

AGRICULTURE. PLANT CULTIVATION

Kramaryov S. M., Kramarov O. S., Pisarenko P. V., Khrystenko A. O., Sokolovsky O. N., Tokmakova L. M., Zhuchenko S. I., Syrovatko V. A., Syrovatko K. V. Comparative assessment of the content of mobile phosphorus in various genetic horizons of ordinary chernozem on tilled field compared with virgin soil in conditions of the northern Steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 7–22.

The change of the content of mobile phosphorus in the genetic horizons of ordinary black plowing a relatively virgin land under North Steppe of Ukraine at different research methods has been analyzed. For accurate diagnosis of phosphate status of these soils should use one of three methods: Karpinski–Zamiatina (GATS 4727), Machygin (GATS 4114) or Olsen (GATS ISO 11263). It has been established that real natural security arable layer ordinary black phosphorus corresponds to the boundary of low and medium security that element of plant nutrition.

Vashenko V. V., Shevchenko A. A. Evaluation of combining ability of spring barley varieties on the main quantitative characters in the conditions of the northern steppes of Ukraine // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 23–25.

A total of diallel analysis varieties of spring barley Donetsk 12, Donetsk 14, Donetsk 15, Prairie, Galactic set features genetic control variability characteristics: plant height, number of grains per ear, 1000 grain weight in accordance with the ratio of variance of specific combining ability (SSI) and general combining ability (ZKZ). Identified and proposed as a source of variety traits plant height and Donetsk 14, Galactic, the number of grains per ear sort Prairie, weight of 1000 grains Donetsk 15. Samples of high and stable levels of combining ability is proposed to use in breeding work have been selected.

Patyka M. V., Kolodjzhnyi O. Yu. Formation of microbial complex of typical chernozem in agroecosis of winter wheat at different agrarian systems // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 26–33.

Analysis of the formation of microbial complex of typical chernozem in agroecosis of winter wheat has been analyzed. The level of differentiation of number of the basic physiological and taxonomic groups of microbes has been identified. Features of structure formation, the qualitative composition and diversity of bacterial complex at different agrarian systems and tillage of soil have been shown. It has been established that the systematic application of organic fertilizers allows to be optimized

microbiological processes and contributes to increase of species diversity with a uniform distribution of the dominant forms of microorganisms.

Patyka M. V., Moskalevska Yu. P. Microbial processes of carbon transformation in sugar beet rhizosphere in typical chernozem // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 34–39.

The comparative analysis of the number by a functional targeting of the microbiota of sugar beet rhizosphere, which involved in the transformation of carbon and its compounds, under different agrarian measures was conducted. The content of organic and labile water-soluble carbon in the chernozem typical and a condition of sugar beet crops is defined. It is established that localization of organic substances in the upper root-inhabited soil layer contributes to increase the number of microorganisms which involved in the carbon cycle in crop's rhizosphere.

Charchenko Yu. V., Charhenko L. Ya., Tymchuk S. M., Pozdnyakov V. V., Suprun O. G. Study of initial material for the maize breeding of food and technical application in the Ustimovska's crop research station // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 40–44.

The wide variability of the maize inbreds-carriers of different endospermic mutations for the grain productivity, content and fractional composition of starch as well as the content of oil and oleic acid glycerides were established. It has been shown the improvement of maize for these indicators requires the use of a wide genetic diversity of crops and quality of the source material. The study determined the effects of combining ability of the inbreds-carriers of mutations wx , su_2 , ae , su_1 and sh_2 for these traits. The perspective initial material for the maize breeding of food and technical application has been identified.

Havryliuk V. A., Valetska O. V. The change of agrochemical characteristics of sod-podzolic soil when using organic fermented fertilizers // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 45–50.

The paper elucidates the main aspects of soil productivity increase through the use of organic and organo-mineral fertilizers of different composition. The results of field studies as well as of laboratory and agrochemical analyses below suggest that the application of organic fermented fertilizer (OFF) in the crop rotation link potato-oat-yellow lupine enhances the nutritive regime of sod-podzolic soil. We have determined that when applying 15 t/ha of

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OFF, which is equivalent to 30 t/ha of manure in terms of its nitrogen content, even during the second year of aftereffect there are no degradation processes. Thus, such fertilizer rate can be recommended for production considering the agrochemical cal perspective.

Sokolovska I. M. The dynamics of the populations of some weeds in the agrophytocenoses of spring wheat // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 51–54.

The study of the current state of weed populations in agrocenoses is important for predicting their subsequent development and effect on yield, quality and productivity of crops. At the very beginning of the formation of the agrophytocenoses of spring wheat the largest groups of the weedy component were the populations of young weeds. They did not compete with the cultivated plants, finished their life cycle before, so did not have a significant effect on the formation of the yield of the main crop. The populations of the root-and-shoot perennial weeds (*Cirsium arvense*, *Cirsium arvense*, *Convolvulus arvensis* L.) in this period formed the least numerical segetal large group of plants. But they differed of high ecological stability, performances of vitality and high ability to compete with cultivated plants, that's why they inflicted the most damage to crops of spring wheat. The populations of this group of plants acquired the environmental stability and had a significant influence on the formation of the agrophytocenoses and yield of spring wheat without conduction proper and timely measures.

Lopushnyak V. I. Balance sulfur at the different fertilizer systems at various grain crops in crop rotation Western Steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 55–57.

Grain-tilled change of fruit short rotation of crops Western Steppe of Ukraine marked negative balance of sulfur. Organo-mineral system of fertilizer with the introduction of 40 t/ha manure + 15 t/ha of green manure + 5 t/ha of straw + $N_{50}P_{85}K_{113}$ and saturation of crop rotation by organic fertilizers (15,0 t/ha) provides a positive balance of sulfur – up to 10 kg/ha of area of crop rotation. By the most bearing-out of sulfur in grain-tilled change of fruit of crop rotation marked sugar beet and red clover, with which the main and side products makes up 80 % of total removal of this element by all cultures.

Koval V. V., Kucheriavyi S. O., Natalotchka V. O., Nechytailo V. M., Fesenko O. H. Dynamics of water pollution by heavy metals for agricultural purposes // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 58–62.

The research results of the salt content of heavy

metals in natural waters of the Poltava region have been shown. It is emphasized that one of the pollutants of water sources is chemicalization of agriculture. The studies were conducted in 2008–2012 on the basis of the Poltava Regional State Technological Design Center to protect soil fertility and quality. The results of studies showed that overrunning of maximum permissible concentration is not observed, therefore, there are prerequisites for doing organic farming in the region. However, a prerequisite to this is the availability of objective information concerning the agro-ecological status of groundwater and water resources, as well as the introduction of environmentally friendly technologies of growing crops.

Stelmach O. M., Grygoriv J. J., Maksymiv T. O. Photosynthetic activity of plants spring *Camelina sativa*, depending on the processing methods of cultivation // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 63–66.

The results of studies on the impact of technological methods of cultivation on the growth dynamics of leaf area and photosynthetic capacity of crops formation have been shown. The research has shown that the highest rates of leaf surface area obtained for the first sowing in spring *Camelina sativa* flowering phase. It has been established that fertilization has been a significant effect on the leaf surface area of spring *Camelina sativa* and according to rate of photosynthetic capacity.

Kozechko V. I. Influence of processing methods of cultivation on formation of indicators of quality of grain of wheat winter in the conditions of the northern Steppe // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 67–73.

Results of the conducted pilot researches testify that at cultivation of various sorts of wheat winter after a spring rape in the conditions of the northern Steppe of Ukraine, receiving the most qualitative grain, the third class of quality, provides sowing on 25 September and on 5 October. Sowing on 5 and 15 September provided grain, generally the fifth and fourth classes of quality. Among sorts of wheat winter which were studied in the experiences, the greatest protein content (11,2–13,0 %) and glutes (17,5–22,7 %) in grain Selyank's sort differed. The smallest Podolyank's sort of 10,6–12,5 and 17,1–21,9 % had these indicators respectively. The volume of the bread received from a flour of wheat of winter of a sort of Selyanka, was the highest. So, on the average for 2008–2010 it fluctuated from 495 cm³ when sowing on 5 September seeding rate of 4 million units germinating seeds/ha to 612 cm³ when sowing on 5 October the same norm. Influence of seeding rate on indicators of quality of

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grain is established. So, high protein content and glutens in grain, and also the volume of bread are noted on experience options where sowing carried out norm of 4 million units germinating seeds/ha. The increase in seeding rate led to reduction of these indicators. Average, over years of research, the highest yield sort Selyanka formed (4,89 t per ha) when sowing on 25 September norm of 5 million units germinating seeds/ha. The maximum

productivity of a plant of a grade of Zolotokolosa – 4,20 and 4,19 t per ha formed, respectively, when sowing on 5 October norm of 6 million units germinating seeds/ha and on 25 September seeding rate of 5 million units germinating seeds/ha. The low among grades productivity was formed by a sort of Podolyanka at which it fluctuated, during carrying out researches, within 2,99–3,75 t per ha.

AGRICULTURE. ANIMAL HUSBANDRY

Zamykula V. V. Influence of technological parameters of pork production on the structure of production and breeding pyramid // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 74–79.

Pig industry always requires the increased attention as producers of pig products, Veterinary Service, and also state structures that monitor the situation and provide the government support to producers in the form of grants. Since the pig breeding is an area of high-risk stock-breeding, the industry needs to develop and implement new technologies, tools and techniques that would help increase multiple pregnancies, the safety of the offspring, the intensity of growth and improving reproductive qualities of sows.

Ryzhkova T. N., Goncharova I. I., Gade I. M. Efficiency of raw milk processing in range of dairy products depending on its breed // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 80–83.

This article provides comparative data of the research results of milk samples of two groups of Ukrainian black-pied and Ukrainian red-pied breeds of cows which are kept in the educational and research center of Kharkov State Zooveterinary Academy to choose the optimal flow sheet of its processing on prepared dairy products. The milk which is given by the Ukrainian red-pied cows is expediently processed into rennet cheese, is given by Ukrainian black-pied cows should be directed for the production of whole-milk dairy products.

Grechka G. M. The directed using of the bee colonies with the altered physiological state // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 84–87.

There has been shown the possibility of intensification of economic activity of the bee colonies with the presence of swarming features by applying three methods of beekeeping: the shuffling of the nest, the nest renovation, and the artificial division of bees. It has been proven that «the nest renovation» is an optimal method of beekeeping which helps to normalize the physiological state of the colonies of honey bees (from swarming to

working) return to normal life, stabilize and use their swarming energy efficiently in the complex beekeeping and increase the productivity: honey – 12 %, wax – 15 %.

Pochernyaev K. F., Balatskyi V. N., Lyadskiy I. K. Association g.143C>T polymorphism of gene *ctsl* with the formation of fattening and meat qualities in pigs of the large white breed of Ukraine // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 88–90.

The results of researches of the association of gene *ctsl* with the formation of fattening and meat qualities in pigs of the Large White breed of Ukraine have been given. The features of gene *ctsl* alelofund in different populations of pigs of LW breed have been analysed; the analysis of frequencies and distribution of different genotypes have been carried out. The association g.143C>T polymorphism of this gene with thick deposits of fat in the middle of the back and in area of 6-7 ribs, as well as average daily gains, thickness of the longest muscles and meat yield was studied. It has been determined the impact force g.143C>T polymorphism of gene *ctsl* on these traits. It was determined significant differences ($P < 0.05$) for some of the above traits in pigs with different genotypes of gene *ctsl*. On the basis of the researches it have been made conclusions and advanced proposals to producers.

Tenditnik V. S. Scientific School of young technologists and its creator – Professor M. I. Knyha // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 91–95.

Some research job results of Professor Moisey Ivanovich Knyha and his students are aimed to the improving of cow's productivity and directed to increase and improve the quality of milk and dairy products. A creator of Kharkov Scientific School of young technologists of M. I. Knyha is the real eminent Scientist and unselfish Teacher. Together with his students he has made a considerable contribution into development of science about a dairying and technology of production of milk and dairy products. He has been an eminent organizer

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and leader of Kharkov Zoological and Veterinary Institute, one of leading agricultural institutes in Ukraine.

Shamro L. P., Solovyova T. N. Biological characteristics working bees' families with different behavior hygiene // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 96–98.

A comparative study of the anatomical and physiological characteristics of bees (the concentration of protein in the hemolymph of bees, the degree of pharyngeal glands and fat body) in families with high and low hygienic behavior during four periods of active beekeeping season has been done. We have determined that the concentration of protein in the hemolymph of bees in families with high resolution sanitizing their nests during the season to 6.35–15.8 % higher compared with families with lower hygienic behavior. No significant difference has been observed levels of body fat and pharyngeal glands of bees in both groups of bees.

Yaremich N. V. Efficiency of application of the preparation «E-selenium» at farming of young growth of minks of the Scandinavian selection // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 99–101.

The results of the studies of the impact of selenium preparation «E-selenium» the dynamics of the live weight of young mink Scandinavian selection have been shown. The differences in intensity of growth and development of young animals at various circuits using the preparation «E-selenium» have been identified. Young mink, which have been injected by the preparation «E-selenium» at a dose of 0.04 mg/kg body weight, gaining weight and better exceeded peers in the control group at 180 days of age in '53. Established probable share of influence of selenium preparation «E-selenium» ($\eta \times 2 = 0,10-0,24$, $p < 0,01-0,001$) on the dynamics of live weight of young minks aged 60–120 days.

VETERINARY MEDICINE

Ksyonz I. M., Tsivenko T. M., Pochernyayev K. F., Korinnyi S. M. The PCR test-system development for indicating bacteria of the chlamydia genus in biological samples taken from domesticated dogs // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 102–104.

The PCR test-system has been developed for domesticated dogs Chlamydiosis diagnostics, including oligonucleotide primers, flanking the site of the gene coding endoribonuclease P (RNase P RNA) of *Chlamydia abortus*, *Chlamydia pecorum* and *Chlamydia psittaci*. Identity of the amplification product is confirmed by means of the restriction analysis with the use of Alu I endonuclease. The above PCR test-system has been tested on 50 positive and 25 negative DNA samples of the *Chlamydia* genus bacteria extracted from dogs' Chlamydial isolates, and has been successfully validated versus other PCR test-systems for indication and species differentiation of Chlamydial infection agents in mammals and birds.

Zamaziy A. A. Interconnection of composition of amino-acid liquid and «maturity» of the surfactant system of lungs for new-born clinically healthy of calves // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 105–108.

Data have been provided in article about amino-acid structure and interrelation of amniotic liquid and «maturity» of surfactant system of lungs at newborn clinically healthy calves. It has been established that «maturity» of surfactant system of lungs was installed at 40,0 % of calves of firstcalf

heifers. It has been 1,80-1,70 times less ($p < 0,01$) at calves received from cows of the second – the third time. The total fraction phospholipid was 1,38 times higher than amniotic liquid, than at animals given rise in a condition of a hypoxia ($p < 0,01$). The general content of amino acids in amino-acid liquid of clinically healthy newborn calves makes $330,39 \pm 7,52$ nmol/0,1 ml. The content of free amino acids has been at the level $222,97 \pm 3,82$ nmol/0,1 of ml. From them, it was the share of part of irreplaceable amino acids $38,40 \pm 1,32$ nmol/0,1 to ml, and replaceable – $184,57 \pm 3,44$ nmol/0,1 to ml.

Bogach N. V., Shaydyuk I. V. Application in «Vermal» ganguleterakidozis ducks and its impact on blood biochemical indices // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 109–111.

In this article has been determined in experimental ganguleterakidozis invasion ducks picked antiparasitic efficiency remedy "Vermael" (NSC "IEKVM"), which was 90,9 % with 95,6% intens. Used "Vermael" caused immunosuppressive effect within 3–10 days after application, and from 10-day drug normalized total protein and globulin fractions, led to a reduction of the CEC $0,21 \pm 0,02$ mg/ml to $0,11 \pm 0,02$ mg/ml, and with seromucoid $0,18 \pm 0,02$ mg/ml to $0,12 \pm 0,01$ mg/ml in blood ducks.

Tarasenko L. A. Efficiency gains of using of the feed additive pectin rearing pigs // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 112–115.

Studies have shown that the use of a feed additive for piglets rearing pectin at an optimal dose 0.3 g/kg

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body weight for 30 days to reduce cadmium, cuprum, Plumbum and mercury in all organs and tissues to levels MPC positive impact on the normalization of metabolic processes, the level of mineral and protein metabolism, improve the morphological composition of the blood. It is well known the dependence of enzyme activity present in the reaction mixture of the activators and inhibitors. Therefore, a mechanism to reduce the activity of title complex enzyme can be explained by the presence of inhibitors, – substances that cause inhibition of enzyme-catalyzed reactions, in which the roles in the present case are the heavy metals, which when applied removal of pectin feed additive normalize enzymatic processes .

Ponomar S. I., Kruchynenko O. V. Monitoring the situation epizootic worm infestations of the gastrointestinal tract cows in Ukraine (according to the veterinary statistics) // *News of Poltava State Agrarian Academy.* – 2014. – № 2. – P. 116–118.

The results of monitoring studies on epizootic situation in fasciolosis, paramfistomosis, dicroceliasis and strongyloidosis of the digestive system in Ukraine have been shown. The most disadvantaged areas in helminthiasis gastrointestinal tract are Volyn, Zhytomyr, Poltava, Rivne, Sumy and Chernihiv regions. During 2010–2011, 100 % of extensity of invasion by parasites paramfistoma registered in Donetsk region, dykrotseliya – Volyn and stronhilyata of the digestive system – in Rivne. During 2012–2013 he was 100 % of extensity of invasion dykrotseliya recorded in the Kiev region.

Sytiuk M. P., Bezymennyi M. V. Zoning map of territory Ukraine according to the results of

serological monitoring studies teschen disease in the population of wild boars // *News of Poltava State Agrarian Academy.* – 2014. – № 2. – P. 119–123.

The results of serological monitoring of wild pigs concerning Teschen disease in the context of rayons (districts) of Ukraine are described. 6840 blood sera samples were collected from hunter-killed boars during 2001–2013 hunting seasons in 374 rayons in all oblasts of Ukraine. We used micromethod of neutralization test in a fetal pig kidney cell culture. As a result of the retrospective monitoring we mapped rayons where samples were collected and where positive serum samples were identified from.

Sokolyuk V. M. Formation of the water used for watering animals in the southern biogeochemical zone of Ukraine // *News of Poltava State Agrarian Academy.* – 2014. – № 2. – P. 124–128.

The article analyzes the formation of water, which is used for watering animals on the farms of the southern biogeochemical zone of Ukraine. It is given the sanitary and hygienic estimation of water sources. It has been investigated sanitary and hygienic safety and quality of drinking water. It has been established that the sanitary protection zones on the farm near water intake were absent. The authors believe that this may promote bacterial contamination of underground water. It has been determined the chemical composition of fresh water it has been increased mineralization due to bicarbonate and sodium content and may be classified as the second type. It has been also found out that mercury and manganese content exceeds the maximum permissible concentration.

ECONOMICS

Samojlik M. S. Methodological principles of resource-ecological safety providing in the region // *News of Poltava State Agrarian Academy.* – 2014. – № 2. – P. 129–136.

In the articles have been worked out methodological principles of resource-ecological safety providing in the region, it includes three stages: authentication of danger, determination of resource-ecological safety zones and forming of idea of problem decision; a choice of providing events of sufficient resource-ecological strength of region security (it comes true on the basis of optimization economic models and complex estimation of alternative scenarios of the naturally-economic potential use in the region that takes into account an ecological, economic and technological criterion); adjustment and concordance of decisions (it comes true on the basis of integral model of the economic-ecological systems development of the

secondary material and power resources use in the region taking into account a regional specific).

Urusova Z. P., Yarmosh V. V., Urusov A. A. Problems and prospects of development of the market of financial services in Ukraine // *News of Poltava State Agrarian Academy.* – 2014. – № 2. – P. 137–139.

Financial service market is a market in which to exchange financial resources, the provision of credit and capital mobilization. The objective basis for the functioning of the financial market is different needs in financial resources, availability of sources of meeting this need. Market of financial services is one of the mechanisms for ensuring competitiveness of the economy, as the allocation of financial resources in this market takes place on a competitive basis, which allows direct investment flows in the most attractive segments of the economy and thus contribute to economic growth. That is why there

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are considered and identified factors that are crucial for increasing Ukraine's competitiveness in the market of financial services on a global and regional scale.

Shupyk I. I. The development of tourism as one of the promising directions of overcoming macroeconomic challenges the countries in the conditions of transformation of society // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 140–143.

The importance of the tourism industry as one of the promising directions of solving a wide range of macroeconomic problems in the period of transformation of society has been proved, which will allow stabilizujace socio-economic situation in the country and to improve the quality characteristics of living. Major directions of the impact of tourism activities on socio-economic development of the country and the reasons for their cause have been defined. It has been emphasized

that the achievement of goals is possible only if a consistent and responsible actions of the government, its constant interaction with the public, business.

Lytvyn O. Yu. The economics ideas of Christianity as the base possible post-crisis economical strategy of Ukraine // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 144–146.

The principal economics ideas of Christianity are considered in the article. The article analyses some publications by Ukrainian and Russian researchers, church historians and publicists dedicated to study of this problem. In this article the attention is focused on the influence of economics ideas of Christianity on modern economics. We must consider the economic ideas of Christianity, not only in the context of the development of Christianity and economic thinking, but associating them with a possible national Post - crisis economic strategy of Ukraine.

TECHNICAL SCIENCES

Prasolov E. Ya., Kulik O. V., Svintitskaya K. V. Reasons of spontaneous combustion of technique and application of ecological absorbents for a ceasing the fire // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 147–150.

The article presents research causes spontaneous combustion of agricultural machinery, in particular, combine harvesters. The analysis of known means to combat the fire has been researched. The studies have been shown the establishment of effective environmentally sound and economically feasible means to combat the fire. Experiments have been carried out with the definition of a fire-extinguishing capability for extinguishing hotbeds model class A and B. A composition of mixtures based bishofit to extinguish. In this case, the process reduces the cost of fighting fires achieved environmental safety, eliminated the harmful effects of fire fire fighting appliance for firefighters.

Petrovskiy A. N. Change of the electric properties of seed under influencing of high-frequency electromagnetic irradiation // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 151–155.

The questions of dayly stimulation of seed the high-frequency electromagnetic field are considered. The method of irradiation of seed and determination of their electric descriptions is offered. On the basis of structure of cages electric properties of biological fabric which seed consist of are certain. The change of constituents of active resistance is shown depending on frequency of current. It is experimentally proved that it is impossible to take an equivalent electric chart to the simple cases of connection of resistances and capacities, and seed can not be considered a neutral dielectric. The method of estimation of intensity of exchange processes is developed depending on electric resistance of seed.

THE YOUNG SCIENTISTS PAGE

Shovkova O. V. Photosynthetic productivity of soybean depending on sowing time and method of application of microfertilizers // *News of Poltava State Agrarian Academy*. – 2014. – № 2. – P. 156–160.

Photosynthesizing activity of crops, including soybeans, is the main component of the formation of their productivity. Optimal growth of the leaf surface and dry matter accumulation of soybean plants largely depends on the validity of cultivation technologies that ensure long-term operation leaf

apparatus. Seed treatment with microfertilizer chelate based on "Rexolin" and foliar feeding with "Rexolin" and "Brasitrel" on different dates of sowing soybean crops intensified photosynthetic activity of a given culture. Integrated application of microfertilizers to seed and vegetative plants promoted the formation of the maximum performance of the leaf surface and pure photosynthetic productivity.

Bondarenko I. V. Chemical and biological pest control of stored grain // *News of Poltava State*

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Agrarian Academy. – 2014. – № 2. – P. 161–164.

The results of experimental researches of chemical and biological methods of pest control of grain stocks have been presented. During the experiments was determined the technical efficiency of insecticides contact action – «Aktellik» (pirimiphos-methyl, 0.016 ml/kg), «K-Obiol» (deltametryn + piperonil butoxide, 0.042 ml/kg, 0.084 ml/kg), biological preparation – «Bitoksibatsillin» (*Bacillus thuringiensis*, 3 ml/kg and 6 ml/kg) and their mixtures against pests of grain stocks. The presence of toxic properties in number of herbal preparations: cloves, cumin, vanilla, thyme, mustard, canella, bay leaves, coriander were installed also, determined efficiency of their action in relation to the dominant species of pests of grain stocks.

Nozdrina N. L. Formation of structure units of yielding capacity and quality of grain of new winter wheat varieties in northern Steppe // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 165–168.

The results of research concerning the definition of structure units of yielding capacity (quantity of productive stems on 1 m², quantity of grains in an ear, mass of grain in an ear, mass of 1000 grains) and quality of grain of new varieties of winter wheat, grown on bare fallow are cited. Influence of weather conditions on yielding capacity and quality of grain is established. It is revealed that the greatest yielding capacity of all varieties has been received in 2013 year with sufficient moistening, the least – in droughty 2012 year. The varieties Zamozhnist and Antonivka were the most productive. In years different in weather conditions the best indexes of grain quality were formed by variety of Sonechko, and low – by variety Rozkishna.

Baranova A. S. Meat-lard production and physical and chemical properties of pork of different pig genotypes // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 169–172.

The article is devoted to the comparative study of feeding and meat qualities of sows that belong to different productivity lines: Large White (universal) breed, Landras breed and cross-breed sows in the similar conditions of feeding and keeping. Productivity has been defined based on the feeding, slaughter and carcass traits of young animals of different genotypes during growing and control fattening period. The results of the research prove that sow productive qualities are positively conditioned by the genotype. The best breed combinations of sows that provide heterosis effect in productive qualities have been experimentally determined. Sows of cross-breed genotypes proved

to excel the analogous sows of Large White and Landras breed in most productivity indices.

Manhura L. P. Productive qualities of pigs of red white belt and large white breeds at different methods of breeding // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 173–175.

The results of productive qualities of red white belt (RWB) and large white (LW) pigs' breeds by reciprocal crossbreeding have been shown. It has been established that the most polycarpic (10.91 piglets) have been revealed the sows of LW breed be thoroughbred breeding. By crossbreeding more polycarpic (10,82 piglets) have been revealed combinations LW + LWB. By this combination has been revealed the live weight piglets' nest by taking away after 60 days. Live weight of every weanling has been the highest (17,61 kg) by thoroughbred red white belt piglets. Crossbreeding of the sow LW with the boars LWB has been conducive more intensive for growth of crossbred youngsters by the less food consumption on every kg of growth.

Havryk K. A. Features sensitivity of microorganisms to antibiotics, which are isolated from the skin of the patient dogs on demodicosis and otodektsis // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 176–178.

The article highlights the features of the species composition of pathogenic microflora of the affected skin, which complicates the course of demodicosis and otodektsis in dogs and set the sensitivity of selected isolates to antibiotics. Microbiota of the skin characterized by summer mange species diversity of microorganisms and gram-negative bacilli represented (44,4 %), Gram-positive cocci (33,3 %), Gram-positive bacilli and yeast-like fungi (11,1 % respectively). Most isolates have been susceptible to amoxicillin, oxacillin, erythromycin, lincomycin, doxycycline and fluoroquinolones but resistant to gentamicin.

Lokes-Krupka T. P. Typical clinical symptoms for hepatolipidosis in domestic cats // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 179–182.

Most liver diseases in domestic cats have the same clinical picture, but each of them has its own features of display. The article presents clinical symptoms of hepatolipidosis in domestic cats: icterus of the conjunctiva, the mucous shell of oral cavity, nose and skin, vomiting, deterioration of the wool and itching. It has been established that obesity of animals, with subsequent manifestation of anorexia is a favorable factor for development of liver lipidosis. age and pedigree susceptibility of domestic cats to liver lipidosis have been explained.

ANNOTATION

Yeshchenko I. V. Status and problems of oilseed production in Poltava region // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 183–188.

Sufficiently rapid development of the oilseeds production industry and the increasing demand for vegetable fats in the world resulted a significant increasing of the scientific interest to problems of oilseed production in Ukraine. The article discusses the major trends of this industry development, the external and internal factors which make an influence on it, organizational and economic peculiarities of the effective development of oilseed production industry, the analysis of economic efficiency of oilseeds production has been provided, as well as the main reserves of its increase in Poltava region has been

identified.

Nischenko T. N. Features of personnel management in agricultural enterprises // News of Poltava State Agrarian Academy. – 2014. – № 2. – P. 189–192.

The article substantiates the need to consider socio-economic and educational qualification factors increased productivity for the effective use of personnel in enterprises of the agricultural sector. The system of personnel management as a complex mechanism between elements of which there is a close and indissoluble relationship. The basic structure of the components of human resource management in the agricultural enterprise. Particular attention is paid to providing effective professional impact of highly skilled workers.

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