A.B. Nikulin

**Peculiarities of formation of swards with eastern goat-s-rue at the eighth and ninth years of life**

*Keywords*: Forage production, eastern goat’s-rue, legumegrass swards, hay, botanical composition, productivity

The purpose of work is scientific justification for the establishment and use of legume-grass swards with eastern goa-s-rue (Galega orientalis Lam.). Experimental data on the botanical composition and productivity of the studied swards are resulted.

N.Ju. Stepanova, P.A. Prokofiev

**The study of samples of Melissa when growing and freezing**

*Keywords*: melissa, the cultivar investigation, freezing

Studied some samples Melissa, given their agrobiological characteristics, defined the productivity of samples in the conditions of the Leningrad region and the nutritional value of lemon balm when freezing.

N.M. Naida

**Ontogenetic and morphobiological features of Inula helenium L. in conditions of culture**

*Keywords*: Inula helenium, medicinal plants, growth, development, phase, the vital status, raw material productivity

The article presents the results of a study of Inula helenium L. culture in Leningrad region. Stages of ontogenesis of plants studied, conducted surveillance of the development phases, is the raw material yield.

T.V. Stepanova, N.A. Posmitnaya

**Research based on herbage festulolium and perennial ryegrass at haying use in conditions of Leningrad region**

*Keywords*: festulolium, perennial ryegrass, yield, haying use

The results of studies of herbage haying use involving festulolium and ryegrass. Swards with ryegrass and festulolium provided good quality raw materials for fodder. Found that festulolium showed himself fit for haying use, since it has a high yield and productivity of swards in combination with other herbs.

A.L. Kokorina, S.A. Begunova

**Potato variety trials of different maturity groups conditions in the Arkhangelsk region**
Keywords: potatoes, Arkhangelsk region, Leningrad region

The paper presents the results of a study of promising potato varieties of different maturity groups on Velsky CSO Arkhangelsk region. Identified varieties with high yield and marketability of potatoes. Recommended best potato varieties for cultivation in the conditions of the Leningrad region.

R.S. Gamzayeva, S.V. Tsymlyakova, M.V. Baikov
Evaluation of efficiency of application of biological products on productivity of various sorts of barley

Keywords: barley, flavobakterin, mizorin, development phases

The influence of biological products "Flavobacterium" and "Mizorin" on the width of the sheet, the number of conducting bundles and productivity indicators. It is established that the preparation "Flavobacterium" effectively for varieties Potra and Belogorskiy.

A.N. Kononenko, Yu.N. Loginova, O.F. Ivachnova
The efficiency of microbial drug Ekstrasol th at quantitative yield and quality of mini-tubers

Keywords: Seed potatoes, potato minitubers, potato micropropagation

This article examines the impact of different ways to use a microbiological preparation Ekstrasol M on microplants potatoes under greenhouse conditions.

The results on the effect of the drug on the productivity of different varieties of potato, the fractional composition of mini-tubers, dry matter accumulation and starch.

L.G. Tyryshkin
The change of the wheat leaf rust pathogen virulence under the effect of temperature

Keywords: Wheat, leaf rust, temperature, genes for resistance, virulence

Increase or decrease of near-isogenic wheat Lr lines partial resistance to leaf rust under the effect of temperature has been shown to be related to changes in the pathogen specific virulence to certain resistance genes under the effect of the abiotic factor. The results indicate that a gene-for-gene interaction is only particular case for wheat-leaf rust pathogen system.

L.E. Kolesnikov, M.N. Pavlova, Yu.R. Kolesnikova
The grain’s biochemical composition of spring soft wheat accessions, resistant and susceptible to brown rust

Keywords: spring soft wheat, elemental composition, wheat diseases, brown rust, Puccinia recondita, multidimensional analysis of pathogenesis

The differences in grain’s biochemical (elemental) composition of spring soft wheat accessions’ groups, resistant and susceptible to brown rust, was revealed. Accessions of wheat, resistant to brown rust, in comparison with susceptible, were characterized in that maintenance in its grain Na, Ca, Al, Ba was more significant and values of the maintenance of heavy metals Cd, Ni, Se was authentically smaller.
Yu.S. Surova
The justification of tillage systems during the development of fallow land

*Keywords*: fallow land, tillage, oats, spring triticale, bulk density of soil, soil moisture, yield

Described that holding deep plowing contributes to more decompaition of soil, uniform distribution of soil moisture and harvest of spring sown crops. Noted the positive aftereffect of deep tillage and the need for different depth tillage time.

V.P. Tsarenko, D.A. Danilov, A.P. Smirnov
Productivity and quality of wood mixed spruce-pine stands on soils binomial structure

*Keywords*: spruce-pine stands, binomial soil, supply of basic density of wood, coefficients of variation, commodity structure

The influence of the composition of mixed pine stands growing on soils binomial structure, underlain by heavy loam on the performance of a stock, commodity structure and density of wood of spruce and pine.

M.A. Efremova, E.M. Naumov
Research of efficiency of a spring-sown wheat at a fitoremediation of the sod-podzolic soil polluted by arsenic

*Keywords*: arsenicum, sod-podzolic soil, spring-sown wheat, accumulation coefficient

Possibilities of a fitoremediation of the sod-podzolic soil polluted by arsenic are considered, at cultivation of a spring-sown field in the conditions of application of a microbiological product Agrofil. There was an increased accumulation of arsenic in wheat when using microbioreparation Agrofil in 2.5-3 times as compared with the control.

E.I. Alekseeva, I.O. Turenko
Rating stallions Arab thoroughbred breed for 2013

*Keywords*: pedigree horse breeding, Assessment stallions on the quality of offspring

Presents detailed characteristics stallions allows to objectively evaluate their quality offspring. Analysis of pedigree stallions Arab thoroughbred breed gives a complete idea of class origin. The results Hippodrome tests descendants confirm the high racing class producing structure. Rating stallions allows breeders to make an informed selection stallions to a Mare on slunou campaign.

N.D. Vinogradova, R.V. Paderina
Productive longevity Holstein black-motley cows

*Keywords*: genetic, productive longevity, factors

A study of the effect of various factors on productive longevity Holstein x black-motley breed.
S.V. Doroshchuk, I.Sh. Shapiev
Influence of biologically active substances on reproductive ability of cows

Keywords: Fertility, index insemination, malonic dialdehyde, ALT

Questions of improvement of reproductive ability of high milk productive cows are studied. Necessity of providing the balanced maintenance of biologically active substances in an organism of animal is shown.

N.V. Vinokurov, K.A. Layshev, E.S. Sleptsov, G.G. Evgrafov
Reactogenicity properties and immunological reactivity of vaccines and b.abortus 75/79-ab 82 reindeer

Keywords: reindeer, infectious process, brucellosis, vaccination, serological diagnosis

In a controlled experiment reindeer were studied reactogenic properties and immunological reactivity of the vaccine strains B.abortus 75/79-AB and 82. Established that the conduct of the above vaccines are up to 7-14 days short term local and general reaction of animals to the introduction of the vaccine antigen vvide inflammatory edema at the site of an immunological and whole body hyperthermia.

R.Yu. Korolko, A.W. Lopatin, V.A. Ponomarev
Common non-infectious and bacterial diseases of bees, with their laboratory breeding and use in the greenhouse

Keywords: bumblebees, disease, greenhouses

Considered the issues of prevention of some bacterial and non-communicable diseases bumblebees Bombus terrestris (l)during their breeding in the laboratory and used in greenhouses.

V.V. Shevchenko, S.L. Safronov, I.V. Asfondjarova
Analysis of the quality and safety of canned fish in tomato sauce

Keywords: the checking of products, expert operation of the foodstuffs, smoked fish, estimation smoked fish quality, condition and shelf time

The article presents results of research of canned fish in tomato sauce. There were established cases of quantitative, qualitative and information falsification of canned food from individual producers.

O.Yu. Pavlova
State support of agricultural sector of Russia as a factor of import substitution

Keywords: the import substitution, sanctions against Russia, WTO, competition, food security, public support

Considered are the issues of excessive excess of import over export and food according to Russia, the need to import substitution of agricultural products and this cannot be done without state support and innovative development of the agroindustrial complex of Russia.
S.V. Fedoraev, A.N. Litvinenko
Sustainable agriculture and rural development - the basis of food security

Keywords: Agrarian policy of the country, the threat of sustainable agriculture, food sovereignty, food security, resilienz management.

The article presents the legal basis for sustainable development of agriculture and rural development, food sovereignty and security of the country, are considered major threats to food security and agricultural development, suggesting possible areas for further development.

M.V. Moskalev, I.G. Sudorgina
The strategic development of the regional food market and food safety system

Keywords: food market, food safety system

The regional aspects of development of agribusiness, food market and territorial system of food safety factors and their possible interactions consolidated are considered in the article.

A.N. Litvinenko
The early warning system and enterprise risk management

Keywords: risk management warning system, the law

A system of early warning and risk management companies, international and national legislative framework for its construction.

A.A. Kaganovich
The concept of building a synergetic model of regional territorial and economic agroformatsi

Keywords: Agricultural economy, synergy

In a scientific article, the author develops the concept of building a synergetic model of regional territorial and economic agroformatsii. Introduced into the scientific revolution a number of new concepts in agricultural economics.

N.Yu. Vinogradova, B.E. Bulkin
Basic principles of the organizational process

Keywords: Principles of organization, organization theory, system approach, the functional connections, the feasibility of the organization

The problems of formulating the principles of organization in the postulation of a theory of social organization. The article describes the basic principles, laws organizational process, extensive and intensive structure, historical (genetic), logical (structural) and organizational (functional) methods.

M.V. Kanevcev, A.L. Popova
The impact of the crisis 90-ies in the development of agriculture of the Russian Federation
Keywords: agriculture, crisis phenomenon, statistics, production of agricultural products

The consequences of the crisis of the 1990s, manifested in the code as currently. Were changes the severity of the crisis in agriculture in 1992-2013 years., defined reasons for their conservation and directions of development of measures on their elimination.

N.L. Smelik  
**Principles for the transformation of the economic system**

*Keywords: Transformation, economic system, principle, the form changes, substance*

In the article the cell structure of the subject and object of transformation of the economic system. The subject-object relationship defined level of objectification of the individual and public subject.

N.P. Ilin  
**Risk factors and uncertainty of agrarian and industrial complex**

*Keywords: losses, insurance, forward contracts, hedging*

Different types of the risks which are showing in branch now, and also possible ways of their decrease are considered.

N.T. Israfilov, A.N. Garyavin, E.I. Israfilova  
**Restoration of the country's agriculture enterprises**

*Keywords: Insolvency, bankruptcy, law, business, company, farm-debtor*

The measures to restore the solvency of companies and types created based on insolvent commodity business associations: the first phase - a state unitary enterprise, the second phase - joint stock companies and the third stage - agro-industrial holdings.

G.G. Bulgakova, D.V. Kolodko  
**The intraday dynamics of currency invariant indices of simple and aggregate currencies**

*Keywords: currency, indexing, currency basket*

The article considers the intraday dynamics of cross-rate EUR/USD and compares it with the theoretical model of geometric Brownian moving. Currency invariant indices and stable aggregate currencies are also considered. In the article we compare the intraday volatility of simple currencies and stable aggregate currency.

B.E. Bulkin  
**Application of clustering methods in organizational design**

*Keywords: Organizational design, organizational structure, information clusters ry, Monte Carlo Markov Chain*
The article discusses issues related to the organization's management system departamentizatsiey based clustering information flows. The analysis of existing clustering methods and clustering method is described with the use of graph theory.

**S.G. Fedorova, I.R. Trushkina**

**The name of article:** Features of financial lease (leasing) accounting under a the lessee

*Keywords: finance leases, leasing, the lessor, repair costs, insurance costs, property taxes*

The organization questions of accounting property obtained under the lease agreement and accounted on the balance sheet of the lessee were considered.

**D.V. Elyashev, O.A. Sozykina, O.V. Popova**

**Agricultural insurance market in the Leningrad region in 2013**

*Keywords: agricultural insurance, government support for agricultural insurance, Leningrad region, crop insurance, the Federal Law “On the development of agriculture”*

The article examines the dynamics of the agricultural insurance market in the Leningrad region in 2013, its problems and suggestions for changes of legislation regulating this market.

**I.B. Tyumerova**

**Directions effective system of government regulation of agricultural services**

*Keywords: government regulation, the Republic of Chuvashia, the agricultural sector*

The article analyzes the development of the regional characteristics of the agrarian sector. Just identified positive and negative factors in the development of the agrarian sector, forming the pace of social and economic development. Republic of Chuvashia were formulated ways of increasing the effectiveness of state regulation of activities to stimulate the development of the agrarian sector.

**I.V. Silantyev**

**Methodical features check the capital investments on an example of the gas-distributing organization**

*Keywords: audit, methodical recommendations, capital investments*

In article the algorithm of check the capital investments with some methodical features in gaz-distributing branch is presented.

**O.V. Osipova**

**Innovative technologies in dairy cattle breeding — a basis of an intensification of branch**

*Keywords: dairy cattle breeding, breeding work, intensification, reproduction, seksirovanny seed.*
Use of innovative technologies in dairy cattle breeding of Russia is considered.

**L.A. Kirkorova, I.A. Burova, E.R. Bortnevskaya**  
*About a situation in dairy cattle breeding and measures for branch development*

*Keywords: dairy cattle breeding, milk production, cattle*

In article, the modern situation in dairy cattle breeding of Russia is considered. Its such main indicators as production of milk, a number of cattle and cows, their efficiency are studied in dynamics from 1990 to 2012. Influence of various State programs on a condition of branch is estimated. Recommendations about development of dairy cattle breeding are made.

**A.V. Kolmykov**  
*Land use greening as direction of land use improvement of agricultural enterprises*

*Keywords: greening, land use, agricultural enterprise, land, rational use, optimization, measures*

The notion of land use greening is formulated in the paper, its content is revealed, the composition of its indices is given. Requirements and principles of land use greening as factors of improvement of land use by agricultural enterprises are reviewed.

**D.A. Shishov, E.V. Kozyreva, K.T. Oganesyan**  
*The concept of the evolution of the land-legal relations.  
(Historical traditions - the pre-Christian period)*

*Keywords: Land legislation, land-legal relations, the historical and legal systems, types and forms of management, legal sources of ancient Russia, the Prince of the earth.*

This article describes the historical-legal and socio-economic aspects of formation of the system of land relations in the historical traditions of Russia in the pre-Christian period.

**B.V. Sidel'nikov, M.A. Belyaev, A.I. Potashov**  
*Modified equivalent circuit of the induction motor*

*Keywords: induction motor, magnetic loss*

This paper proposes a modified equivalent circuit of the induction motor, which accounted for an additional magnetic leakage flux losses from the stator winding. Provides a method of experimental correction of its parameters without neglecting the influence of the stator resistance.

**V.Ya. Skovorodin, A.S. Evseev, M.K. Dgamilov**  
*Research of parameters of a roughness of a surface of the crankshaft journals related to the properties of surface irregularities in the direction of the length of the profile*

*Keywords: The engine, crankshaft, roughness profile, ordinary income*

Viewed the results of the research of roughness parameters of the surface necks of crankshafts of internal combustion engines.
V.N. Brovctin, V.E. Kolpakov, R.V. Shkorlakov
Identification of the parameters of mobile units by the application of MATLAB SIMULINK

Keywords: Mathematical model parametrical identity

The article gives examples of identification of the model parameters of an arable unit on the ka-nel control the position of the thrust line composed of wheeled tractor MTZ-82 and mounted the first plow PIN 4-35 and the model parameters. Identification is achieved with the use of the application Simulink® Parameter Estimation SPT MATLAB®.

P.A. Ilin
Use of the criterion of Cochrane when determining sample size data during bench tests on the example of bearing units disc harrows

Keywords: the criterion of Cochrane, Student, temperature

The use of electronic instruments, in particular gauges of temperature, is a wealth of information about the diagnosed process and for this reason requires rational methods of information processing.

O.V. Smelik
Results of experimental studies of the active rollers as part of the rink in the combined unit remover topper

Keywords: active roller, information model, laboratory setup, the results of studies

The article describes the operation of the unit circuit, the circuit field laboratory setup, the information model of the combined unit remover topper with a section of active rollers. In addition, some results of field research unit.

M.A. Novikov, V.G. Shcherbakov
Experimental research methodology and basic theory of diagnosing threshing drum combine harvester on vibration parameters

Keywords: diagnosis, rotary working device, disbalance, vibration

Methods and means for diagnosis of combine harvesters have been analyzed, theoretical questions of diagnosis of unbalanced rotor working parts on the parameters of vibration have been reviewed.

K.A. Pirkin
Integrated approach to assessing the efficiency of the energy technology production lines processing establishments of agro-industrial complex

Keywords: Integrated approach, mass production, energy technological equipment, efficiency.
Integrated approach to assessing the efficiency of the energy technology production lines involves a joint analysis of their internal and external environment. This in turn allows you to get more correct results in solving problems related to increasing economic efficiency in-line production.

F.D. Kosouhov, N.V. Vasilev, N.U. Krishtopa

Method of calculation of the power loss unbalance currents in electrical networks 0,38 kV

*Keywords:* Power, current unbalance, transformers

The article describes the method for calculating the power loss from current unbalance in transformers and electrical lines 0,38 kV networks

S.A. Rakut'ko, E.A. Logacheva, V.G. Zhdanov

Algorithms instrumental examinations for energy audit organizations

*Keywords:* energy saving, power consumption, training on energy saving, energy audit, instrumental examinations.

The article deals with one of the directions of the energy audit – instrumental surveys of enterprises. Algorithms of instrumental examinations that may be used in the educational process and in the production activity are shown.

I.V. Kokunova, M.V. Strechen’, V.A. Ruzhev

Specifics of supplying high-quality grass fodders under weather conditions of the North-Western Russia

*Keywords:* stalked feeds, weather conditions, hydrothermic coefficient, fodder quality.

Specific features of natural and climatic conditions in the North-Western Russia are treated in respect of their influence on the quality of grassy fodders. Main factors for choosing foddering technology and respective machinery are discussed.

V.N. Karpov, Z.Sh.Yuldashev

Need of innovative approach to a choice of the power equipment for ensuring the large-scale and accelerated increase of energy efficiency of the agrarian and industrial complexes enterprises

*Keywords:* Consumer power system, energy efficiency, power consumption of production

In article need of innovative approach to a choice of the equipment for ensuring the large-scale and accelerated increase of energy efficiency of the agrarian and industrial complexes enterprises is proved. The analysis of an existing choice of the equipment from positions of influence on energy efficiency is made. Special innovative requirements to hothouse power are provided. Consumer power system, energy efficiency, power consumption of production
**V.S. Shkrabak, A.A. Popov, S.V. Danilova**

*Assessment of conditions and labor protection of workers of vegetable growing in the Northwest region of the Russian Federation*

*Keywords*: Vegetable growing, work, conditions, safety, harmlessness

The article describes the research level mechanized cultivation of vegetables and conditions of work in this area. There is a high percent of manual labour and the lack of appropriate conditions for recreation. Proposed activities that contribute to the improvement of conditions and labor protection of the employees of vegetable growing.

**V.P. Solovyeva**

*Occupational risk and its evaluation*

*Keywords*: risk assessment, factors outside danger, hazardous

The analysis of the situation in Russia with the assessment and management of occupational risks. The formula determining the class of professional risk. Is a series of indicators to measure the level of occupational risk. Introduced generalized index of occupational exposure. The information on the developed methodology in Yekaterinburg occupational risk of injury. A model for the mechanism of implementation and the risk of injury in the workplace.

**R.V. Skrabak, A.V. Spirina, O.V. Belyakova**

*Analysis of conditions and protection of workers in construction*

*Keywords*: Working conditions, injuries, construction

The results of studies assessing the condition of labor in the construction and ways of its improvement. Paid attention to the major sources of injury, his reasons. Noted the need to reduce injuries and accidents due to human, organizational, technical and engineering activities with regard to innovative solutions.

**V.E. Kolpakov**

*Employment of artificial intelligence to determine object technical state*

*Keywords*: engine diagnostics, neural networks, hidden units, multilayer perceptrons, radial basis functions, error function, generalization, classification, pattern recognition, artificial intelligence.

Questions of pattern recognition and classification of engine technical state, using neural networks. In article are adduced input diagnostic data and results of testing.
Ladislav Nozdrovicky, Miroslav Macak.
Current trends in agricultural engineering and in the area of human resources in agriculture in slovak republic

Keywords: Slovakia, engineering, human resources

Slovak University of Agriculture in Nitra, Faculty of Engineering, Department of Machines and Production Systems, Trieda A. Hlinku 2, 949 76 Nitra, Slovak Republic

In connection with the extensive restructuring of the Slovak agriculture significant changes have occurred in the area of employment. The total number of employees decreased (positive change) and educational structure also changed (negative change). At the same time we can observe a strong acceleration of technical development and availability of more sophisticated machines and equipment supported by information technologies. Gradually, there is an imbalance between the technical level of machinery and educational level of the human factor. Reduction of the number of workers using the machinery is not compensated by increasing the number of workers having higher skills. The human factor is becoming a brake on the use of benefits of modern machinery. The presented paper is focusing on the key factors determining the operator and manager requirements in the area of agricultural engineering. The trend of the development of human resources, educational and training system adapted to the needs of modern agricultural engineering and technologies is also considered.

A.G. Davydenkova
Sociology agriculture policy and rural life

Keywords: sociology, agriculture, social ecology, national security strategy, the state cultural policy.

The article suggests areas and topics of discussion for the conference "the Seventh St. Petersburg sociological reading", which is scheduled to take as already established tradition, in mid April – 16 - 18 April 2015 in the Saint-Petersburg state agrarian University.

Old Belief in the works of Russian conservatives of second half of XIX-early XX century

Keywords: Old Belief, conservatism, religion, state, church, Slavophilism, Westernism, pochvennichestvo.

The article analyzes the conception of the representatives of conservative thought XIX – early XX century on phenomenon of Russian Old Believers. The authors examine the relevant aspects of the social and philosophical concepts of the conservative direction (I.S. Aksakov, F.M. Dostoyevsky, Konstantin Leontiev and others
M.V. Velichko

Education system as a generator of “crisis of fragmentation of social knowledge”

Keywords: crisis of fragmentation of social knowledge, education system, structure of science, social philosophy, scientific and methodological support of activities.

In the article is shown the change in the nature of professional education, which occurred during the XIX century, and the role of changes in the generation of the "crisis of fragmentation" of fundamental and applied scientific knowledge, including the social philosophy and social knowledge.

Ja. S. Shapiro

Socio-economic aspects and monitoring the quality of agro-technological profile teaching students

Keywords: Professional self-determination of schoolchildren, the agro-technological profile, monitoring the quality of teaching

Provides an overview of the socio-economic aspects of agro-technological training of schoolchildren and a monitoring system for assessment of his quality.

N.D. Kovbenko

The Council of judges of Russia. Appearance

Keywords: the judicial community, the judicial system, justice

The article reveals some problems of appearance and development of the judicial community in Russia, the creation of on independent judicial system and justice.

D.A. Shishov, B.V. Zavarin, S.V. Yaryomenko

Legal solutions of a problem of formation of the land plots under apartment houses (on the example of the legislation of St. Petersburg)

Keywords: Real estate objects, land plot, land surveying of lands, formation of the land plot, procedure of formation and border of the land plot

In work legal aspects of establishment of borders of the land plot provided for use for ensuring operational and other functions of an apartment house on the example of normative legal acts around the city to St.-Petersburg are considered.