

AGRICULTURE. PLANT CULTIVATION

Melnyk A. V., Sobko N. G., Dubovik O. O. Productivity of winter wheat varieties depending on terms of sowing under the conditions of northern part of the Left Bank steppe of Ukraine // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 6–9.

Thus, the optimal conditions for the northern part of the Left Bank steppe of Ukraine sowing dates should be considered 10-th – 20-th of September. For most varieties sowing on September the 20-th contributed to greater performance of their genetic potential in terms of productivity. The regularity of productivity loss have been stated at a deviation from the optimum sowing time to earlier (September the 10-th) and later (1-st and 10-th of October). Sowing in the later periods in most years leads to greater yield reduction than at early sowing.

Vitanov A. D., Soldatenko O. V., Uryupina L. M. Energy efficiency of growing cucumber on seed purposes in Eastern Forest-Steppe of Ukraine // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 10–13.

It is established that when the cultivation of cucumber seed goals in Eastern forest-Steppe of Ukraine the best way to irrigation has drip. This method of irrigation fertilizer required to locally in soil at a dose of $N_{30}P_{60}K_{45}$ and conduct fertigation twice during the vegetation period on the N_{15} . The obtained yield of conditioned seeds (188 kg/ha), the highest ratio of energy efficiency 0,053 and incurred lowest energy costs (352,7 MJ), on the formation of 1 kg of seeds, due to economy water (46 %) of mineral fertilizers (50 %).

Herman M. M., Mishchenko O. V. Dynamica of accumulation of drymattergrainsoft winterwheat // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 14–16.

The results of the studies found the best stage of ripeness soft winter wheat to produce high-quality seed. Determined that the principal amount of protein and gluten in grains synthesized by the middle of the milk, the next phase of ripening grain continues their accumulation in sufficiently moist years before full maturity, in the dry - the middle of ripeness of grain, regardless of its predecessor, background fertilizer and seed rates soft winter wheat seeds. Found that in dry warm weather and lack of rain during the development and ripening of grain daily gain mass of 1000 grains is much larger than in years with high rainfall.

Rozhkov A. O. Spring triticale grain productivity and bioenergy efficiency of its growing depending upon different sowing and sowing methods // News

of Poltava State Agrarian Academy. – 2014. – № 1. – P. 17–21.

The results of the three-year researches according to the coenotic factors influence: sowing methods and sowing rates on the grain productivity of spring triticale plants are given. The advantage of the striped sowing method on the increase of economic and bioenergy efficiency indices of spring triticale growing is established in the article. The crop capacity is higher while using the striped sowing method as well as economic and bioenergy efficiency indices of spring triticale growing are higher at a sowing rate of 550 seeds / m^2 ; at the same time during the drill sowing method – at a sowing rate of 500 seeds / m^2 . The established regularity is caused by weakening of coenotic tension in the striped sowing method which creates conditions for the full development of a larger number of plants per unit of the sown area.

Ivashchenko O. D., Momot Y. V. The drug active ingredients identification in the lignified stamp parts of hemp // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 22–24.

The article is devoted to an important issue: the research of the modern variety YUSO-31 hemp waste for active drug content. The cannabinoids determination in the lignified stamp parts of the cannabis plant (boon) was carried out by various methods. A microscopic morphological definition of the plant facility was carried out to prove its cannabis origin. The results of the tetrahydrocannabinol identification were also presented due to the qualitative chemical reactions and the quantitative analysis by gas chromatography.

Tsilyuryk A. I., Shapka V. P. Effectiveness of moldboardless tillage when growing spring barley in northern steppe // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 25–29.

Have studied influence the different of basic soil tillage under barley spring on agro physics properties soil, moisture mode of ordinary chernozeme, weediness of crops, productivity and cost-effectiveness of the production of crops. Established that chisel tillage in the arid steppe of Ukraine provides an increase in the accumulation of soil moisture in the autumn and winter period, due to the presence on the surface of the soil and plant residues predecessor and wavy nanorelief. This ensures the maximum amount of moisture in the spring compared with other methods of the basic soil cultivation, as well as high yield and the highest level of profitability of grain production. Using shallow disk tillage (10-12 centimeter) under spring barley leads to increased

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weediness that there is one of the causes of low productivity grain-fodder culture 0,20-0,46 tone/

hectare in relation to the moldboard plowing and chisel tillage.

AGRICULTURE. ANIMAL HUSBANDRY

Pelykh V. G., Chernishov I. V. Effect parameters consolidation group for body weight and uniformity of growth on growth patterns of young pigs // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 30–33.

The paper studied the effect of equalization of groups of pigs on live weight at weaning from the sow and uniformity parameter growth in the suckling period on productive qualities of pigs. Proved a significant influence of these parameters on the dynamics of daily average and relative growth and variability of live weight of pigs. The data obtained should be used for breeding plants, reproducers and commercial farms for the optimal set of groups of pigs, increasing the energy of their growth in growing and fattening and obtain a homogeneous product.

Katerinich O. O. Analysis of parameters for the formation of turkey live weight in different genotypes // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 34–37.

Weekly assessment of young turkey live weight of initial lines and hybrids derived from their use was done. The parameters of the growth of live weight were determined - the intensity of formation (Δt), uniformity index (Ip) and voltage index (IH).

Sex and genetic differences according to the nature of forming of turkey live weight of paternal lines cross "Kharkiv" has been established. A significant level of voltage index in predicting growth of turkey live weight in the 16 - weeks of age ($r = 0,72; -0,60$) has been established.

Yaremich N. V. Influence of age females mink of different Scandinavian genotypes depending on fertility rate // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 38–40.

Research of indicators of fertility females of minks different genotypes the Scandinavian selection depending on duration of their use for reproduction in economy is conducted. It is established that irrespective of color type at females indicators of reproductive ability grow with age. So, at minks of genotypes of Pearl and Scanblack the maximum values of an indicator a fertility are registered at females 3-ro years of use - 6,25-6,42 puppies ($P > 0,99... 0,999$). At animals of a genotype of Scanglow the maximum value of this indicator was observed at females of 2-year age - 5,48 goal. It is established high-probable positive correlation communication between indicators of quantity given rise all and been born live puppies ($r = 0,36-0,39, p > 0,001$).

VETERINARY MEDICINE

Lukyanova G. O. Features epizootology of anoplocephalidosis horses in the Crimea // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 41–42.

Seasonally and age invasiiaanoplocephalidosis of horses in different climatic and landscape zones Crimea have been studied. Maximum infestation of anoplocephalata in horses registered in the foothill and mountain areas. The steppe zone is present but generally not observed. The most common pathogens detected species Anoplocephalaperfoliata (in 63 of 71 affected horses of anoplocephalata – 87,3%). The most invazia observed in the autumn. Young animals 1 to 3 years of age had the highest rates of infestation cestodesintestin (EI – 26,3%). Adult horses were infested by only 5,7%.

Yevstafyeva V. O., Korchan L. M., Mordovtseva O. M., Korchan M. I. Eimeriosis of goats in individual farms in Poltava city // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 43–46.

The data concerning the incidence, age and season eimeriosis dynamics in goats from individual farms in Poltava city. The species composition by

causative agents of eimeriosis in goats represented by six species: Eimeriaarloingi – 56 %; E. caprina – 30 %; E. alijevei – 28 %; E. ninakohlyakimovae – 15 %; E. jolchijevi – 12 %; E. christenseni – 6 %. Extensiveness of eimeriosis invasion in young stock of goats was 63–100 %, in goats older than one year, averaged, 85 %. In 56 % infected animals intensiveness of invasion averaged from a few hundreds to 10 thousands of oocysts in 1 g of feces. The most favorable to the eimeriosis was young stock of goats from 16 day to 4 month age. The data of therapeutic efficacy antieimeriosis drugs for this invasion. The maximum efficiency on eimeriosis in goats showed by brovaseptol (effectiveness 100 %) and amprolinvet 12,5% (IE=98,8 %, EE=60,0 %).

Spitsina T. L., Rakytyansky V. N., Sukhin V. N. Correction of physiological status and reproductive function of sows to the effect of dietary supplements // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 47–49.

The article studied the possibility of using dietary supplements for correcting metabolism and stimulation of reproductive function of sows. The

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additive activates protein synthesis function of the liver and improves hepatocytes, decreasing the period between weaning and estrus, increased levels of fertilization after the first insemination by 10%. This effect used additives improves blood circulation in the pelvic organs, increases the functional activity of the ovaries by stimulating folliculogenesis and ovulation.

Lokes P. I., Kravtschenko S. O., Lokes-Krupka T. P., Gryshchuk A. V. Morphology of liver and kidney in hepatic-renal syndrome in dogs and cats // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 50–54.

Studies have found that the development of hepatocellular renal syndrome in dogs and cats is accompanied by structural changes in the liver and kidneys. Pathological changes are the edema's increase and focal discolored liver and kidneys. Microscopic changes consist in the development of protein (granular and hydropic) degeneration, focal necrosis of hepatocytes and manifestations extracapillary glomerulonephritis and interstitial nephritis, atrophy most convoluted tubules and glomeruli.

Kone M. S., Korchan L. N., Petrenko A. A., Opryshko A. L. Epizootological data feline panleukopenia and comparative evaluation of the effectiveness of treatments in Ltd «Biocenter» in Poltava // *Вісник Полтавської державної аграрної академії*. – 2014. – № 1. – P. 55–57.

Age and breed sensitivity, seasonality and dynamics of manifestations panleukopenia in cats under veterinary clinics, Ltd "Biocenter" Poltava have been studied. Different treatments feline panleukopenia have been offered. New treatment scheme panleukopenia in cats have been developed. This study established that the most registered panleukopenia in cats aged from two months to one year. More prone to suffer nonpedigreed animals. The disease has a clear seasonality, which it is manifested more frequent in the spring-summer-autumn periods. The proposed scheme provides absolute therapeutic effectiveness.

Lokes P. I., Lokes-Krupka T. P. Differential diagnosis of liver disease in domestic dogs and cats // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 58–61.

Found that liver disease is very common in pet dogs and cats. Shows the structure of the liver disease in animals of these species. Found that the differentiation of the most common diseases of the liver (hepatitis, cirrhosis and hepatodystrophia) in dogs and cats should be carried out by clinical signs, symptoms, results of ultrasound, as well as the results of laboratory analysis of blood. Describes the

most typical symptoms of diseases and their characteristic ultrasonographic differences and blood biochemical parameters.

Goralska I. U. Diagnosis and treatment of hepatopathy in dogs with babesiosis // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 62–64.

Dogs which suffer from babesiosis, at different stages of disease pathology installed liver (hepatopathy), which is characterized by pain in the liver area of the field, hepatomegaly, ikterychnisty conjunctiva, hypoalbuminemia, hyperbilirubinemia, increased activity of ALT, AST and GGT. Three-week course of treatment for babesiosis of dogs with signs of jaundice using glucose, ascorbic acid, glutargin, contrical, katozalu, panangin, lasix and essentielle forte leads to a gradual, partial recovery of the functional state of the liver.

Shipakin M. V., Prusakov A. V., Virunen S. V., Scuba V. V., Bylinskaja D. S. Manufacturing method of corrosion preparations using dental plastics // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 65–67.

In this article the technique of production of corrosion anatomic preparations with use of stomatology plastic which is at present used on chair of anatomy of animals of FGBOUVPO "St. Petersburg state academy of veterinary medicine" is stated. As injection hardening liquid we suggest to use two-component plastic "Redont — 03". This plastic is used for production of orthodontic artificial limbs and consists of two components – powder and solvent. As a result, this method can produce corrosive agents on the cardiovascular system, including arterial and venous bed, and the tube-cavity of the casts. Also, this technique can be used for preparations of the bronchial tree and the biliary system of the liver. The corrosion preparations received by this technique can be used both in research work, and when carrying out laboratory classes in anatomy of animals.

Kostjuk I. A. Peculiarities of using of succinate as an energy substrate of tissue respiration under accumulation of vitamin E in the liver of chickens // *Вісник Полтавської державної аграрної академії*. – 2014. – № 1. – P. 68–74.

In connection with the use of succinic acid (succinate) as a factor in metabolic correction in the diets of animals and veterinary medicine, the study of relevant features of the use of this substance as an energy substrate of tissue respiration is question of vital importance. Very important for the effective application of metabolic correction is to study the influence of membranotropic substances, in particular vitamin E succinate oxidation on liver mitochon-

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dria. The study has displayed free stimulation of succinate oxidation in liver mitochondria under the influence of high doses of vitamin E in the diet of

chickens that must be considered when possible joint use of vitamin E and succinate and as energetic factors of metabolic correction in birds.

ECONOMICS

Cheberyako O. V. Influence of monetary reform of the 1920s on the budget relations in Ukrainian SSR // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 5–81.

Establishment and functioning of the Soviet budgetary system in the USSR in the 1920s, would be impossible without the monetary reform and its implementation in 1922-1924 contributed to the organizational and functional improvement of the budgetary system, the formation of stable performance revenues and expenditures of state and local budgets, otherwise - so called solid budget. It is shown that in terms of budget financing the main burden for 1921-1924 biennium assumed the Soviet sign, which means money the state treasury. Soviet sign even guarded ducat from depreciation in the period of the project as a new monetary unit. Therefore, determining the impact of monetary reform on the budget process, you should consider all stages of the monetary reform and the ratio of the pre-war rubles and the so-called commodity, conditional gold ruble. Under the conditions of approval of hard currency - tenner - to stabilize the fiscal system and fiscal relations is important to prevent depreciation, eliminate the role of the emission means. It was necessary to avoid the issue in budget revenues, the economical use of budgetary expenditures, take responsibility for budgeting, financial sources carefully considered.

Samojlik M. S. There is economic model of development of solid waste handling sphere in the region taking into account ecological factors // News of Poltava State Agrarian Academy. – 2014. –

№ 1. – P. 82–87.

Developed and scientifically proved methodology integrated development model sphere of solid waste management, which allows to make optimal decisions of the environmental and economic points of view in this area. Expected system charges of different variants of efficiency of investing and functioning of regional control system by wastes. Calculations showed that economic efficiency of processing of wastes in comparing to the ground burial place considerably higher, that it is related to the size of ecological risks. An integral economic effect, for calculation ten year term of exploitation of setting on processing 156 thousand tons of wastes in a year, makes a 9,88 million hrn.

Litvin O. Yu. Descriptive propagandistic period in the development of ukrainian housing cooperation // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 88–90.

Main problems about the development of the housing cooperation and their coverage in the world economic literature are examined. Research on called subject has been analyzed. The study has been proposed periodization of publications, which identifies four periods and takes into account the specifics of the state policy in the sphere of housing cooperation. Attention has been given to the housing cooperation which can be one of the possible mechanisms for solving the acute housing problem in Ukraine, to the need for broad public awareness of the great potential of housing cooperation and positive use of foreign experience.

TECHNICAL SCIENCES

Senenko N. B., Storozhenko D. O., Senenko A. I., Stepanenkov H. V., Pisarenko P. V. Method of drinking water purification from nitrate-ions // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 91–95.

The chemical composition of the sample clay raw material is specified. The results of experimental research of sorption characteristics of clay raw material in the air – dry condition and thermally treated at different regimes concerning nitrate – ions are presented. The basic physical – chemical indices of natural drinking water quality are researched before and after treating by selected sorbent and desorption characteristics is defined. The possibility of reducing the concentration of nitrate – ions in

water is shown up. The recommendations for purification of natural drinking water from nitrate – ions are developed.

Ivanov O. N., Arendarenko V. N. Computational models hydroinjection installation tunnel type // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 96–101.

The results of theoretical studies on the preparation of the computational model hydro spray tunnel designed for spraying high-pressure plants in the tunnel chamber. Studies were carried out using the theory of hydrodynamic and hydrostatic calculations for complex pipelines and multi-hydraulic systems. To achieve the objectives of the study were divided into components of hydraulic

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systems, each of which is a more simplified version of a complex pipeline. According to the results of computational studies were compiled analytical equations that determine the magnitude of hydraulic parameters at nodes and establish the relationship between the main components of the hydraulic system, and outlines the framework for the selection of a pressure pump for the amount of required pressure and flow.

Kotsyuba I. G. Mathematical prediction of formation of solid waste in Zhytomyr // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 102–105.

Studied practical experience in dealing with solid waste (MSW) in Ukraine and the developed world. The theoretical and methodological approaches to the analysis of processes of formation of solid waste, taking into account environmental, social and economic factors. A scientific and methodological support for predicting the volumes of solid waste in the city.

Skakalina E. V. Structure of logistic components of the ERP-system agroholding // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 106–108.

THE YOUNG SCIENTISTS PAGE

Dmytrenko I. S. Structure of mesofauna by the different types of farming // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 112–114.

The role of soil mesofauna as the basis of all the processes of soil formation. Mesofauna composition investigated in the fields of different types of farming and calculated the relative number of invertebrates in terms of area. Results of experimental studies are presented in tabular form in June 2013. Opened technique to study soil fauna that was used during the experiments. These are compared and the results of two fields with different tillage technology.

Avramenko N. I. Seasonal variation of biogenic substances in the River Vorskla // *Вісник Полтавської державної аграрної академії*. – 2014. – № 1. – P. 115–120.

The main factors that have the greatest impact on the seasonal variability of nutrients in the river Vorskla are examined. It has been established that an important role is played by the natural cyclical fluctuations in water flow and its regulation. Direct dependence between the vital functions of aquatic and seasonal content of nutrients in the rivers, lakes and ponds has been observed. The results of research on the impact of hydrobiological (photosynthetic) processes and biological factors on fluctuations to the variation of content of biogenic substances have been shown. It has been emphasized that the level of

The work presents the proposed structure of logistic system components control major agricultural producing enterprises. Due to the organization of the logistics components of the modular design is optimized process of embedding it into the overall structure of the ERP-system. All tasks are divided into classes depending on the stage of their implementation. As a mathematical methods to solve logistic tasks components are available apparatus of fuzzy sets, genetic algorithms, methods of optimal sequential-parallel ordering works in systems with non-identical objects.

Opara N. N. Information technology in the teaching and learning of life safety in high school // *Вісник Полтавської державної аграрної академії*. – 2014. – № 1. – P. 109–111.

The article highlights the information technology in the process of teaching a course in LS schools. Primarily the study focuses on the use of common approaches suggested by a group of authors, as well as the leading components of the conceptual apparatus, on what basis can improve the content, forms and methods of the educational process.

nutrients is limited by the development of biological processes in the water. It has been determined that the variability of biogenic substances in river water has a clearly defined seasonal nature. The dependence on the magnitude of water flow and the development of hydro-biological processes has been established. Eutrophication processes in the river Vorskla, in which agroecological information was collected, have been described.

Fesenko O. G. Description of nitrate contamination superficial and underground waters of Poltava region // *News of Poltava State Agrarian Academy*. – 2014. – № 1. – P. 121–124.

The process of environmental pollution by nitrates, such as surface water resources is examined. The growing use of chemicals in agriculture, especially the use of high doses of fertilizers, increase tension in the biological cycle of substances increase the risk of contamination of agricultural landscapes. On the basis of analytical and statistical study revealed that one of the major environmental pollutants, in particular, the water in the Poltava region, nitrates. The results of studies of surface water area on the nitrate content according to the Poltava Regional State Technological Design Center to Protect soil fertility and quality.

Stcherban T. V. Reproductive qualities of sows Mirgorod's Breed when crossed with boars for meat production // *News of Poltava State Agrarian*

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Academy. – 2014. – № 1. – P. 125–129.

Mirgorod pig breed is one of the local endangered breeds, so it is very important to find the ways for keeping it. This article provides a comparative analysis of reproductive qualities of sows Mirgorod breed pure breeding and crossbreeding with specialized meat genotypes. The positive influence of Landrace boars on the reproductive capacity of sows Mirgorod breed; negative effect on the reproductive quality – from crosses with Pietrain breed and large white English selection.

Lyashenko A. O. Morphological analysis of bull semen of long-term storage // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 130–133.

The morphological characteristics of frozen bull sperm of different breeds the Bank of genetic resources the long-term storage in liquid nitrogen were studied. A significant difference between the indicators of pathological and dead forms of bull semen with different terms of storage was set. The result studies, by the terms of storage 10-45 years, in bulls of dairy breeds were observed above normal of pathological forms of sperm in an average of 2,5 %, except for sperm Ukrainian Black Pied dairy breed. In semen bulls of Simmental and beef breeds above an average of 5 %.

Jurtshenko I. I. Influence of intravascular laser irradiation on blood in cows and treatment of pyoinflammatory processes of the distal extremities // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 134–137.

Laboratory results of blood (serum) for a range of hematological and biochemical parameters of cows sick on inflammatory processes in the distal extremities before and after use of intravascular laser irradiation of blood have been lit. It has been established that the use of locally ILOK and copper sulfate powder contributes to the normalization of the inflammatory process. In the blood serum is achieved a significant reduction of the activity of aspartic trans a minase and alkaline phosphatase is increased (in the control group). Also in the experimental group we saw a decreasing of the percentage of lymphocytes, and in control one - increasing the percentage of lymphocytes, as well as an increasing of hemoglobin in the experimental group and in control group – its reduction.

Mirzaeva M. S. Spreading of a dental pathologies in dogs under the veterinary clinics conditions in Poltava // News of Poltava State Agrarian Academy. – 2014. – № 1. – P. 138–141.

The paper shows the results of accounting documentation on common dental diseases in veterinary clinics Poltava for the period from 2011 to 2013. Nosological manifestations of pathology in dogs and the breed have been taken into account. It is proved that dental disease in dogs are fairly common, it makes 21.11% of surgical diseases. The obtained data indicate the need to improve and complement existing methods of prevention and treatment of oral disease in dogs.

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