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УДК 633.1.004.12:631.15/.16 (571.15)

V.B. Bublikov

**MANAGEMENT OF COMPETITIVE BREAD GRAIN PRODUCTION**

Principal direction of competitive bread grain production increase in specialized agricultural enterprises of the Altai Region are proposed taking into consideration specific natural conditions of the Region's zones and economic efficiency of grain crops production.

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УДК 658:63

V.A. Kundius,  
V.V. Tsvetkov**ANALYSIS OF INTER-INDUSTRY LINKS AND COMPUTABLE GENERAL EQUILIBRIUM  
AS TOOLS OF INTER-INDUSTRY MANAGEMENT**

It is important for inter-industry management links to reveal influence of direct and inverse links and interdependency in the branches of agricultural industry complex. A model of inter-industry equilibrium is developed.

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УДК 331.108.26

T.A. Akimochkina

**METHODS OF EXPRESS-DIAGNOSTICS OF HUMAN CAPITAL STATE IN ORGANIZATION**

The author's methods of the human capital state express-diagnostics are represented. The results illustrate and allow formulating the insight of the human capital state and can be used as the basic of making administrative decision of the necessity of deeper diagnostics.

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