

ABSTRACTS

AGRONOMY

УДК 633.112.:575.1

A.A. Zhorov

BREEDING VALUE OF SPRING HARD WHEAT GENETIC RESOURCES OF THE KASIB PROGRAM IN THE CONDITIONS OF WEST SIBERIA

Spring hard wheat genetic resources within the integrated Kazakhstan-Siberian Program (KASIB) were studied in 2000-2007. The number of studied samples in seed-plots was as following: KASIB 1 – 23; KASIB 2 – 20; KASIB 4 – 16; KASIB 5 – 15; KASIB 6 – 16, KASIB 8 – 13. Gradual progress in the breeding of spring hard wheat at plant breeding centres of Russia and Kazakhstan is observed. Some samples suited by number of features as parent material for developing varieties for the conditions of West Siberia were identified.

УДК 582.736:581.142:577.151.042

Y.G. Kilina,
Y.V. Zhmud,
O.V. Dorogina

GERMINATING ABILITY OF SOME SPECIES OF FABACEAE L. FAMILY, THEIR CONTAMINATION BY FUNGIC AND BACTERIAL MICROFLORA AND TRYPSIN INHIBITOR ACTIVITY

Germinating ability, contamination by fungi and trypsin inhibitor activity (TIA) was investigated in the seeds of Fabaceae L. family perspective for introduction in the conditions of forest-steppe of West-Siberia, namely, *Astragalus cicer* L., *Astragalus onobrychis* L., *Trifolium ambiguum* Bieb. and *Trifolium medium* L (Fabaceae L.). It is revealed that germinating ability and TIA does not depend on storage time. Specimens of 7 genus of *Mucor* were found on investigated seeds, at that seeds of *Trifolium* are contaminated by fungic microflora to greater extent. After a long storage (over 10 years) all investigated seeds in general revealed bacterial contamination, the seeds having been stored less than 10 years revealed fungic contamination.

УДК 634.1/7:631.544

F.F. Streltsov,
R.A. Tuchin

IMPROVEMENT OF PRODUCTION TECHNOLOGY OF PLANTING STOCK OF FRUIT AND BERRY CROPS

Improved technology of growing seedlings of fruit and berry crops based on the use of covered mother plantations, twice repeated use of protected ground and growing seedlings with covered root system allows increasing production of planting stock 1.5-1.9 times and reducing its growing period by one year.

УДК 633.1:631.175:631.4

A.A. Shpedt,
V.K. Purlaur

THE INFLUENCE OF MESORELIEF ON YIELD AND QUALITY OF GRAIN CROPS

The investigation on exploring the influence of mesorelief on yield and quality of grain crops was undertaken in the agricultural part of the Krasnoyarsk Region. It was shown that the most favourable conditions for cultivation of grain crops are on the soil of plateau and southern slopes (steepness 4-6 degrees), and in arid conditions on the soil of depressions. Cultivation spring wheat

on the soil of northern slopes, and in moist conditions on the soil of depressions, results in yield reduction of the crop. In moist weather conditions on the soil of various mesorelief the formed grain by gluten content differs by one quality class. The highest quality grain is formed on the soil of slopes of southern exposure.

AGRICULTURAL ECOLOGY

УДК 581.331.2:581.192

**G.I. Yegorkina,
T.V. Babich**

MALE GAMETOPHYTE REACTION OF CULTIVATED PLANTS TO SOIL POLLUTION BY HEAVY METALS

The reaction of male gametophyte of some agricultural crops to influence of heavy metals was studied in an experiment with artificial soil pollution. Significant differences in susceptibility of the species to particular elements were revealed, indicators of soil pollution by heavy metals are recommended.

УДК 631.4:631.8632.95

**Y.V. Robertus,
R.V. Lyubimov,
Y.N. Kulikova-Khlebnikova,
V.A. Okhremenko**

PRELIMINARY RESULTS OF EXPERIMENTS ON CHEMICAL DETOXICATION OF SOILS CONTAMINATED BY PESTICIDES

For the first time in the natural conditions of the Altai Mountains Region there was experimental study of applicability of the method of chemical detoxication of soils contaminated by residual amounts of chloride-organic pesticides. Potential possibility of application of relatively low-cost reagent Netrol produced by a Biysk company Polikhrom-A is determined.

УДК 634.11:632.4(470.25)

**Y.P. Tumanov,
Z.V. Nikolayeva**

THE MAIN PATHOGENS OF APPLE-TREE AND BIO-ECOLOGIC FEATURES OF VENTURIA INAEQUALIS (COOKE) G. WINTER IN THE CONDITIONS OF THE PSKOV REGION

The research findings of species composition of apple tree pathogens are presented. Distribution of *Seimatosporium lichenicola* (Corda) Shoemaker et Mueller is observed among causative agents of leaf spot disease. Bio-ecologic features of *Venturia inaequalis* (Cooke) G. Winter in the Region are revealed. The effect of scab on weight and quality of fruits is determined.

ANIMAL PRODUCTION

УДК 636.4.082.453.52:633.88

S.V. Apanasenko

INFLUENCE OF BIOEFFEKT DV-2 PREPARATION ON REPRODUCTIVE FUNCTION OF BREEDING BOARS

The experiments revealed the Bioeffekt DV-2 preparation had a positive effect on sperm production and sexual activity of breeding boars.

УДК 636.32./ .38:611.018

**N.N. Opaleva,
N.I. Vladimirov****THE DYNAMICS OF AGE CHANGES OF WOOL FIBRES' THICKNESS AND DENSITY
OF HAIR FOLLICLES IN SHEEP OF THE KULUNDINSKAYA BREED**

The dynamics of age change of skin thickness, wool fibre thickness and density of hair follicles in sheep of the Kulundinskaya breed are discussed. The research revealed that wool fibre density and thickness as well as wool production in coarse-haired Kulundinskaya sheep may be forecasted at the age of four-six months.

УДК 636.2.084:636.2.082.4

**L.N. Cheremnyakova,
G.D. Nekrasov****THE CAUSES AND PREVENTION OF ALIMENTARY STERILITY IN COWS**

Cows' reproductive parameters reduction (calves' birth per 100 cows – 85; conception rate – 2.1; service period – 111 days; yeldness – 15%) is caused by deficient in the level by 2.2-8.2% and unbalanced in organic, mineral components and vitamins animal nutrition during winter barn period.

TECHNOLOGIES AND MEANS OF AGRICULTURE MECHANIZATION

УДК 631.3

**V.I. Belyayev,
I.Y. Fedorenko,
V.I. Ustinov,
D.V. Belyayev****COMPARATIVE EVALUATION OF TECHNOLOGICAL SYSTEMS OF DOMESTIC
AND FOREIGN MACHINERY**

The results of implementation of resources saving technology of grain crops cultivation technology with the use of foreign tillage, sowing and harvesting machinery are presented by the example of the Farm of V.I. Ustinov, the Kosikhinskiy District of the Altai Region.

УДК 631.171:636.085/086

**I.Y. Fedorenko,
I.A. Naumov****DISTRIBUTION OF COMPACTING PRESSURE IN A CURVILINEAR CHAMBER**

Compaction of material in a curvilinear chamber is considered. Pressure distribution formulas from a vane to the rest and from the rotor to the housing are presented. Calculation data are illustrated by graphic relations.

УДК 631:363.4

**V.I. Kurdyumov,
P.N. Ayugin,
N.P. Ayugin****REDUCTION OF CRUSHING POWER CONSUMPTION**

The most power-intensive process in preparation of root crops for feeding is crushing. Sliding cutting is less power-intensive, but it is difficult to carry out due to great values of the friction angle of root crops on the side of a metal wedge. Therefore in root crop grinders it is necessary to realize the principle of inclined cutting providing rather low power consumption and high quality of crushing.

Experiments have been conducted on the process of cutting root crops crusher at the speed of knife movement from 3 up to 10 m/s, at angles of sliding of the knife 0...45°.

The experiments revealed the decrease of specific work of cutting root crops on all speeds of knife movement at angles of sliding 30...40° (approximately on 30...35%). With the increase of speed of knife movement there is an increase of specific work of cutting.

УДК 631.362.33

**N.I. Strikunov,
S.V. Lekanov,
I.N. Strikunov**

EFFICIENCY OF POST-HARVEST HANDLING OF SEEDS BY MODERNIZED UNIT

Technological design of the line of modernized grain-cleaning unit, implemented in JSC Shans of the Tselinniy District, with description of technological potential of each section is presented. Analysis of the unit operation with several wheat varieties is made.

ECONOMICS OF AGRICULTURAL INDUSTRY COMPLEX

УДК 334.724:913

**E.F. Aunapu,
D.V. Bateykin**

MARKET OF GOVERNMENT AND MUNICIPAL INSTITUTIONS AS A TOOL OF REGIONAL DEVELOPMENT

Government institutions and their local aspects are effective tools for innovation processes incentive in the regions. Owing to development of government institutions' market at the level of the Russian Federation it is possible to some extent to pursue regional policy of leveling scientific and technical and economic development of territorial municipalities.

УДК 332.12

**V.V. Mishchenko,
O.N. Yutyayeva**

ECONOMIC SAFETY OF THE AGRI-INDUSTRIAL REGIONS OF SIBERIA IN THE CONDITIONS OF INTEGRATION INTO THE WORLD ECONOMY (ALTAI REGION, NOVOSIBIRSK REGION, OMSK REGION)

For preventive anti-crisis management in the agri-industrial regions of Siberia, for achievement economic safety and steady development of the economy constant monitoring of economic safety indicator system is necessary as well as the working out and realization of a complex of corresponding measures in case of breakdown of the economic stability in those regions or in case of other real threats for their development.

УДК 334.75:631.15/.16

**N.I. Kolyada,
Y.I. Zvyagintseva**

DEVELOPMENT OF ORGANIZED GRAIN MARKET: PRECONDITION AND PROSPECTS

The issues of the currant wheat market and the use of new tools in economic circulation are discussed.

The experience of the recent years is analyzed by creation of organized wheat market with the use of exchange trade. The main directions of wheat market development are determined and the elements of its infrastructure improvement are proposed.

MANAGEMENT

УДК 338.242.2 + 338.45

M.V. Bedrina

DEVELOPMENT OF THE MANAGEMENT MECHANISM OF PARTNERS' RELATIONSHIPS WITH THE PURPOSE THE INDUSTRIAL COMPANY'S COMPETITIVENESS INCREASE

The potential of an enterprise's competitiveness increase on the basis of partners' relationships management is investigated. The fundamental stages of development of the management mechanism by partners' relationships of an industrial enterprise were determined. The use of the concept of Balanced Scorecards as a basis of management mechanism is proposed.

УДК 338.242.44(470.57)

T.V. Vostretsova,
A.A. Askarov

FOUNDATIONS OF THE INDICATIVE PLANNING OF RURAL TERRITORIES' DEVELOPMENT

The notion, problems and principles of indicative planning of the rural territories development taking into account their modern economic condition are considered. Conclusion is drawn that development and realization of indicative plans will promote the efficient rural development.

УДК 332.33

O.V. Kozhevina

METHODOLOGY OF STRATEGIC MANAGEMENT AT THE STUDY OF POSSIBILITY OF STEADY DEVELOPMENT OF AGRICULTURAL NATURAL RESOURCES USE IN A REGION

The issues relating to definition of contents of strategic management of regional agricultural natural resources use development are considered. The methodology is proposed which allows identifying priority directions, mission and long-term objectives guaranteeing conservation of natural resources potential of a region and rational agricultural natural resources use.

УДК 631.158:658.310.84:377

N.V. Puzachyova,
B.P. Pankov

PERSONNEL POTENTIAL OF THE AGRICULTURAL INDUSTRY COMPLEX AND THE ISSUES OF ITS REPRODUCTION

The issues of elementary vocational education system for labor force in agriculture of the Kaluga Region are studied. The results of questioning 10th and 11th grade students with respect to their readiness to get an agricultural profession are presented, and those of questioning agricultural organizations' managers concerning labor quality estimation, reasons of low quality of education in vocational schools, and necessity to confer qualification ranks to labor force.
