

ABSTRACTS

УДК 378 (571.15)

G.G. Morkovkin

SCIENTIFIC AND RESEARCH ACTIVITY AT THE ALTAI STATE AGRICULTURAL UNIVERSITY

Review of the University's potential and realities in scientific support of the Altai Region's agriculture development is presented, which characterizes active participation of researchers of the Altai State Agricultural University in scientific support of the National Project "Development of the Agricultural Industry Complex" and the Federal Program "Development of Agriculture in 2008-2012".

УДК 016:608

V.A. Dyomin

**FORMATION AND CURRENT CONDITION OF INVENTION
AT ALTAI STATE AGRICULTURAL UNIVERSITY AND ITS CONTRIBUTION TO DEVELOPMENT
OF THE REGIONAL AGRICULTURAL INDUSTRY COMPLEX**

In the year of the sixty fifth anniversary of the University the invention activity at Altai State Agricultural University is forty-five. During these years the scientists of the University made a discovery registered No. 221 in the International Association of Scientific Discoveries' Authors, over 300 inventions in various spheres of agricultural production were developed. Many of them were applied in the agricultural production and highly appreciated.

AGRONOMY

УДК 635.1/7:635.5:631.559(571.1)

N.V. Yashutin

MODERN APPROACH TO METHODOLOGY IN AGRICULTURE: AGROLOGISTICS

The issues of adoption new informational technologies of management in agriculture, development of latent reserves and resources of systemic logistic influence and interaction of factors in the production and technical purposes, modeling and design of logistic systems in the arrangement of effective agricultural production are considered.

УДК 001.8:631.153.3 (571.61)

A.N. Gayduchenko

**STATE AND RESULTS OF RESEARCH IN THE DEVELOPMENT OF OPTIMUM STRUCTURE
OF CULTIVATED AREAS IN THE AMUR REGION**

The research revealed that the most effective in the Amur Region are short 3-6-course crop rotations with clean, occupied, and green-manured fallows and long 7-10-course crop rotations with 2-3-year use of perennial grasses filled with 30 to 40% of soybean, 40-50% of grain crops, and 17-33% of fodder crops.

The most rational crop rotation schemes recommended for the Amur Region farms are presented.

УДК 633.521

A.A. Khlopov,
Y.S. Lybenko,
T.A. Lekontseva,
Y.S. Sofronova

ANATOMIC STRUCTURE OF STEM AND FIBRE QUALITY OF NEW DOMESTIC SELECTION VARIETIES OF FIBER FLAX (*LINUM USITATISSIMUM* L.) IN THE KIROV REGION

The varieties of fiber-flax of domestic selection developed in the beginning of the 21st century were studied in the Kirov Region. Among them the best ones by anatomic structure of stem and fibre quality were revealed, such as Zaryanka, Sinichka, Impuls and Tverskoy, as well as the varieties with the best economic-biological indices: Tost 3 and Tost 4.

УДК [633.17:632.51]:633.11«321»(571.1)

N.A. Rendov,
T.V. Gorbachyova,
S.I. Mozyleva

COMPETITIVENESS OF PANIC GRASS (*PANICUM MILIACEUM RUDERALE*) IN THE CROPS OF SPRING WHEAT IN THE FOREST STEPPE OF WESTERN SIBERIA

On the basis of six-year long investigation the losses of spring wheat per one weed were calculated. The number of panic grass plants per square meter that envisages the application of herbicides in forest steppe of Western Siberia was established.

FORESTRY

УДК 630.0.431

T.A. Matveyeva

WOOD COMBUSTIBLES RESOURCES IN MOUNTAIN FORESTS OF SOUTH SIBERIA

Some special features in the process of combustible resources formation in light coniferous ceno-sises of south taiga sub-zone are considered. The influence of stand completeness on size and ratio of resources of ground combustibles is considered. It is revealed that in dense stands the mass of phyto-detritus is substantially greater.

УДК 551.588.6:581.132 (470.22)

V.A. Usoltsev,
Y.V. Barakovskikh,
A.A. Malenko

CARBON RESOURCES CHANGES DURING THE LAST TEN YEARS IN THE FOREST COVER OF TAIGA AND STEPPE ZONES

For the first time in terms of two data bases matching (the phytomass, determined on the experimental areas, and data of State Forest Fund Records) in the forestry enterprises it was determined that carbon resources in the forest cover for the last decades increased by 5% in the Perm Region, and by 38% in the Orenburg Region. Thereby, carbon resources in the forest cover in different natural zones increases in the steppe zone more essentially than in the south taiga. It appears that climatic changes are more favorable for the stand productiveness in the south of forest areal.

УДК 634.0.43

S.V. Zalesov,
S.V. Toropov

REASONS AND WAYS OF DETECTION OF FOREST FIRES IN THE SVERDLOVSK REGION

The reasons of forest fires in the forest-fire territories in the Sverdlovsk Region as well as the efficiency of different ways of fire detection were analyzed. Some recommendations are offered in the improvement of forest fire protection.

AGRICULTURAL ECOLOGY

УДК 631.6.02

A.S. Davydov,
A.V. Tingayev,
V.B. Sheptalov

EXPERIENCE OF WASTE WATER APPLICATION FOR IRRIGATION

Waste water application for irrigation aims at water resources protection and fresh water deficiency decrease. Normed irrigation helps to increase crop capacity. Irrigation rates at watering with waste waters should be 3000 mi/ha for grasses and 2400 mi/ha for grain crops. It is recommended to carry out 6-8 waterings with the rates of 300-400 mi/ha.

УДК 631.6.02:556.013

Y.D. Kosheleva,
K.B. Koshelev

**WATER EROSION ON SLOPES OF THE PRIORSKY PLATEAU
IN THE ZONE OF INFLUENCE OF THE BURLINSKIY MAIN CHANNEL**

As a result of field research borders and degree of activity of gullies on slopes of the Priorsky Plateau within the Burlinskiy Main Channel are established. By mathematical modeling zones of influence of the channel on ground waters are obtained. Recommendations concerning gullies observation in the zone of influence of the channel are proposed.

ANIMAL PRODUCTION

УДК 636.2:612.392.64

I.N. Pleshakova

INFLUENCE OF VARIOUS DOSES OF POTASSIUM IODIDE ON MILK YIELD

Scientific and economic experiment was conducted on the training farm "Prigorodnoye" in 1999-2000. The purpose of the research was to determine the optimal dose of potassium iodide for implantation in heifers of the Black-and-White breed. 21 and 24 mg per head implantation of potassium iodide increases milk yield in heifers by 8.9 and 6.5%.

УДК 619:616:99

N.M. Ponamaryov,
N.V. Tikhaya

**IMPROVEMENT OF LIFE-TIME DIAGNOSTICS OF GASTROINTESTINAL STRONGYLOSIS
OF RUMINANT ANIMALS**

Comparative characteristic of methods of life-time diagnostics of helminthes in farm animals with the use of water from naturally salt lakes of the Altai Region is carried out. The data of helminthologic examination are presented.

TECHNOLOGIES AND MEANS OF AGRICULTURE MECHANIZATION

УДК 631.3

V.I. Belyaev,
T. Meinel

**EXPERIENCE OF INTRODUCTION OF MINIMUM
AND NO-TILL TECHNOLOGIES IN THE ALTAI REGION**

The results of introduction of minimum and no-till technologies for wheat cultivation in the East-Kulundinskaya zone of the Altai Region with the use of machinery complex manufactured by Amazon Company: Catros disc harrow, Citan Z seeding complex, UG 3000 NOVA sprayer are presented.

УДК 664.8.047.3.049.6

K.V. Anisimova,
A.P. Ilyin,
L.S. Vorobyova

**MATHEMATICAL MODELLING OF DEHYDROFREEZING PROCESS
OF FRUITS IN ULTRASONIC FIELD IN THE STREAM OF INACTIVE GAS**

Mathematical model of sublimation drying of fruits in ultrasonic field in the stream of inactive gas is described. The obtained results are adequate to experimental data.

УДК 631.431.:436.6

Y.A. Savelyev

THE RESEARCH OF THE EFFECTIVENESS OF SOIL DECOMPACTION BY FREEZING

The technique of determining the value of soil decompaction by freezing is described. Laboratory device for making the soil samples of necessary density and moisture and the process of its functioning are described. The effectiveness of the process of soil decompaction by freezing is studied.

УДК 633.34:664.0:636.084

G.M. Kharchenko

**EFFECT OF DESIGN-KINEMATIC PARAMETERS OF BICONICAL VERTICAL FILTERING CENTRIFUGE
ON THE ACIDITY INDEX OF REFINED SUNFLOWER OIL**

Based on the technological process analysis main equitation for filtering in biconical vertical filtering centrifuges was obtained, and the results of multifactoral experiment for acidity index determination obtained in the testing of experimental centrifuge with workspace $k = 0.00181 \text{ m}^3$ are described. The acidity index < 1 is achieved with the following factors: equivalent diameter of zeolite

particles $d = 0.002-0.004$ m, the outlet ports area $F = 1.77 \cdot 10^{-6}$ m², and the rotating frequency of the centrifuge $\omega = 200-300$ c⁻¹.

ECONOMICS OF AGRICULTURAL INDUSTRY COMPLEX

УДК 338.436.33+908.470.40

**Y.A. Cherdantseva,
I.M. Kosterina**

ON THE STATE REGULATION OF REPRODUCTIVE PROCESS IN AGRICULTURAL ENTERPRISES OF THE PENZA REGION

Extended reproduction in agriculture demands for circulating assets and their regular replenishment. Shortage of circulating assets in agriculture results in critical financial situation, and restrains its efficiency and threatens preservation of agricultural lands. To overcome this situation is impossible without state support policy. Substantiation of that policy is presented.

УДК 336.77

I.A. Fleykler

FINANCIAL AND CREDIT SERVICE FOR THE AGRICULTURAL INDUSTRY COMPLEX OF THE OMSK REGION

The system of institutions of finance and credit infrastructure of agricultural industry complex is studied, the terminology is defined, and the level of its links' development is evaluated. Measures on structure and functions of finance and credit services market participants' development on the regional level are proposed.

УДК 635.21:631.151.6

T.I. Zakharova

ACTIVIZATION OF INTEGRATION PROCESSES IN THE BRANCH OF POTATO GROWING

Research of the current state of potato growing reveals that increase of its economic efficiency is possible by intensifying integration processes. By means of mathematical modeling of integrated formation the parameters which provide profitability of production are recommended.

УДК 338.242.2

**O.V. Borisova,
I.F. Rau**

COMMERCIAL TRANSACTIONS MANAGEMENT

Achieving strategic goals of an enterprise depends on the correct running its commercial activity. Modern types of transactions are analyzed, main directions of marketing studies, necessary for effective bargaining, are presented, algorithm of bargaining is proposed. It is proved that the principal goal is to reckon different variants and to select the appropriate partners for achieving the strategic goals of an enterprise.

ACCOUNTANCY AND FINANCE

УДК 336.71:339.9

N.I. Kolyada

COMMON AND SPECIAL IN THE CHARACTERISTIC OF FINANCIAL SYSTEMS OF RUSSIA AND THE USA

Main differences between Russian and American financial systems are considered. The peculiarities of creating compulsory reservation funds, the work of deposit multiplier and formation of credit resources in both countries are shown. The problem of discrepancy between some issues of administrative regulating the monetary and credit systems and national interests of the states is brought up.

УДК 65.012.7

G.V. Chetverikova,
Y.A. Marchenko

INTERNAL AUDIT ARRANGEMENT FOR A RECESSIONARY ENTERPRISE

Procedure of internal audit arrangement in a recessionary enterprise is considered. Managerial aspects of the stages of internal audit are described in details. The presented conclusions and directions may be applied in internal audit arrangement in the conditions of failure of an economic entity.

УДК 631.162:339.187.62:083.74

N. V. Borodina,
L.I. Kirkeyeva

ISSUES OF LEGAL REGULATION OF LEASING OPERATIONS ACCOUNTING

Supply of agricultural enterprises of the Altai Region with machinery and equipment is analyzed. The concept and advantages of leasing for provision agricultural enterprises with fixed assets are considered. It is necessary to improve legal regulation of leasing operations accounting.
