

A B S T R A C T S**EDUCATION: PROBLEMS AND PERSPECTIVES**

УДК 37.01:37.022:378

N.S. Kozlov,
O.Y. Sergeyev**PREPARATION OF STUDENTS OF AGRICULTURAL UNIVERSITY
FOR FOREIGN LANGUAGE PROFESSIONALLY ORIENTED COMMUNICATION
IN PRESENT DAY CONDITIONS**

Process of preparation of agricultural university students for foreign language professionally oriented communication gains importance in view of reforming the system of higher professional education. The paper deals with the present day state of specialists' training system by means of foreign language, its problems and solutions. The authors present model of educational process organization in foreign language course and recommendations on its application.

THEORETICAL DEVELOPMENTS

УДК 631.31

V.S. Krasovskikh,
B.V. Adonyev**PROBABILISTIC-STATISTICAL MODEL OF MODULAR TILLAGE-SEEDING COMPLEX**

Mathematical model of modular tillage-seeding complex is presented allowing to estimate tractive and economic parameters of tractors and conditions of their operation when working on group of fields. There is determination of rational structure of the assembly and of its operation's modes, with the account of probabilistic character of variation of specific traction resistance of soil and limitations imposed by the requirements of agronomic practices, of tractor design, and field surface.

AGRONOMY

УДК 633 358:631.8

S.F. Spitsyna,
L.G. Protopopova

**EFFECTS OF PREPARATIONS CONTAINING COBALT ($\text{Co}(\text{NO}_3)_2$, CoSO_4 , CoCl_2)
ON YIELD AND QUALITY OF PEAS**

The paper present results of field experiments on application preparations containing cobalt for preplanting seed treatment of peas with the purpose of raising forages, enriched by cobalt; it is deficiency of cobalt in organism of animals that causes anemia.

It was established, that all cobalt containing preparations ($\text{Co}(\text{NO}_3)_2$; CoSO_4 ; CoCl_2), increase cobalt contents both in grain, and in straw. At the same time they effect positively on yield of grain and straw of peas.

УДК 633.853.494 «321»:631.8:631.559

M.G. Podorvanova,
S.F. Spitsyna

**EFFECTS OF MACRO- AND MICROFERTILIZERS ON YIELD OF GREEN MASS
AND DRY MATTER OF SPRING RAPE**

The paper deals with effects of combined and separate application of macrofertiliser $\text{N}_{30}\text{P}_{30}\text{K}_{30}$ and preparations containing B, Zn on yield of green mass and dry matter of spring rape. It is established, that the most effective variant was the one with boron preparation applied on unfertilised field, the rape green mass yield in that case was 44,9 tons/ha, compared to green mass yield of 35,3 tons/ha on check plot.

УДК 631.521.54:631.524.84:631.415.1

I.T. Trofimov,
L.A. Stupina

**RESPONSE OF AGRICULTURAL CROPS TO SOIL ACIDITY
AND INCREASE OF THEIR YIELDS**

The research is based on revealing the effect of sugar industry waste - (beet pulp) де-феката, complex mineral fertiliser, and their combined effect on yields of agricultural crops. Based on the research results, there is conclusion on growing the crops on meliorated grey forest soils.

AGROECOLOGY

УДК 631.436

S.V. Makarychev

FEATURES OF SOIL COVER AND THERMALPHYSIC PROPERTIES OF CHERNOZEMS OF THE PRIOBYE AREA

Formation of thermalphysic properties and regimes in chernozems' profiles depends on the features of crops growing there.

The data provided in the paper confirm of a weak hydrological role of clean fallows on heterogeneous by their granulometric composition leached chernozems of the Altai Priobye area. At the same time those fallows are characterised by high heat accumulating ability.

УДК 551.49:628.36.002.23

Y.N. Akulenko,
Y.D. Kosheleva**HYDROGEOLOGICAL AND MELIORATIVE FEATURES OF THE IRRIGATED LAND AREAS IN THE BURLA RIVER BASIN**

The hydro-geological and meliorative features of irrigated lands of the Burla river basin are analysed in the paper. The paper contains forecasts of the ground water gradients and soil salts balance under the conditions of open irrigation during the 8-10 years of irrigation systems operation. Recommendations to maintain favourable meliorative grounds in the region are proposed.

УДК 631.12:911.52:681.518

L.G. Kazantseva,
S.A. Zhdanov**STAGES OF AGRICULTURAL LANDSCAPE DESIGN IN THE TERRITORY OF THE ALTAI REGION USING GIS**

Stages of agricultural landscape design work in the territory of the Altai Region using GIS were developed. Creation GIS of the Altai Region should be carried out in several stages, according to the hierarchy of natural territorial complexes on the one hand, and according to requirements of agricultural production management on the level of the Region, a district and a farm on the other hand.

In spite of significant experience in the field of agricultural landscape research, actual realisation of agricultural landscape design remains a business of future.

ANIMAL PRODUCTION

УДК 636.082.2+636.083

Y.M. Malofeyev,
N.I. Ryadinskaya

DESCRIPTION OF MUSCLES OF CHEST LIMB OF MARALS

Muscles of chest limb of marals were investigated by anatomic methods. Dynamic muscles include deltoid, big round, small round, coracoid-humeral, lateral triceps head, cubital, humeral. They are characterised by rather long muscular fibres, their longitudinal arrangement, that is why the anatomic diameter coincides with physiological one. These muscles are connected with dynamic load on fore limb. Possessing significant amplitude, they provide large span of movement, but their force is relatively small. Supraspinatus, infraspinatus, two-headed muscles of humeral and elbow joints belong to static-dynamical. To greater extent they carry out static function during support, fixing joints unbent at standing of an animal.

VETERINARY MEDICINE

УДК 636.7:636.8:616.34-008314.4

O.A. Kostilyova

ENTEROCOLITIS OF DIFFERENT ETIOLOGY IN DOGS AND CATS

Microbiological investigation of significant amount of clinical material was carried out to reveal etiology of enterocolitis in dogs and cats.

УДК 616-091:611.3:001.891.53

Y.V. Kuryatova

**STRUCTURAL CHANGES IN GASTRIC MUCOSA
OF RATS AT EXPERIMENTAL GASTRITIS
AND DURING PROCESS OF "MALAYIT" PREPARATION ACTION**

Histologic examination of gastric mucosa of 3 groups of animals with experimental atrophied gastritis and which received "Malavit" preparation for 24 days allows to detect positive dynamics in the gastric mucosa structure, which was revealed by stabilisation of proliferation process and cell differentiation, reduction of lymphoplasmacyte infiltration in stratum of gastric mucosa and in proper gastric mucous plate.

MACHINERY

УДК 631.362.33

V.I. Belyaev,
N.I. Strikunov,
B.T. Tarasov,
S.V. Lekanov

**RESULTS OF RESEARCH OF INFLUENCE OF KEY PARAMETERS OF SEED SCREEN
ON OPERATIONAL EFFICIENCY OF CENTRIFUGAL-SIEVE SEPARATOR**

Results of single-factor experiments on determination of influence of design, kinematic and technological parameters of seed screen on operational efficiency of centrifugal-sieve separator are presented. Analysis of the obtained relationships is provided.

УДК 631.171:631.372

V.S. Krasovskikh,
N.N. Berezhnov

**INCREASE OF THE OVERALL PERFORMANCE EFFICIENCY
OF TILLAGE-SEEDING COMPLEX DUE TO CHOICE OF RATIONAL CONFIGURATION,
PARAMETERS AND OPERATION MODES**

There is examination of comparative analysis aspects of tillage-seeding complex layouts based on K-701 tractor and Kuzbass tillage-seeding complex by basic criteria of power, agronomic and technical-economic evaluation. Preliminary results of theoretical calculation and analysis of results of experimental research are provided.

УДК 631.3.004.67

A.V. Bodyakin

**ESTIMATION OF OPPORTUNITIES OF ELECTROCONTACT SINTERING
OF POWDER COMPOSITIONS TO CONTROL PROPERTIES OF OBTAINED COATS**

There is analysis of opportunities of electrocontact sintering of powder compositions to obtain coats with properties necessary for specific conditions. There is systematisation of methods to control the properties of coats. Possible ways of development of electrocontact sintering technologies are considered.

PROCESSING: TECHNOLOGIES AND EQUIPMENT

УДК 631.3

I.V. Zhorov,
A.B. Borisov,
A.N. Matveyev

**INCREASE OF EFFICIENCY OF MACHINE MILKING OF COWS BY DEVELOPMENT
AND OPTIMISATION OF MILKING EQUIPMENT**

There has been analysis of existing milk-pipeline milking machines alongside with development and optimisation of basic layouts of the equipment, promoting stabilisation of working vacuum, reduction of milk fat and protein losses in milk-pipeline, preservation of milk quality.

УДК 631.362

N.I. Strikunov

**EFFECTIVE UTILISATION OF TECHNOLOGICAL POTENTIAL
OF GRAIN CLEANING EQUIPMENT**

Issues of operation of grain cleaning machines in agriculture are considered. Recommendations on correct installation and adjustment of grain cleaners are given with the purpose of effective utilisation of their technological potential.

ECONOMICS AND MANAGEMENT

УДК 351.773.004.2:33:633.1

I.N. Pospelova

FOOD SAFETY AND GOVERNMENT REGULATION OF GRAIN MARKET OF RUSSIA

The history of food safety of Russia and its modern state are considered in the paper. The problems of Russia's grain market are discussed, and measures of its stabilisation are proposed. The demand to develop the government protectionism policy towards grain market is substantiated.

УДК 334.5:63

A.M. Zubakhin,
N.I. Glotova**PREREQUISITES OF CREATION OF AGRICULTURAL CONSUMER COOPERATIVES
FROM STANDPOINT OF ECONOMIC BEHAVIOUR OF THE POPULATION**

Because of agricultural character of the Altai Region the most essential economic processes proceed in agriculture, in particular in sphere of personal subsidiary farms. Such farms belonging to the population have practically exhausted their resources for further development and for substantial growth of agricultural production, such a situation demands search of new forms of farming. Our research revealed prerequisites of creation of agricultural consumer co-operatives from standpoint of economic behaviour of the population.

SAFETY

УДК 631.372.001.66:331.101.1

A.K. Kislenko,
M.A. Arkhilayev**ERGONOMIC PARAMETERS OF AGRICULTURAL PURPOSE TRACTORS**

There is presentation of specific working conditions of agricultural machinery operators when performing field works, and running ergonomic parameters of tractors, such as microclimate, content of hazardous substances in the air of working zone, noise, vibration, force applied to the controls.

УДК 636:001.25

N.D. Dorokhova,
A.I. Peshkova**HUMAN SAFETY AT CONTACT WITH SMALL DOMESTIC ANIMALS**

Safety of human life when contacting sick domestic animals is an urgent issue of the society. When there is danger of being infected by rabies and leptospirosis, a person, by following certain guidelines to select safety measures, is capable to protect oneself against possible infection.

ANNIVERSARIES

УДК 06.091.5

A.M. Bulgakov,
N.V. Shadrin,
L.L. Chernov**ANNIVERSARY OF A SCIENTIST AND A PEDAGOGUE**

The paper is dedicated to the creative path of Nikolay Gavrilovich Sarychev, a scientist and a pedagogue, Doctor of Agricultural Sciences, Professor.
