

Antonets S. S., Antonets A. S., Lukyanenko G. V., Pisarenko P. V., Pisarenko V. N., Pisarenko V. V. Social and ethical framework of organic farming // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 7–9.

The data presented in this article indicate a need to change the concept of agro-chemical farming for agro biological. This approach to food production in agriculture solves the problem of human health, since organic farming is the only production system that maintains and even improves the condition of the soil, ecosystems, and ultimately the human health. Almost 40 years of successful experience of "Agro ecology", proved that organic agriculture on high soil fertility allows to receive crops at the level of intensive farming. Therefore, the social and ethical concept of organic farming in modern conditions should be the groundwork of all agricultural enterprises, as it is an important prerequisite for the production improving.

Moskalets V. V., Moskalets T. Z., Moskalets V. I. Influence of biological agrotechnology of cultivation of winter triticale on the elements of structure of the productivity of grain // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 10–14.

The sensitivity of winter triticale on the action of microbiological preparations albobakterin and diazobakterin in terms of the elements of structure of the productivity was researched. It is established that the use of microbial preparations on winter triticale allowed to differentiate varietal composition of this culture in terms of sensitivity to the action of microorganisms: sensitive (on diazobakterin: «Amphidiploids 256», «Slavetne»; on albobakterin: «Vivate Nosivsky», «Jaguar», «Augusto», «Slavetne»), moderately sensitive (on diazobakterin: «Augusto») and insensitive (on diazobakterin: «Vivate Nosivsky», «Jaguar», «DAU 5»; on albobakterin: «Amphidiploids 256», «DAU 5»). It is well-proven that the use of biopreparations on sowing of triticale winter in the conditions of central part of Forest-steppe of Ukraine assists the increase of the productivity of grain (7–8 tons per ha) due to the increase of quantitative indexes of elements of structure of the productivity.

Zhemela G. P., Shevnikov D. M. The influence of agro-ecological factors on the growth of durum wheat depending on fertilizers and biological products // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 15–18.

The use of fertilizers and inoculation of seeds of spring durum wheat had a positive impact on the growth and development of plants. The impact of mineral fertilizers on plant height was more effective in comparison with biological products, but their complex influence was more effective on the growth processes of plants of spring durum wheat, in these conditions negative impact did not appear against adverse environmental factors. Without the use of fertilizer plant height was 63.6 cm, the use polimiksobakterina increased to 67.2, diazofita - up to 68.6 cm.

Herman N. N., Marenich M. M. Efficiency of pre-sowing seed treatment of soft winter wheat by

fosfatmobilizing agents // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 19–21.

It is found that presowing treatment of wheat seeds of soft winter varieties Vasilisa by phosphate mobilizing agents positively contributes to increase the yield of winter wheat. According to scientific studies the highest increase in the yield of soft winter wheat with the use of bacterial substances polimiksobakteryn and diazofit a dose of 150 ml / ton, while making a complete fertilizer dose without fertilizers 0,89, N₂₅P₂₅K₂₅ –0,95, N₅₀P₅₀K₅₀ –0,95, N₇₅P₇₅K₇₅ –0,85, 3 t/ha of straw + N₁₀ – 0,94, respectively diazofit in making a complete fertilizer dose without fertilizers 0,86, N₂₅P₂₅K₂₅ –0,93, N₅₀P₅₀K₅₀ – 0,94 N₇₅P₇₅K₇₅ –0,87, 3 t/ha of straw + N₁₀ –1,01 is 0.89 to 0.95.

Kolesnikov L. O., Kolesnikova O. L. Flora of the United States and contiguous countries of North America in the arboretum of Poltava state agrarian academy // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 22–27.

Ecological and geographical analysis of dendroflora of the Park of Poltava State Agrarian Academy was conducted - the distribution of the flora of the park in geographical spreading. The genetic analysis - the distribution of flora on the criteria of geographical origin and history of the settlement, botanical and geographical analysis - liaison with the flora of the other floras were executed. The plants which originate from North-American region were selected. The ecological standard of these plants was given: edaphic requirements for environmental factors, light conditions, temperature, phytopathological resistance. Ecological phytocenological analysis - the distribution of flora on the growth conditions was done.

Konoplia K. V. Sprouting power and germination of hemp seeds of different sizes // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 28–29.

14 hemp varieties were investigated by the sprouting power and germination: 1) of the individual plants with the highest, middle and the lowest mass of 1000 seeds; 2) of the population of big, middle and small seeds group. In both experiments were analyzed only normal ripe seeds regardless of the fraction factor excluding adverse effects of immature seeds. It was revealed that all groups of seeds of individual plants and populations give high indexes by the sprouting power, as well as by germination. Finding of fact that the ripe seeds of fines on the viability of hemp seeds are not inferior to the big and middle fractions indicates its usefulness as a seed. The fact of full value of small seeds as sowing material was proved.

Kulyk M. I. Influence of growing conditions on phytomass switchgrass productivity (*panicum virgatum* L.) of the second year vegetation // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 30–35.

The peculiarities of forming switchgrass phytomass productivity on degraded soils to produce raw materials for biofuel production are given. Phenological examinations such as the duration of interphase periods during the crop vegetation of the second year are shown.

The quantitative indices of vegetative plant part and their correlation are established. Productivity of phytomass switchgrass of under study varieties according to different row-spacing width is determined.

Mischenko S. V. Dependence of seeds germination power of hemp self-pollinating lines on generation and keeping period // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 36–39.

One of the main aspects of the influence of inbreeding (self-pollination) on proving of depression of signs of germination energy and power of modern hemp (*Cannabis sativa* L.) varieties is given in the article. It was proved, that at increasing of keeping period of seeds germination energy and power decrease. At self-pollination decreasing of indexes of germination energy is fixed. It is typical for all lines (samples), which were investigated. Considerable limits of variation of signs of germination energy and power (h from 1 to 68) let us assert the gene-type dependence of such sign.

Gyrka A. D., Kulyk I. O., Andreichenko O. G. Productivity of oats and spring barley depending on predecessors and use of micro-fertilizers in northern Steppe // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 40–42.

The results of studying the influence of the use of fertilizers on crop yield of oats and spring barley in the Northern Steppe. It is established, that a complex application of micro seed treatment and spraying crops provides increased productivity of oats by 10%, barley - 15% depending on the predecessor. It is found that more adapted to arid conditions are oats that provided by 0.72 t per ha (30.9%) higher yield than barley. The best predecessor for these crops is winter wheat. Cultivation after winter wheat ensured grain yield formation of oats by 10.1 and 18.1%, and barley - by 20.4 and 23.7% more than after maize for forage and sunflower respectively.

Gulay V. V. The allelopathic connections of spirochetes *Leptospira interrogans* in phytocoenoses of marshy meadows // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 43–44.

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

Kozelets G. M. Productivity of coriander depending on the terms of sowing, seeding rate and row spacing in the northern steppe of Ukraine // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 45–48.

There were given the results of seeding rates and row spacing on the productivity of coriander of winter and early spring terms of sowing. It was founded that the best term for sowing of coriander was the under winter term at which the productivity of fruit was 1.21 t/ha, which is more in comparison with the early spring on 0.30 t/ha, or 24.7%. For the coriander in the conditions of northern

Steppe the optimum seeding rate is 2.0-2.5 million of germinating seeds per 1 ha, which provided the yield 1.14-1.15 t/ha. Sowing with a row spacing of 0.45 m encouraged getting of yield 1.09 t/ha, which is more than 0.15 m by 0.06 t/ha or 8.0%. Higher level of yield (1.39 t/ha) was obtained by the under winter term of sowing with a row spacing of 0,45 m and seeding rate of 2.0 million of germinating seeds per 1 ha.

Kholod S. M., Kholod S. G., Il'ichev U. G. Chickpea as promising legumes for forest-steppe of Ukraine // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 49–54.

The value of chickpea culture and the results of the study of 102 samples from Syria on the main display of economically important traits are given. Samples of chick-pea were evaluated for manufacturability, productivity and its components. The sources of economically important traits: on seed production, number of seeds per pod, number of pods per plant, the high mass of 1000 seeds and suitability for mechanized harvesting were identified. Taking into account the results these models can be used in breeding to improve productivity and manufacturability in the southern forest-steppe of Ukraine.

Ilchenko M. O. The correlation between physiological and biochemical indexes of boars semen // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 55–57.

The physiological and biochemical status of semen in boars with different sperm quality was studied. Among physiological indexes the following were studied: the volume, the common number of sperm, the concentration, and movement of semen, thermoresistential test and thermo stress test. The biochemical indexes are: general protein and its fractions, activity of ALT, AsAT and LDG, creatinine, urea, cholesterol, triglycerides, phosphorus, calcium. The correlation only between some of them was determined.

Ladysh I. A., Bublik V. N., Znagovan S. Y. Overall results of assessment of the adaptation system status of sheep organism // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 58–60.

As a result of morphological and biochemical studies of sheep blood a clinical-biochemical coefficient was created which is based on lymphocyto-neitrophilous index. In newborn lambs of precos breed, there was a higher coefficient in comparison with lambs from Lugansk region as a consequence of higher level in adaptation mechanisms in organism of the newborn lambs of the breed. It was established that sheep of Askania merinos breed bred in the conditions of the Kherson region have been more adapted to the physiological and technological stresses.

Sidashova S. O. Estimation of dairy cows fitness to be donor or recipient for preimplantation embryo // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 61–63. In the article the results of palpation research in morphological and functional state of high productivity dairy cow ovary and luteogenesis for animal selection with the aim of embryodonation are presented. In 9-14%

of cows, deficiency in luteal stage formation from day 5 to day 15 as a consequence of corpus luteum lack in ovary is found. Moreover, 17-43% of them were faulty for embryodonation as a consequence of kistosis follicle degeneration: embryos flushed from them on day 7 to 8 after polyovulation had deep morphological defects and were nonviable.

Tkachova O. L., Dobrodeyeva L. T., Rossokha L. V., Rossokha V. I., Tkachov O. V. Cytogenetic and biotechnological estimation of traken and hannover stud breeds stallions // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 64–66.

This article highlights the experimental research results of the comparative cytogenetic and biotechnological estimation of the inspected traken and hannover stallions on general chromosomal instability and by the high-quality and quantitative indexes of sperm after thawing. At general chromosomal instability of the inspected stallions of the hannover stallions 4,9% a biotechnological fitness of sperm was 76,19%, for the stallions of traken stallions a biotechnological fitness of sperm was 72,73% at chromosomal instability 5,91%. On the biotechnological fitness of sperm of the inspected stallions a presence influences also pair and circular aberracy.

Grechka G. M. Economic value of Ukrainian steppe bees // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 67–69.

The experimental data of comparative evaluation of purebred bee of Ukrainian steppe breed with local families according to a result of accounting grown bee brood in different periods of their active life, bee collected pollen, produced honey and rebuilt honeycombs are given. Judging from the average number of grown bee brood, the intensity of development in the bee families of Ukrainian steppe breed by 28.7% more than in families with local female bees. Bringing up a sufficient number of worker bees, pure-bred bees provide high productivity for honey collection. Ukrainian steppe bees collected more than 19.6% of bee pollen, 33.4% of honey and rebuilt more than 20.2% of honeycombs.

Shamro L. P., Shamro T. N. Biological features of working bees in wintering bee colonies on different forage // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 70–72.

A comparative study of anatomical and physiological characteristics of bees in bee colonies (the concentration of protein in the hemolymph, the degree of pharyngeal glands and fat body) that wintered in the honey and sugar feed, during the autumn-winter-early spring period of their detention was done. It was found that during the replenishment of forage supplies in winter with feed sugar concentration of protein in the hemolymph of bees falls to 48.15 against 72.05 g/l in the media families ($P < 0,01$). Later - during the winter stay and to replacing wintered bees into summer - it is always slightly lower than in families who eat honey in winter. The degree of development of pharyngeal glands and fat body during the study period is consistently (uncertainly) lower in bee

families that wintered on sugar feed.

Myronenko O. I., Bulavkina T. P. Effect of alternative mineral feed additives on macronutrient metabolism in the body of pigs // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 73–75.

Study and analysis of influence of mineral of unconventional forage additions: double-base compositions of DMC (dry mineral concentrate) from lipotom, DMC with Echinacea purple) and complex (DMC from lipotom and by Echinacea purple) on the exchange of separate macronutrients, in particular, calcium, phosphorus, potassium, sodium and iron, in the organism of pigs, and also their content in the chyme of gastrointestinal tract and serum of blood. A positive effect of produced water on the functional state of young pigs was investigated and was scientifically justified its introduction in the required amount in the feed additive intake.

Yuskiv L. L., Vlizlo V. V. Metabolic profile of bovine blood of cows with postpartum hypocalcemia // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 76–80.

During the research, the content of 25-hydroxycholecalciferol (25-OHD₃), parathyroid hormone (PTH) and calcitonin (CT), and concentration of calcium of total, inorganic phosphorus, magnesium and the activity of alkaline phosphatase in blood, noneteryfikation fatty acids (NEFA), glucose and total protein in the blood of cows suffered from postpartum hypocalcaemia was studied. It was found that the blood of cows with clinical signs of postpartum hypocalcemia content 25-OHD₃ was higher and the content of PTH and CT - lower in comparison with healthy cows in 1-2 days after calving. However, in the blood of cows suffered from postpartum hypocalcaemia the content of total calcium, inorganic phosphorus, glucose, total protein reduced as well as the content of NEFA, concentration of magnesium, and activity of alkaline phosphatase had increased.

Berdnyk V. P., Timchenko O. V. Comparison of results of studies of cow's milk with the help of mastadenitis samples and the cultural method with the aim of excretion of *Staphylococcus aureus* // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 81–83.

In comparative terms the results of researches of 85 samples of cow's milk with the help of mastadenitis samples and the cultural method with the aim of excretion of *Staphylococcus aureus* are given. With the help of mastadenitis samples positive results in 20 (23.5 %) cases, and cultural methods - 34 (40.0 %) were obtained. Of the 41 samples of milk volume of 10.0 ml culture *St. aureus* was isolated in 34 (82.9 %) cases, 1.0 ml - 25 (61.0 %) and 0.1 ml - 22 (53.6 %) cases. In 13 (65.0 %) of 20 samples of milk, which reacted with mastodyn, the results of both tests coincided, in 7 (35.0 %) - they did not.

Izdepskiy V. Y., Izdepskiy A. V. Exchange of proteincarbohydrate complexes in serum blood and synovial fluid under different methods of treatment aseptic arthritis in horses // *News of Poltava State Agrarian Academy*. – 2013. – № 2. – P. 84–86.

Results highlight features of exchange of protein containing compounds in serum and synovial fluid at various treatments of aseptic arthritis in horses. In

comparative aspect the efficacy of intraarticular injections of various medicinal compounds containing anesthetic and antiinflammatory components is studied. It was found that the use of Movalis in combination with trifuzolom promotes rapid exchange recovery seromucoid sialic acids in serum and synovial fluid in comparison with diprosanom.

Borisevich B. V., Lisova V. V., Bondarenko O. V. Microscopic changes in the liver of cats at the calycivirus infection // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 87–88.

The results of the histological examination of the liver of cats killed by calycivirus infection are presented. The presence of inflammatory changes characterized by the expansion and congested blood vessels, inflammatory swelling of parenchymal organ and its infiltration by inflammatory cells was determined. Such changes were accompanied by dystrophy and necrosis of part of hepatocytes. Under a capsule of liver cytes of necrosis of hepatocytes which did not have clear borders were registered. Necrosis of hepatic cells was characterized by the cariolysis.

Berezovskiy A. V., Galat M. V., Nebeschuk L. V., Rybalchenko D. Y. Epizootology and diagnostics of toxoplasmosis of goats // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 89–91.

The paper presents data about the using of different test systems for in vivo diagnostics of toxoplasmosis of goats. The peculiarities of the course of invasion are established. They depend on the season of the year, as well as age, sex and breed of animals. An infection of sapling of goats from one year was 10 %, at the same time as at animals by age from five to six years this index was increased and evened 30 %. Maximal infestation with toxoplasmes at animals of regional breeds was registered. Extensiveness of invasion among the females of goats was considerably higher (72, 2 %) as compared to males (20 %).

Dovgiy Y. Y., Feschenko D. V., Ryabtseva N. A., Zgozynska O. A., Koryachkov V. A. Comparative efficiency of disinfection of excrements of different kinds of agricultural animals by chemical reagents // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 92–94.

The results of influence of oxide of calcium on efficiency of disinfection of organic wastes are given. The disinfection effect of chemical solutions on the excitors of widespread nematodosis of animals is set. It is set that maximal efficiency of disinfection of pus arrives at a temperature 70 – 100°S and thermal effect of 120 – 220 kDzh. A high disinfection action is certain 1,5 % solution of brovadez-20 under ascariosis of pigs and 2 % kristal-1000, vetoks, brovadez-plus under strongilyatoses of horses. Dezinivazivne effect of compounds in relation to the excitors of parasitosis depends on the concentration of workings solutions.

Kirichko B. P., Zvenigorodska T. V. Pathogenesis and treatment of periodontal disease in domestic cats // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 95–97.

It was found that at periodontal disease increased ESR,

glucose, and gamma-globulin, reducing the number of red blood cells and white blood cells in the blood is recorded. In oral fluid hyperproteinemia and hyperglycemia are registered. The dependence of the level of catalase and malondialdehyde during treatment was traced. Increase of lysozyme activity during treatment compared with animals before treatment was registered. The combination of conservative and surgical treatment of inflammatory periodontal diseases in cats and implants "Biomim" make a positive impact.

Grubich P. Y., Kurman A. F., Lepeta L. V., Parhomenko E. A. Development of PCR test systems for specific identification of causative agent of babesiosis // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 98–101.

The system of oligonucleotide primers, allowing amplifying in PCR 18S rRNA gene site 6 species of the genus Babesia was developed. Article describes the features of designing and testing primers multiplexed PCR test systems for the identification of the genus Babesia. The length of amplified fragments - from 299 to 258 base pairs for Babesia canis, Babesia divergens, Babesia caballi, Babesia major, Babesia bovis was defined. 342 blood samples from different animal species were studied and 100% coincidence with the results of microscopic studies was ascertained.

Hutiy B. V. Effect of cadmium chloride on antioxidant system in rat liver // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 102–103.

The features of the antioxidant system of rats with chronic cadmium toxicosis are disclosed. It was researched that cadmium chloride in toxic doses reduces enzyme activity of antioxidant system, as indicated by the decrease in enzyme glutathione peroxidase, glutathione reductase, superoxide dismutase, catalase and restored glutathione in the liver and blood of rats. The results indicate that chronic cadmium toxicosis leads to enhanced activation of lipid peroxidation.

Loboiko Y. V. Indicators of nonspecific resistance of carp yearlings with invasion by ectoparasites // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 104–106.

The data on lysozymic and bactericidal activity of blood serum and phagocytic activity of neutrophils at different intensity of invasion of ectoparasites are given. The decrease of lysozymic, bactericidal and phagocytic activity of carp blood serum at lesions by ectoparasites *Lernaea cyprinacea* and *Dactylogyrus vastator* compared with clinically healthy fish was established. At high infestation of ectoparasites (> 0.26 *Lernaea* / g bw ma > 0.53 *dactylogyrus* / g bw) was observed a significant decline in non-specific resistance of carp yearlings.

Shcherbakova N. S. Determining the safety of poultry diseased with eymerioz // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 107–108.

The article provides an assessment of safety of meat of chickens diseased with eymerioz. The data which determine the toxicity of poultry by rapid method using ciliates *Colpoda steinii* are given. And reasonable

veterinary and sanitary evaluation of meat of eymerioz sick poultry is given. Meat obtained from patients with symptoms of bird depletion is toxic and should be sent to the technical utilization, and the meat obtained from sick birds, but if no signs of exhaustion might be released after inactivation be the method of boiling during 3 hours in open pots.

Oprya A. T. Scientific conception of statistical methodology: methods, indexes, criteria of reliability // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 109–119.

Conceptual approaches of statistical methodology are considered in research of intercommunications of the economic phenomena and processes. The necessity of application of statistical methods is grounded for deep research of causal- investigatory connections from positions of approach of the systems of their use: methods, statistical indexes, estimations of reliability. An attempt to unite the empiric aspect of research work with scientific methodology is done, coming from conceptual positions of statistical science.

Hakobyan L. L. Problems of providing agriculture of RA with the stuff of agricultural specialties and ways of their solution // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 120–122.

Due to the lack of specialists directly in the field, the agriculture of Armenia losses one third of gross production. The article substantiates the necessity of such personnel and gives the basic ways of their content, sources of funding salaries, the basic principles for a share of each source and the particular dimensions of the share of the conditions of production, location, etc. The main sources of funding for the salary are the state and a private sector of farming, to which agricultural specialists will provide services.

Dmitrikov V. P., Padalka V. V., Protsenko A. V., Kolomeets V. I. Processing of exhaust leaden-cadmium galvanic elements // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 123–126.

The results of researches on the reagent processing of exhaust leaden-cadmium galvanic elements and accumulators which serve as the second raw material for electrical engineering industry are given. A method of processing is waste-free, energy-and resource-saving, environmentally friendly, however, the residual content of lead, cadmium, and their compounds do not exceed environmental standards. Chemical and technical processes are analyzed, an improved methodology is offered and the general chart of technology of processing of leaden-cadmium galvanic elements and accumulators is developed.

Kalinichenko A. V., Kopishynska O. P., Kopishynskyi A. V. Environmental risks of shale gas production from gas-bearing area of Ukraine // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 127–131.

The problem of shortage of natural gas in Ukraine as one of the key factors of national energy security was found. The present state of the fuel and energy sector, the reasons for shortages of natural gas of domestic

production, production prospects of alternative gas from shale was analysed. The problems and environmental threats and risks associated with the prospects of development of alternative sources of shale gas on the basis of a detailed analysis of its production technology are examined. Experience associated with gas production from shale in the U.S., where technology is used for the first time, and the consequences of violations of environmental safety were regarded.

Stepova E. V., Galkevich V. I., Gudz Y. V. Analysis of the state of corrosive safety of gas pipelines of the Poltava region // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 132–135.

The estimation of soil conditions of linear part of the gas-transport system of the Poltava region is executed according to pH environments, electrical conductivity of soil and content of sulfate-ions. It allowed to estimate possibility of creating conditions for development of corrosion processes on the section of gas pipelines. The dependence is shown for the estimate of speed of corrosion processes on the surface of gas pipelines. The use of complex method of researches of influence external environment on development of corrosion processes on the section of gas pipelines is recommended with the use mathematical modeling.

Shershova S. V. Waste products of growing the genus Echinacea (Echinacea Moench) as promising source of biologically active substances // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 136–141.

The experimental foundation of bioconversion of waste product of growing (chaff) of purple Echinacea (Echinacea purpurea (L.) Moench.) and pale Echinacea (Echinacea pallida (Nutt.) Nutt.) was carried out. The high activity of extracts of Echinacea chaff, which had growth-stimulating effect to the test culture, was proved. It was found that the highest stimulating activity has the extract of chaff of purple Echinacea: aqueous solution at concentrations of 0.01 %, alcohol-0.01 %-0.001 %. And with increasing concentration of alcohol in the extracts their activity decreased. For the first time it has been shown that chaff of Echinacea contains specific proteins - lectins, and their activity in the waste product of pale Echinacea significantly exceeded activity in the waste product of purple Echinacea. Technological schemes to get of lectins and extracts of biologically active substances from waste growing product (chaff), was developed for their effective use.

Medynets O. E. Effect of recovery time of spring growing season of winter wheat on the development of brown leaf rust // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 142–145.

The dependence of the lesion of winter wheat with leafy brown rust on the resumption of the spring growing season plants and periodicity of solar activity on 55-year observations of Myrgorod selection field of Poltava region was established. Time of spring revegetation is a complex index for light, thermal and partially water conditions of plants' spring development. The maximum loss of crops by brown rust (57-81%) was observed

during the years with the average solar activity (61-120 W) under optimum and late time of spring revegetation.. Minimum affection that doesn't demand protection agents application was observed in combining of two factors: 1 – in years with early time of spring revegetation (till 20th of March) and not depending on solar activity and 2 – in the years with high solar activity (121-190W) and light dependence from time of spring revegetation. There were 28 such years of 55. Obtained results can be used in prediction of brown rust development on winter wheat.

Koretskiy A. E. Biological activity of soil in sowing of winter wheat depending on predecessors in the Left-bank of Forest-steppe // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 146–149.

Dependence of biological activity of ground under crops of winter wheat from predecessors and a set of cultures in short-term crop rotations is investigated. Positive influence of leguminous predecessors of esparcet, peas and a soya on biological activity of soil microorganisms at crops of winter wheat in crop rotations from a part of grain crops 50; 66,7; 100 % is revealed. During researches it has been established, that accommodation of winter wheat after predecessors of winter wheat and black fallow stipulated the decrease in intensity of biochemical processes in a superficial layer of ground on 17–35 % compared with leguminous predecessors.

Skarednov D. Yu. Slaughter and meat quality of fattening pigs for use in diets of soy protein concentrate of dry feed // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 150–153.

The results of studies of slaughter and meat quality of pigs fed on diets with different protein soy food production technologies: the pressure of expansion (concentrate dry soy protein food), spinning under pressure (soybean cake), Extrusion (extrudate soy) have been given. As a control sunflower oilcake was used. A significant positive effect of soy protein feed on growth rate, feed conversion, slaughter and meat quality of pigs, the morphological structure of the carcass was found. The best exit for slaughter carcasses were analogues of pigs fed on soybean cake and dry soybean protein concentrate fodder (+2.47% and 1.53% respectively to control). In general, meat and tallow products of pigs on key dimensions correspond to the normal categories of pork.

Senchuk T. Yu. Preparatory work for making a comparison of consequences of wintering on the different kinds of forage and its influence on development of bee families // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 154–157.

Currently, the predominant amount of farmland on which the bees can collect winter feed is occupied by sunflower. Honey from sunflower has high ability to crystallization, which significantly affects wintering bees and can lead to death of a bee family. The aim of our research is to determine the effect of honey with a low capacity for crystallization and sunflower honey on the progress and development of wintering bee colonies in the early spring period. We have done the necessary preparatory work for

the organization wintering on different types of honey: defined honey reserve of the area, made a honey balance of the area and a calendar of flowering of melliferous plants, provided bee colonies with various feed stocks for winter.

Mirzaeva M. S. Individual morphological, microbiological, biochemical data of oral and krevikular fluids in clinically healthy dogs // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 158–161.

The results of laboratory research of oral and krevikular fluids in clinically healthy dogs (morphological composition, microbiological and biochemical parameters) are given. On the basis of comprehensive studies of the above mentioned substrates it is determined that they have: the number of species and landscape of microorganisms, cellular composition (percentage: desquamated squamous epithelium, leukocytes – lymphocytes, neutrophils and salivary cells), biochemical parameters: activity of aspartate, alanine, alkaline phosphatase, lysozyme are received and also the content of total protein, cholesterol, total calcium, electrolytes (sodium, potassium, chlorine) and pH are defined.

Lyashenko A. O. Effect of long-term storage of cryopreserved bull semen in liquid nitrogen on parameters of sperm quality // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 162–164.

The study of performance of straight-forward motility and absolute survival rate of thawed sperm of bulls of different breeds in long-term storage in the Bank of genetic resources was done. The high positive correlation between the indicators of motility and an absolute survival rate of sperm ($r=0,89$) ($p<0,001$) is established. The studies found that the rates of sperm motility and survival of White-headed Ukrainian, Lebedinsky, Simmental and Gray Ukrainian bull breeds were higher than the current standard on average by 15 %.

Slusar G. V. Dynamics of immunologic indices of blood of dogs under various methods of treatment of wounds // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 165–168.

Dynamics of immunological parameters for the different treatment of wounds in dogs have been given. It is shown that topical preparations of hyaluronic acid and tryfuzolu in treatment of purulent wounds in dogs stimulate healing by accelerating reparative processes. Faster recovery performance of specific and nonspecific resistance of the organism in a phase of regeneration and proliferation of wound healing has been determined: increase of T and B lymphocytes, IRI, the number of phagocytic and NBT-test.

Sobchyshyna T. M. Roentgenologic description of treatment of cats with purulent osteomyelitis // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 169–172.

The article presents data of radiology study after application of granular implants Biomin-gTIS for plastic of bone defects. The use of these implants leads to activation of reparative osteogenesis and reproduction of the anatomical shape and bone structure. The main tissue changes typical for osteomyelitis were identified and described radiographically. It has been proved that X-ray

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allows to set osteomyelitis early and assign an effective treatment.

Khizhnya L. Y. The spread of chicken mallophagoses in farms of Poltava region // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 173–174.

During the research the widespread of chicken mallophagoses in farms of Poltava region (Zenkovsky, Piryatinsky, Gadyachsky and Karlovsky areas) was discovered. Extensity of infestation was on average 53.3% of the intensity of infestation $3,8 \pm 0,01 \text{ nmb} / 10 \times 10 \text{ cm}$ of the bird surface. On the territory of the region there were four types of chicken chewing lice allocated: three types of Menoponidae family (Menopon gallinae, Menacanthus stramineus, Menacanthus cornutus) and one species - of Gonioididae family (Goniocotes hologaster).

Peretyat'ko I. V. Economic efficiency of production of sunflower in agricultural enterprises of Ukraine // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 175–179.

In recent years, an increase in demand for oilseeds on world markets as well as on the agricultural market of Ukraine has been observed. Especially popular is sunflower and derived products. This article examines the

economic efficiency of sunflower production in agricultural enterprises of Ukraine. It is based on the summary statistical reports of Ukraine (2006 –2011) and analyzes the main economic indicators of the sunflower. The factors influencing the performance of the enterprises in this profile are defined; comparative analysis of the production and consumption of sunflower in Ukraine and the world was done, the dynamics of the volume and the sunflower crop in Ukraine was studied.

Odarjuk O. O. Economy and legal regulations affecting the agricultural land market // News of Poltava State Agrarian Academy. – 2013. – № 2. – P. 180–183.

Problems and features of formation of the land market are defined. The essence and value of the state influence on it, financial and economic levers of regulation are considered. A situation in branch of control over use and protection of the land is analyzed. Actions of improvement of the monitoring system for use of agricultural lands have been planned. Features of formation of the land market are considered, the basic problems of its development are marked out, a way of their overcoming and optimization in modern market relations is offered.

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