

A B S T R A C T S

THEORETICAL DEVELOPMENTS

УДК 517.946

G.A. Pavlov

SOLUTION OF RECURRENCE FORMULAS

The paper deals with linear recurrence formulas of the second order being applied at numerical solution of various problems. Formulas, which provide solution of those problems, are presented.

AGRONOMY

УДК 633.521.85:631.811.98

O.I. Antonova,
S.M. Chavkunin

**EFFECTS OF BIOLOGICALLY ACTIVE SUBSTANCES ON REMOVAL OF NUTRIENTS
DEPENDING ON RATE AND TECHNIQUE OF APPLICATION FOR OIL-PRODUCING FLAX**

The paper deals with the study of effects of biologically active substances on removal of nutrients depending on rate and technique of application for oil-producing flax. Liquid organic fertilisers Talisman, Artemia and Albita, growth stimulators with fertilising effect, and complexes of Talisman with boric acid and zinc sulphate were applied for pre-planting seed treatment. Use of biologically active substances with various application rates and techniques results in uneven nutrients intake and nutrients removal.

УДК 631.31.04

V.I. Belyaev,
M. Frühauf
T. Meinel

**COMPARATIVE EVALUATION OF WHEAT CULTIVATION TECHNOLOGIES AT VARIOUS
METHODS OF FALLOW FIELDS TILLAGE AND BASIC TILLAGE IN THE STEPPE ZONE
OF THE ALTAI REGION**

The paper presents the results of a field experiment, that was aimed at research of effects of predecessor crops, tillage methods of fallow fields, autumn tillage practices, and seeding dates on soil water regime dynamics, on plant development, and wheat yield formation in the steppe zone of the Altai Region.

УДК 663/635:631.527(571.15)

F.M. Strizhova,
N.I. Shevchuk

**EFFECT OF SEEDING DATES ON OATS YIELDS IN THE CONDITIONS
OF TEMPERATE-ARID WOODED STEPPE OF THE ALTAI REGION**

The paper deals with the effects of seeding dates on yields of oats varieties. Pattern of oats response to seeding dates varied. The variety 'Pamyaty Bogachkova' revealed maximum yield during the experiment at the third seeding date.

УДК 633.63:631.59 (571.17)

L.Y. Tsaryova,
M.F. Sommer

ECONOMIC FEATURES OF SUGAR BEETS AND THEIR INTERRELATION

There is traced interrelation of economic features of sugar beets, its yield and sugar content, and influence of ecological and technologic factors on those features' formation when sugar beets is cultivated in various zones of the Altai Region. By the results of varieties' tests at the Biysk and Aleysk Varieties' Testing Sites, the authors calculate regression equation, which allows to relate yield and sugar content figures.

ANIMAL PRODUCTION

УДК 636.32/.38.035

N.I. Vladimirov,
N.Y. Vladimirova

WOOL PRODUCTIVITY OF ALTAI NATIVE SHEEP BREEDS IN SHEARING SEASONS

The authors evaluate wool productivity of native sheep breed Kulundinskaya in shearing seasons and evaluate ratio of guard hair and downy fibres in sex and age groups.

УДК 636.5.084 (038)

V.N. Khaustov,
S.S. Krymskiy

EFFECTS OF SAPROPEL ON PRODUCTIVE QUALITIES OF RAISING DUCKLINGS

The paper deals with research of sapropel introduction into raising ducklings diet in dozes of 1; 2 and 3%. It is determined, that the greatest productive qualities are achieved from ducklings fed 3% of sapropel. In addition, profitability level was over 17.3% higher, than in the check group.

УДК 636.084

L.V. Rastopshina,
A.T. Klepikov,
V.N. Khaustov

**EFFECTS OF FEEDING DRIED BEETS PULP ON GROWTH DURATION
OF MARAL STAGS' ANTLERS**

The paper deals with an experiment on introduction 0.3 kg of dried beets pulp into diet of maral stags during antlers growth. It was revealed that this feed effects antlers growth and shortens growth duration and maturation by 5 days compared to check group.

УДК 636.4:636.082.22:612-083

Z.V. Medvedeva,
O.Y. Rudishin

**ANALYSIS OF GENETIC DIVERSITY AND GENOTYPIC RELATIONS IN HERD
OF THE KATUNSKIY TYPE OF THE LARGE WHITE BREED OF SWINE**

The paper deals with analysis of genetic diversity in herd of the Katunskiy type of the large white breed of swine. The analysis revealed frequency of occurrence of desirable genotypes in blood systems G, H, F, D, K, E, L. Recommendations are provided to optimise selection taking into account genotypes by blood groups.

MACHINERY

УДК 631.365.22

V.I. Lobanov

IMPROVEMENT OF ACTIVE AERATED BINS DESIGN

On the basis of existing design of active aerated bins such as БВ-25 the author reveals their defects and proposes new designs of equipment for preservation and drying of grain material.

УДК 631.302

N.I. Kapustin

**SOME DESIGN FEATURES OF DIRECT ACTION REGULATOR FOR FLOW CONTROL
OF GASEOUS, LIQUID AND LOOSE MEDIA**

The paper deals with general principles of flow control, and it reads, that continuity of the flow is essential for control process, and all constructive decisions are basically aimed at this problem solution with changes in medium resistance and viscosity at control portion. The problem may be solved by various techniques based on known physical laws. The results may be used to develop flow controls.

УДК 631.3:62-112.6:631.4:633.11:631.559

A.A. Zuborev,
V.M. Bocharov,
A.V. Panin**EFFECTS OF SEEDING IMPLEMENTS ON AGRIPHYSICAL PROPERTIES
OF SOIL AND STRUCTURE OF WHEAT YIELD**

The paper studies effects of seeding implements Т-4А + СП-11 + 3 СЗП-3,6 and К-701 + 2 Обь-43Т on agriphsical properties of soil (moisture flow, parameters of seedling quality, development of wheat plants) and wheat yield.

УДК 631.354.2

S.B. Vystavkin
I.Y. Fedorenko,**VIBRATION ACTIVITY OF STRAW CHOPPER OF A GRAIN COMBINE HARVESTER**

Vibration effects result in accumulation of damages in a material thus causing development of fatigue cracks and failures, in addition, these effects result in gradual slackening of fixed joints. To determine character of vibration effects it is necessary to obtain spectrogram, i.e., distribution of vibrational energy by octave frequencies. The research revealed that straw chopper of a grain combine harvester has vibration activity.

QUALITY AND EFFICIENCY

УДК 33:631.3.06:631.559

A.M. Zubakhin,
S.A. Kamsha**EFFECTS OF CROP YIELDS AND SERVICE LIFE ON OPERATIONAL PARAMETERS
OF COMBINE HARVESTERS**

The paper presents mathematical dependencies of effects of crop yields level and service life of combine harvesters on their efficiency, maintenance, repair and storage, fuel consumption.

УДК 636.51.6.084:636.087.7

S.S. Lee,
A.F. Knorr**EFFECTIVENESS OF USE ARTEMIA CYSTS IN NUTRITION
OF VARIOUS AGRICULTURAL ANIMALS AND POULTRY**

The experiments aimed at studying effectiveness of use Artemia cysts as dietary supplement for various species and sex and age groups of agricultural animals and poultry revealed their positive effect on quality of bulls' biological products, egg-laying ability and egg quality of commercial egg-laying hens. In addition, Artemia cysts revealed stimulating effect on growth and development of milk-fed calves, pigs at raising and finishing, young replacement egg-laying hens, broiler chickens. Their weight gain increased from 14,5% with finishing pigs, between 18,8 and 33,7% with calves, and up to 29,8-36,5% with broiler chickens.

FINANCE AND ACCOUNTING

УДК 336.2.027

A.I. Kolobova,
G.A. Goncharenko

ON THE ISSUE OF TAXATION OF AGRICULTURAL ENTERPRISES

The paper presents systematisation of agricultural enterprises taxation, and the mechanism of tax charging. The authors reveal essential problems of taxation system development, their influence on enterprises' economics, and suggest ways to improve taxation policy as the most important tool of government control.

УДК 657:336

L.I. Kirkeyeva,
V.V. Kozlov

SIMPLIFIED SYSTEM OF ACCOUNTING AND TAXATION

Entities of business, which use simplified system of taxation, are relieved from organisation of accounting. According to the tax legislation they keep tax accounts of economic activity indicators. Abandonment of organization of accounting is unreasonable and inexpedient, because accounting allows to control all processes taking place in current activity of an enterprise. Therefore, we believe accounting should be mandatory. Here entities of small business should follow the "Standard Recommendations on Organisation of Accounting for Entities of Small Business".

ECONOMICS AND MANAGEMENT

УДК 631.145:33:633.63

A.I. Kolobova,
A.L. Poltarykhin

DEVELOPMENT OF SUGAR BEETS-SUGAR SUB-COMPLEX IN THE REGION

The paper substantiates an integrated target programme of perspective development of sugar beets-sugar sub-complex in the Region. Taking into consideration complete satisfaction of consumer demand of the Altai Region's population in sugar for forecasted period, the authors determine rates and proportions of development of interconnected branches of food sub-complex.

JUBILEES

УДК 06.091.5

N.G. Deyev,
V.A. Dyomin,
I.Y. Fedorenko

70TH ANNIVERSARY OF ANATOLIY TIMOFEYEVICH ILYUSHCHENKO

The paper is dedicated to the creative path of Anatoliy Timofeyevich Ilyushchenko, a scientist and a pedagogue, Professor of the Chair of Technology of Structural Materials and Machinery Repair.
