

**Shevnikov M. Ya.** Application of biological, chemical and physical measures in the technology of soy growing in the conditions of unstable moistening in Forest-steppe of Ukraine // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 7-11.

Search of new approaches to working out and the use of biological, physical and chemical elements of the technology gives the chance to open fully productive potential of modern grades of this culture in concrete soil-climatic zones of Ukraine. According to the results of long-term researches (1986-2010) we have developed the basic technological elements of soy cultivation in the conditions of unstable moistening of Forest-steppe of Ukraine. Results of the power analysis give the chance to estimate and compare traditional and new technologies, their availability from the point of view of energy conservation level. The use of the recommended technology gives the chance to receive in addition 0,27 t/hectares in comparison with the accepted in the region.

**Kondratenko T.Y., Trokhymchuk A.I., Goncharuk J.D., Pavlenko M.I.** Adaptability and peculiarities of Belorussian apple varieties in the conditions of Ukraine's Forest-steppe // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 12-16.

The results of the primary test of new Belorussian apple varieties and hybrids in Ukraine's Forest-steppe have been presented. The researches have detected a high adaptability of all the patterns to the conditions of the investigated region. The varieties 'Antei', 'Zaslavskoye', 'Nadzyeiny' and 'Syabryna' have proved to be early – ripening, high productive, with the rapid yield increase during the first fruit – bearing years. Concerning the complex of the characteristics valuable for economy the two latest exceed the control variety 'Radogost' and are characterized as perspective for production testing in Ukraine's Forest-steppe and Polissya.

**Hospodarenko H.M., Trus O.M.** The influence of a prolonged period (45 years) of application of fertilizers on the indices of fertility of a podzolic chernozem and the productivity of a field crop rotation // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 17-21.

The results of study of a prolonged period (45 years) of application of fertilizers on physical-chemical, agrochemical and agrophysical peculiarities of a podzolic chernozem heavy loam of the Right Forest Steppe and the productivity of crops are given. It is appointed that the application of fertilizers allows to preserve the indicator of exchange of soil acidity on the level of pH = 4,6 – 5,4. Depending on the variants of fertilizers the level of phosphorus has changed but it was low, the level of phosphorus has changed from the middle to the very high and the level of potassium has changed from the increased level to the highest one. The soil has the high content of agronomically valuable aggregates — 74,2 – 88,2 %. The unity of application of organic and mineral fertilizers assists to preserve the water-resistance of structural aggregates of soil.

**Koval V.V., Natalochka V.O., Tkachenko S.K.,**

**Minenko O.V.** Dynamics of remanent concentrations of pesticides in water of agricultural use in the conditions of Poltava region // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 22-26.

Laboratory studies conducted by Poltava Regional State Design and Technology Centre for Protection of Soil Fertility and Foodstuff Quality show that a wide use of pesticides in agriculture could result in pesticide contamination of environment. Water is the essence of all life on the Earth including man. Hence, special emphasis is placed on water quality management. One of the reasons for contamination of water bodies and water sources is the use of chemicals in agriculture. Water contamination with pesticides poses the biggest danger. This obligates the agriculture experts to reduce the risk from the use of agrochemicals and pesticides.

It is important to note that the presented results of the toxic elements monitoring in water during 2002 and 2009 confirm that water resources of Poltava region are not contaminated by organochlorine pesticides, organophosphoric pesticides and sym-triazine pesticides.

**Glushchenko L.D, Homenko L.V., Doroshchenko J.L., Alejnikova T.L., Artemenko L.V., Vakulenko V.M.** Dynamics of agrochemical indicators of typical chernozem depending on different fertilizing systems // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 27-30.

Transformation of agrochemical indicators of typical chernozem depends on many factors. Basic of them is fertilizer system, depth and terms of selection of soil samples and natural conditions. The maintenance of nitrates in vegetative samples is in admissible limits, irrespective of fertilizer system though in plants on the fertilized variants their level was a little above. It has been concluded that defining presence of mobile elements of plant nutrition in soil, we should take into account intensity of their use by plants at different fertilizing systems, in other case the real picture of potential fertility of soil will not be reflected completely.

**Vasfilova E.S., Bagautdinova R.A.** Peculiarities of growth and development of *Echinacea pallida* of the variety Beauty of prairies in the conditions of the Middle Urals // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 31-35.

Opportunities of adaptation of *Echinacea pallida* of the variety Beauty of prairies to the conditions of the southern taiga subzone of the Middle Urals are investigated. It is found out that the adaptive potential of the variety is high enough: plants regularly fructify, give full seeds and small self-sowing, can reproduce vegetatively and aren't damaged with pests and illnesses. However, phytomass production is significantly lower than in more favorable conditions for the cultivation of Poltava region but is not very different from that of a sample of *Echinacea pallida* local reproduction. The variety r surpasses considerably the sample of local reproduction on the polyfructans content in the underground part in the period of their maximum accumulation in the Urals.

Optimum period for stocking of medicinal raw material is the third – forth years of the plants life.

**Samojlik M.S., Chudan K.A., Shulika A.O.**

Estimation of a bioenergy potential of Poltava area // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 36-41.

The estimation of a total bioenergy potential of Poltava area in a context of a sustainable development of the region is carried out and features of distribution of biopower resources with possibilities of their use for the decision of power problems without deterioration of an ecological situation are investigated. Use of a power biomass in biopower balance of the region will allow to improve an ecological situation in the region, considerably having lowered emissions CO<sub>2</sub> on 232 thousand tones, and SO<sub>2</sub> - on 0,8 thousand tones in a year. Wider use of a bioenergy potential is caused by necessity of solving of power problems of Poltava area and can lead to increase in its part in thermal power of the region from 0,4 % to 19,2 %.

**Solodushko V.P.** Oat selection in the conditions of the north steppe of Ukraine // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 42-45.

Based on a long-term researches the characteristic of breeding material by a complex of economically valuable traits and resistance to biotic and abiotic factors has been presented. As a result of breeding work oat varieties Spurt, Busol, Sterno, Iren were created, which successfully combine high productivity with resistance to lodging, diseases and drought have been developed. From 2010 varieties Busol and Spurt are listed into the State register of plant varieties of Ukraine and varieties Sterno and Iren are on state testing.

**Gangur V.V., Sokirko P.G., Totckyi V.M.** Productivity and economic efficiency of sunflower growing using different methods of soil tilling // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 46-48.

The results of research carried out by Poltava institute of APV named after M.I.Vavilov NAAN are got on typical loamy black soil with little humus during 2008-2010 testify about equivalency of basic soil tilling by the plough of PLN-3-35 on the depth 20-22 cm and shallow loosening by the aggregates of AG are 4 «Scorpio-2», KPE-3,8, KPP-2,2 on the depth 12-14 cm after influence on the level of sunflower productivity. A difference in sunflower productivity according to the variants of basic soil tilling is only 0,17-0,26 t/ha, and according to the backgrounds of the presowing loosening – 0,04-0,11 t/ha that size which from date of analysis variance is within the limits of error experience. The economic evaluation of variants specifies on noticeable advantage of basic soil tilling of AG are 4 «Scorpio-2» on the depth 12-14 cm. Thus, comparing with ploughing the prime cost of 1t of seeds diminishes by 8,2 % and the level of profitability grows on 3,3 %.

**Laslo O.A.** Introduction of technologies of exact agriculture in Ukraine // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 49-50.

The given results of experiments prove that for the cost

cutting on the receipt of a unit of agricultural plant growing production and diminishing of the pesticide loading on an environment exact technologies are created and used on the base of the agronomical system of the productivity. It is necessary expressly to set criteria and ecological standards for territories, taking into account not only descriptions of soils but also anthropogenic influence – distance, from the industrial sources of contamination, railway and motor-car roads, compositions of mineral fertilizers and pesticides, transboundary transference of pollutants is possible, etc.

**Kurdyukova O.N.** Obstruction sowing of crop rotation depending on treatment of soil // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 51-54.

It is set on the basis of the long-term field experiments, that in the conditions of Steppe of Ukraine in seven the field crop rotation, substituting of the turn ploughing by 20 – 22 sm of shallow treatment on 10 – 12 sm results in the increase of impurity of sowing by both annual and perennial offspring root kinds. Combination in the crop rotation of ploughing under the cultivated cultures and shallow treatment under corn and bob cultures allows substantially to decrease the impurity of sowing, and without turn loosening on 20 – 22 sm – to support the impurity of sowing of crop rotation at level not higher than annual turn ploughing.

**Sylenko E.S.** Display of heterosis on the biochemical indices of hybrid combinations of maize in the conditions of Left-bank Forest-steppe of Ukraine // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 55-58.

The problem of distribution of self-pollinated corn lines of on the biochemical indices has been considered in the article. The lines were studied at Ustimov experimental station. As a result of the study most lines are referred to the group with the middle level of sign expression on protein content (9,1-12,0 %). Only lines A 675 (USA) and UH 861 (Ukraine) had a high protein content, namely 13,8% and 12,1%. On average according to the experience a starch level in corn of maternal forms was 70,4%, paternal was 69,9%, and in hybrid combinations – 71,2%. Thus heterosis in hybrids of the first generation resulted in the rise of starch level in corn on 0,8-1,3%. In case of creation of hybrids and lines with high protein content and starch we recommend to involve self-pollinated lines A 675, UH 861, VC 47, IKK 16-8, HLG 1439 in selection process that will give possibility to get a valuable material which will serve as a basis for the priority directions of corn selection.

**Sokolovskaya I.N., Dem'yanova A.V.** The productivity and quality of basic and additional products of food subspecies of maize // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 59-62.

Application of mineral, organic, bacterial fertilizers in a complex with other agrotechnical measures brings to the increase the productivity as a basic and additional products of saccharine and bursting corn. The high productivity of ears and grain was at bringing of humus together with rizogrin and FMB, and economic efficiency

of growing of corn in such terms was the greatest at perfect security for an environment. Combination of mineral or organic fertilizers with bacterial resulted also in an increase on 15-71 kg/hectare of the productivity of medicinal raw *Stigmata Maydis* of the best technological qualities.

**Rak V.V., Goroshko V.V.** Development of agroecological measures of *Valeriana Officinalis* L. prevention from diseases and pests // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 63-65.

The results of the use of growth regulator and biological preparations for pre-sowing treatment of seeds and prevention from diseases and pests of medicinal valerian vegetans have been given. It has been found out that biological preparations stimulated plant growth and development, decreased seed damage by fungal infection, encouraged the increase of plant resistance to diseases and pests that is expressed in the rise of crop productivity and raw material quality.

**Borysenko L.D.** New early-ripe variety of bulb onion Symphony // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 66-68.

The article gives grounding for creation of bulb onion Symphony and provides its brief characteristics. As a result of selection work early-ripe variety of bulb onion Symphony with the yield of 35-40 t/ha, marketableness – 98%, resistant to diseases, storable, with the content of vitamin C of about 5,6 mg/100g has been developed. The article outlines the results of economical efficiency of onion growing under the fluid drilling of sprouted seeds and drop irrigation and local fertilization on the Steppe of Ukraine. Growing of new variety ensures economic effect of 7,4 thousand UAN/ha.

**Kataieva T. Ye.** New middle-ripening variety of squash Consul // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 69-71.

As a result of selection work a new middle-ripening variety of squash Consul with the yield 60-65 t/ha, marketableness – 99%, resistant to diseases, with the content of vitamin C about 14,9 mg/100g has been developed. For the work plants from sources that had the greatest adaptive potential with a complex of economic - valuable attributes are used. They allow expanding the period of receipt of fresh fruits and in regular intervals to provide processing enterprises with raw material. Growing of new variety ensures economic effect of 4,7 thousand UAN/ha.

**Kharytonov M.M., Zhilenko M.I., Krivakovska R.V.** The forecast methodology of the process of vertical salinity of reclaimed coal mine terraces // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 72-74.

The file MathCAD was made to conduct the forecast methodology of the process of vertical salinity of reclaimed coal mine terraces. The steps to decide modeling tasks are reflected in this file. Constants and procedures change under conditions to introduce new beginning parameters – depth of artificial soil profile, range at the space and time. The database obtained from 1987 with 8 years period was used to conduct the vertical salinity process in the experimental soil profiles.

Obtained in 2003 year data of profile salts distribution were treated in developed models as forecasts for next 6 years. Made for 2009 year forecast is closed to data reflecting salts profile distribution of the reclaimed stratum in the trial MR+50LS+50BS. Developed in DSAU Pavlograd land reclamation station methodology can be used to any forecasts of vertical salinization in conditions of Western Donbass.

**Gulay A.V., Gulay V.V.** The ecological connections of pathogenic leptospirs in phytocoenoses of real flood-plain meadows // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 75-76.

The peculiarities of ecological connections of pathogenic leptospirs cultures with the background plants in phytocoenoses of real flood-plain meadows in the western Forest-Steppe zone of Ukraine have been studied. It is stressed that ecological impact on pathogenic leptospirs in phytocoenoses of real flood-plain meadows are based on biochemical influence of higher plants which secretions form topical type of biotic connections.

**Birta G.A.** Haematological indices of pigs of different genotypes // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 77-79.

The increase of productive and pedigree qualities of animals is impossible without the comprehensive study of physiological and biochemical processes, that take place in a living organism. Normal activity of all organs and systems of animals is provided with a relative constancy of physical and chemical descriptions of internal environment of an organism. Pedigree, sexual, age-dependent, seasonal features, influence of intensity of growth and terms of feeding on morphological composition of blood, maintenance of albumen and albuminous factions are important. Indices related to the ORP processes, proteometabolism, exchange of carbonhydrates and phosphotides are significant in the study of biochemical composition of blood.

**Cherny N.V., Mitrochanov A.A.** Resistance and gravimetric indices in dwarfed piglets // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 80-84.

Results of host innate immunity and growth intensity investigations in dwarfed piglets with hypotrophy during postweaning period suffered from body weight deficiency (20 and 30%) comparatively to standard weaned piglets(not low 6 kg in 26 days of life) have been presented. That piglets rearing in Pig-Balya in comfortable sanitary and hygienic conditions with feed of full value use (balanced rations in amino acids, vitamins, minerals) provides their quick adaptation to abiotic factors and the increase of feeding activity, humoral and cellular immune indices, growth and development intensity after weaning.

**Girya V.M., Shapchenko V.E., Usachova V.E.** Productive qualities of Vietnamese belly hanging pigs and their cross-breeds with the large white breed of pigs // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 85-88.

The results of research of reproductive, fattening and

meat qualities of pigs of the Vietnamese belly hanging breed «in a cleanness» and in crossing with the male hogs of large white breed have been given. It has been found out that at the use of crossing improvements of reproductive ability of sows concerning multiple pregnancy, living mass of a piglet and a nest at weaning were achieved. Pigs of the Vietnamese belly hanging breed yielded to the sapling of large white breed on intensity of growth and development and slaughter-weight. Fattening of hybrid genotypes was instrumental in the improvement of fattening and meat qualities.

**Bulawenko R.W.** Level of peroxidation processes and antioxidant protection in the tissues of foetus and newborn piglets // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 89-91.

Dynamics of POL-AOP processes in the tissues of foetus and new-born piglets during the second half of intrauterine development has been studied. Based on the indices of peroxidation (composition of diene conjugates and malonic dialdehyde) and antioxidant defense (concentration of catalase, glutathione peroxidase and glutathione transferase) it has been found out that from birth to 60 days of age, level of lipid peroxidation in liver and long dorsum muscle increases and reaches a maximum with simultaneous enhancement of antioxidant protection.

**Berdnyk V.P., Berdnyk I.J.** Preparation and testing of a vaccine from mycoplasmas. Message 4. The results of application of a vaccine prepared from attenuated “local strains” mycoplasmas in a specialized pig breeding farm // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 92-93.

The results of testing of a vaccine from attenuated “local strains” Mycoplasma hyorhinis (M.), M. arginini and Acholeplasma laidlawii on pigs of the farms which are unfavourable according to mycoplasmosis have been presented. 12-day pigs were vaccinated into a nasal cavity twice and into muscles once with the interval of 7-8 and 40 days respectively. Compared with a control vaccination caused a number of pigs backward in growth on 14.8% and the perished on 7.1%, and also the increase of average live weight by 1.2 and 2.8 kg when giving them for further raising and fattening respectively.

**Berdnyk V.P., Bublyk O.O., Berdnyk I.J.** Preparation and testing of a vaccine from mycoplasmas. Message 5. Testing of a vaccine prepared from attenuated “local strains” mycoplasmas in a pig breeding farm unfavourable according to mycoplasmosis // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 94-101.

The results of testing of a vaccine from attenuated “local strains” Mycoplasma hyorhinis (M.), M. arginini and Acholeplasma laidlawii on pigs of the farms which are unfavourable according to mycoplasmosis have been presented. 12-day pigs were vaccinated into a nasal cavity twice and into muscles once with the interval of 7-8 and 40 days respectively. Compared with a control vaccination caused a number of pigs backward in growth on 14.8% and the perished on 7.6%, and also the increase of

average live weight by 2.3 and 2.4 kg but the loss was lower on 2,1 - 7,6 %.

**Dukhnytskyi V.B., Milastna A.G.** Febrifugal action of izamben (amizon) in experiments on white rats // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 102-104.

Results of researches of izamben’s febrifugal action in comparison with paracetamol are presented in the article. On the model of the fever caused by pyrogenalum it is established that izamben in 2 hours reduces a body temperature of rats on 0,89°C and 0,75°C depending on a way of application, whereas paracetamol on 1,3°C. Application of a preparation inside and hypodermically provides adequate febrifugal action at 100 % of experimental animals that allows to recommend its purpose as antipyretic medications along with means etiotropic and pathogenetic therapy.

**Morozenko D.V., Timoshenko O. P.** Haemorenal indices in diagnostics of internal diseases of dogs and cats // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 105-106.

The problem of application of haemorenal indices – the factor of concentration of urea (FCU), a concentration index of a creatinine (CIC), factor canalicular reabsorption (FCR) in diagnostics of internal diseases of dogs and cats is considered. FCU and CIC at dogs increase at babesiosis owing to development of a toxic nephropathy. At a glomerulonephritis dogs have a depression concentration, excretion and filtrational functions of kidneys that is shown by depression of haemorenal indices. Cats at cholangiohepatitis and diabetes have depression FCU that is bound to disturbance of a functional condition of a liver. At cat urolithiasis FCU and CIC decreases that is caused by disturbance of a functional condition of kidneys.

**Petrenko A.A., Kone M.S., Semenko M.A.** Microflora of intestine of dogs and cats at an uncinariosis invasion // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 107-108.

The results of researches purpose of which is to discover microorganisms which accompany the uncinariosis invasion of dogs and cats have been presented. Basic methods used in the research have been indicated. Nourishing environments on which conducted sowing of tests have been resulted. Character of growth of colonies is described for every type of microorganisms in the process of cultivation on nourishing environments. It has been set that the uncinariosis invasion of dogs and cats was accompanied by a microflora from a collibacillus and enterococcus which are the common inhabitants of thin department of intestine in carnivorous. Pathogenic microorganisms have not been found out.

**Sharyj G.I.** Necessity of establishment of the right land easement payment on agricultural lands // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 109-111.

The problem of loss size caused by rights limitation for land owners and land users, by the ground deterioration as a result of negative influence of enterprises, es-

establishments, organizations activity on agricultural production has been considered. The loss size of agrarian producers is in particular case expected as a result an establishment land easement on an example of agricultural production cooperative "Batkivschina", Kotelva district, Poltava region with the use of the method offered by the author and adopted by the session of Poltava regional council in June 16th, 2000.

**Kuzmenko A.B.** Organizational development and economic security policy of land quality // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 112-116.

The necessity of insurance of agricultural land from deterioration of their quality state has been proved in the article. Practical recommendations for the assessment of losses due to deterioration of quality indicators of land when the insured event of natural or man-made origin have been offered. The assessment is based on the indicators determined when the agrochemical certification: the content of mobile forms of nutrients and humus. The need for agrochemical passport insurance and the project of land management has been proved.

**Tyutyunnyk Y.M.** Forming and factor analysis of financial results of activity of agricultural enterprises // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 117-121.

Essence of financial results and profitability has been considered as criteria of evaluation of efficiency of activity of subjects of farm management. On the summary of statistical information concerning profitable and unprofitable agricultural enterprises of Poltava region indices of financial results and profitability in a dynamics for the period from 2005 to 2009 have been analysed. The system of relative indices has been offered for research of structure of profits. With the use of the determined factor models influence of factors on the change of profit from operating activity, profit from ordinary activity to taxation and net profit has been found out. Criteria which characterize quality of the got profit have been grounded.

**Suprun E.N.** Economic mechanism in development and adjusting of economy // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 122-124.

The theoretical aspects of forming of economic mechanism are analysed in development and adjusting of economy of Ukraine. Its basic segments are allocated: administrative system of micro- and macroeconomic direction; aggregate of forms and methods of organization-functioning of production; system of economic connections in the process of exchange by the results of activity of economic subdivisions. Intercommunications of separate constituents of economic mechanism are grounded: organizational and economic. It is found out that the institutes of the state must not be included in contradiction with the laws of market, that must be balanced on attitude toward each other.

**Krasnikova O.M.** The work with clients of Poltava land bank (1872-1917) // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 125-129.

The system of the work with clients of Poltava joint-stock

land bank has been characterised. Financial results of its operation within the region and outside have been defined. Founded in 1872 this bank establish long-term and short-term crediting under favourable conditions for them. Its operation allows to speak about that private capital involvement can improve crediting of agricultural commodity producers at the stage of market transformation of agrarian sector of the economy of Ukraine.

**Pustyak O.V.** Target financing of the communal unitary enterprises: to the finance-economy essences and displays in accounting // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 130-134.

The article deals with a scientific research of problems of target financing account on maintenance of property asset and providing innovative investment activity of communal unitary enterprises due to the money of state and local budget and special growth of cities fund. The special attention is paid at the financial and economic ground of account target financing of communal unitary enterprise in composition of a property asset. The order of determination of the mastered target financing by the municipal property is described.

**Zagorodniuk O.V.** Development prospects of domestic fish market // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 135-138.

the prospects of the domestic fish market have been analyzed in the article. The necessity of revision of the regulatory legal framework of fishery activities in the interests of Ukrainian society and the interests of economic entities has been grounded. It is noted that the subsequent development of fish market should be based on creating an effective organizational and economic mechanism of its functioning, the state promoting the development of market infrastructure, strengthening control over the quality of fish and fishery products, the modernization of fishery enterprises, upgrading material-technical base, improving capitalization companies.

**Hrinchenko O.V.** Organization and economic mechanism of creation of wholesale food markets // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 139-141.

The mechanism of wholesale food markets has been analysed. Their features and basic tasks have been revealed. The conditions of activity of subjects who work in the wholesale markets of food, quality requirements and composition of products, facilities which are contributed by functioning of such markets have been determined. The consequences of wholesale markets for producers and consumers have been studied. Determining consequences of wholesale food markets is assistance to increase economic efficiency and competitiveness of agricultural production, withdrawal from shadow and the legalization of trade flows of agricultural products.

**Smerdov A.A., Sokolov S.Ye., Smerdova T.A.** The use of passive electrical parameters of biological tissues in agriculture. // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 142-147.

The examples of the use of passive electrical parameters measurement (electrical resistance, capacity, impedance,

dielectrical penetrability) in agriculture have been given. The results obtained in different investigations have been analysed. Availability of the use of passive electrical parameters determination has been shown for instrumental, objective estimation of farm products quality and studying of physiological characteristics state of farm animals and plants in the experiment and in practice.

**Goryk A.V., Kovalchuk S.B.** Synthesis methods for solving problems of mechanics of skid deformation. Message 1. Theoretical background // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 148-152.

The theoretical basis of the method of initial and final parameters as well as the direct boundary element method in one-dimensional problems of mechanics of skid deformation have been studied. For the case of inhomogeneous linear equations of free-order with self-joint differential operators the general solution is considered as a common basis for the original equations of mentioned methods of calculation. Theoretical relations have been obtained based on the general properties of linear differential equations. To construct solutions generalized Green's functions are used.

**Smerdov A.A., Bulba E.N.** Statistical characteristic of wind speed in Poltava region // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 153-157.

The analysis concerns the introduction of renewable energy in the agro-industrial complex. The expediency of using wind turbines of small and large power for the agricultural needs has been proved. Sensor of wind direction and speed DW-160, and the software to work with it have been considered. The characteristics of wind speed in July-August 2009 has been estimated. An average wind speed at the height of 30 m has been calculated, and its connection with wind speed at the height of a weather vane has been defined. The coefficients for the Weibull distribution, which allows us to estimate wind potential of Poltava region have been calculated.

**Rishard Titko, Kalinichenko A.V., Kalinichenko V.N.** Efficiency of the use of thermal pump sort of 'air-water' in heat supply systems // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 158-162.

In the article the results of research of efficiency of the use of thermal pump sort of 'air-water' are presented in heat supply system at different office hours. Investigations were conducted on a laboratory experimental plant with automatic fixing of parameters of equipment work on a computer. The results of temperature measuring of working liquid in the space-heating cycle of the thermal pump are shown. dependence of power-factor of the thermal pump upon the temperature of external air and upon the working temperature of heating system has been determined on the basis of experimental research.

**Petrovskiy O.M., Volkov S.I.** Determination of the most suitable range of electromagnetic radiation for pre-sowing treatment of seeds // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 163-165.

A positive effect is shown from the preseed irradiation of

seed by the electromagnetic fields of different frequency ranges on the basis of previous publications, and also theoretical and experimental researches. Certain factors of influence of electromagnetic radiations are on a man from the point of view of ecological safety. Methodology of estimation of intensity of irradiation influence is offered on seeds at the different parameters of the electromagnetic field. The most suitable is found, from the practical point of view, a range in which it is expedient to conduct irradiation of seeds of agricultural cultures.

**Strela G.P.** Ecological and technological issues of restoration of soil fertility and optimization of land tenure at a regional level // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 166-168.

The solution of the problem of a restoration of soil fertility of land-tenure, taking into account the limited financing and insufficiency of organic fertilizers can be achieved only with the help of the land-tenure designing of the projects of ecological and economic basing of the rotation of crops.

**Herman N.N.** Effect of pre-sowing seed treatment and mineral nutrition on the formation of structural elements of soft winter wheat yield // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 169-172.

The results of three-year investigations of influencing of nitrogen additional fertilizing and pre-sowing seeds' inoculation with biologically active substances of soft winter wheat on forming indices of yield structure elements are given. According to the scientific research it has been found out that the dose  $N_{50}$  and  $N_{75}$  was the most efficient for additional winter wheat fertilizing. These doses favour effective improving indices of yield structure elements. It has been found out that pre-sowing inoculation with bacterial preparations in the dose of 150ml/t favoured increasing mass of 1000 grains and quantity of grains in the ear.

**Grygoriv Ya.Ya.** Productivity of spring orange agaric on sod-podzol soils Prykarpatty depending on different standards of mineral fertilizers // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 173-175.

The article deals with investigations carried out during 2009-2010 in stationary field experiment on sod-podzol soils referring to efficiency of the use of different standards of mineral fertilizers on spring orange agaric productivity. The influence of mineral fertilizers on growth, development and productivity of spring orange agaric of species *Gorny* has been considered. Dependence of elements productivity and crop capacity upon application of mineral fertilizers has been found out. It has been determined that application of mineral fertilizers had a great impact on nutritive indices of spring orange agaric seeds. The best variants provided crop capacity of 18.0 c/ha, oil content in grain is 33.48% and erucic acid is 2.27%.

**Bindiug D.O.** The use of different regimes of feeding pigs // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 176-179.

The camera researches of influence of different regimes

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## ANNOTATION

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of feeding pigs on a display of productive indications have been carried out. The comparative analysis of an effective use of different variants of ration feeding which are used in production conditions has been made. The presence of definitive biorhythm growth and the development of animal organism, specifically pigs has been found out. Positive effect of biorhythmical (variable) animals feeding on the widening of biological possibilities of their organism with the aim of increasing of food conversion and middle daily gains has been grounded theoretically.

**Pozdnyakova T.S.** Reproductive qualities purebred and crossbred sows at crossbreeding with boars of native and foreign selection // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 180-183.

Results of research work on studying of efficiency of use of male pigs of domestic and foreign selection and their influence on the further reproductive ability of purebred and crossbred sows are described. Efficiency of pig breeding industry is determined by the level of reproductive qualities, as volumes of growing and fattening the sapling of pigs depend on them. Using an index reproductive abilities of sows have been compared. It has been found out that in conditions of pig farm combinations of a thoroughbred uterus to breed male pigs landrace and purebred a sows with terminal male pigs were the best.

**Nalyvaska N.N.** Impact of industrial noise on clinical and physiological status and biochemical indices of goat blood // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 184-187.

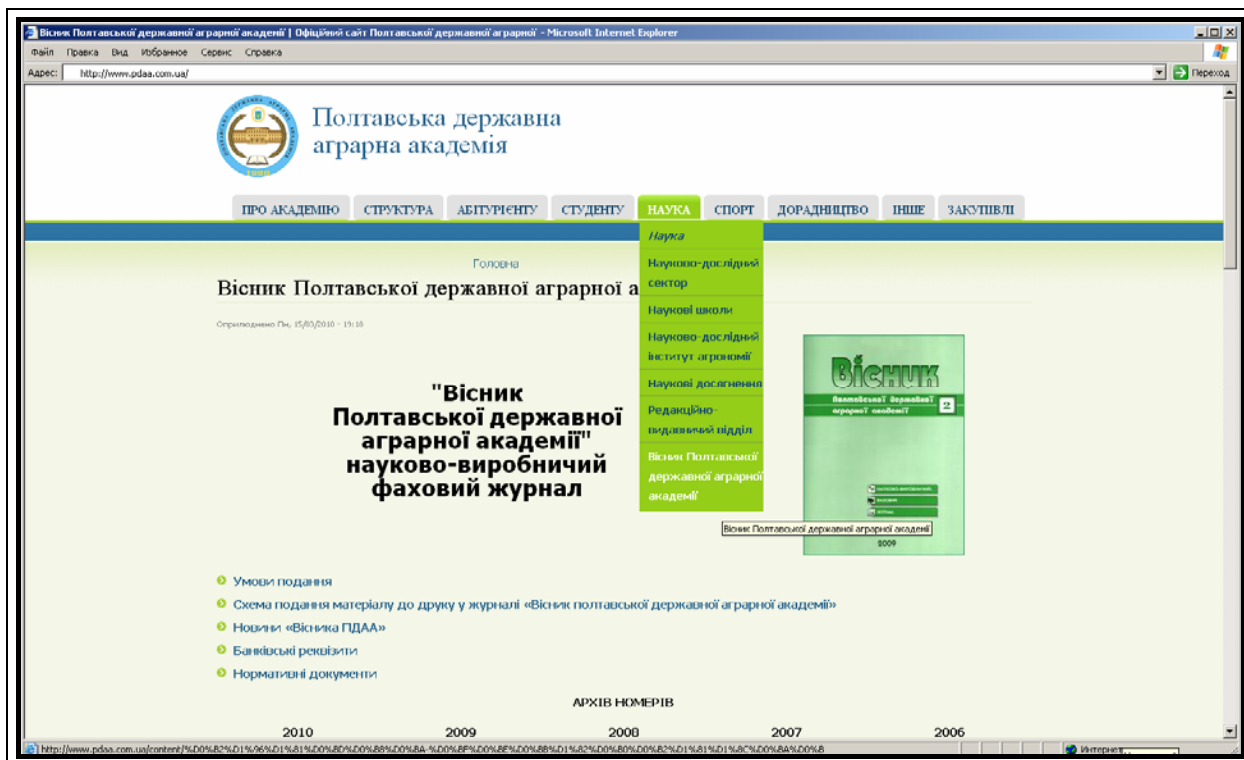
Sound stimulus in the animal body leads to the decrease of hemoglobin, red blood cells and the count of formed elements while the white blood count increases. In the white blood cell differential the count of neutrophils increases whereas the content of lymphocytes and eosinophils decreases. At the same time total protein drops and the content of globulins in blood rises, respectively. These result in the functional hyperactivity of the thyroid gland.

**Gologurskaya O.I.** Studying of biological properties of epizootic cultures of mycobacteria isolated from poultry and zoo birds // News of Poltava State Agrarian Academy. – 2010. – № 1. – P. 188-190.

Results of studying of biological properties of mycobacteria cultures separated from poultry and zoo bird in experiments on hens are given. The comparative characteristic of intracutaneous tuberculin test with serologic reaction is considered. Cultures of mycobacteria isolated from poultry and zoo birds have a high pathogenicity for hens. Blood and drop agglutination with antigen *M. avium* is considered as the most effective method of tuberculosis diagnostic of poultry.

Із причин, не залежних від редакції журналу, в №3 за 2010 рік надруковано статтю «Особливості росту і живлення телиць української чорнорябої і голштинської порід» (автори – І.С. Трончук, С.О. Ульяновко, О.С. Дев'ятко; сторінки 81-85), де допущені помилки, а саме: на с. 83 у лівому стовпчику рядок 9 замість «протеїну» читати «жиру», у правому стовпчику рядок 11 замість «хвилини» читати «години», на с. 85 у правому стовпчику рядок 5 замість «4788» читати «47880», замість «444402» читати «44126».

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