

Pysarenko P. V., Moskalets V. V. Agroecological features of the influence of microbial preparations on quantitative parameters of grain quality of winter triticale // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 7–11.

A study on the sensitivity of winter triticale on the action of microbiological preparations albobakterin and diazobakterin in terms of quality grain has been conducted. It is established that the use of microbial preparations in 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»), depending on the actions of certain biological preparations for a specific grade.

Shevnikov N. Ya., Logvinenko O. M. Influence of terms, methods of sowing and norms of sowing of different sorts of soy on its productivity // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 12–16.

The basic elements of high quality technology of growing of soy are offered in the conditions of left-bank part of Forest-steppe Ukraine, namely terms, methods of sowing and norm of sowing. Norm of sowing more than method of sowing, influenced on the size of the productivity of soy. Increase of norm of sowing to 800 thousand/ha of germination seed, especially at sowing in late lines, did not assist the substantial increase of the productivity. It is most expediently to sow soy with ordinary string (15 cm) or dotted (45 cm) methods with the norm of sowing 700 thousand/ha of germination seed.

Kuts O. V., Zelendin Yu. D., Vitanov O. D. Nutriments consumption of bulb onion plants under depending on methods of irrigation and chemical fertilizers // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 17–19.

Separate and local fertilization under drop irrigation promote reception of marketable yield of bulb onion on level 28.4–28.6 t/ha on the left-bank Forest Steppe of Ukraine. That elements of technology provide the highest activity of consumption by bulb onion plants out of fertilizers of nitrogen – 26–40 %, phosphorus – 4–6 %, potassium – 16–33 %. The removal of elements of nutrition increases with the increase of the level of crop yield. Under drip irrigation and localization of the application of fertilizers consumption elements of the nutrition supply at the formation of the units of the harvest is 3,08 kg/t of nitrogen, from 1.07 kg/t of phosphorous and total 1.74 kg/t of potassium.

Pysarenko P. V., Taranenko S. V., Taranenko A. O. Selection, substantiation and description of indicators of soil biodiversity // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 20–23.

Necessity and importance of improvement of land resources monitoring system, in particular application of soil biodiversity indicators were grounded. List of possible soil biodiversity indicators for assessment of soil biodiversity and soil function was proposed. The methods which are used or can be used for research soil biodiversity were analyzed. The main indicators for monitoring soil biodiversity which characterize research object were selected. Substantiation and description of soil biodiversity indicators were realized.

Pospelov S. V. Methods for evaluating the effectiveness of echinacea (*Echinacea Moench*) in pregenesis period of ontogenesis // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 24–30.

On the basis of long-term researches of Purple Coneflower (*Echinacea purpurea* (L.) Moench) variety «Zirka Mykoly Vavylowa» and Pale Coneflower (*Echinacea pallida* (Nutt.)

variety «Krasunja Preriy» for the first time ever there were developed and patented the methods for determining the efficiency of plants in pregenesis period of ontogeny. The foundation of methodology was made on the studies of regression models with high coefficients of determination which allow to make the estimation of aerial parts and root system productivity for the whole growing season without damaging the plants. The input data for the calculation are the indicators of the length and width of the leaf blade, the amount and the sum of temperatures above + 5 °C and the number of days from sowing.

Laslo O. O. Innovative technologies are in an agrarian production // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 31–32.

Complex technologies of the productions of agricultural goods, that got the name «exact agriculture» (Precision Farming) recognized by world agricultural science as effective enough and as those technologies that put agrarian business on a higher quality level. These technologies are an instrument that provides the decision of three basic tasks that predetermine success in the conditions of modern market – presence of timely objective information, ability to accept right administrative decisions and possibility to realize these decisions in practice. The solution of these three interdependent tasks is possible through the use of specialized hardware and software.

Sylenko S. I., Sylenko E. S. Inheritance of agronomic characters of F1 *Phaseolus vulgaris* hybrids in the left-bank of the forest-steppe part of Ukraine // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 33–36.

It was demonstrated that the degree of phenotypic predominance in F1 hybrids can vary from h_p to $h_p < +1 > -1$ depending on mating components. The vast majority of the F1 hybrids inherit the length of the growing season and its interphase by type of over & positive dominance. F1 hybrids inherit the height of plants by types of positive dominance, intermediate inheritance and negative domination. The height of the attachment of the lower tier of the beans is largely determined by a combination of parent components. Thus, in the first generation in hybrid combinations there is the phenomenon of over dominance. Due to the yield and its components (seed yield, seed mass per plant, 1000 seeds, number of beans per plant, number of seeds per plant, number of seeds per seedpod) in all first generation hybrids heterosis is observed.

Komarova I. B. Correlation between economically valuable and morphological characteristics of spring false flax // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 37–41.

The significant correlation between the morphological characteristics of spring false flax – number of branches and pods per plant, plant height and trunk and relationship of economically valuable indicators (yield, oil yield, weight of seeds per plant and weight of 1000 seeds) with the degree of manifestation of morphological parameters were founded. Yield and oil yield were positively correlated with the number of pods and plant height. Weight of seeds per plant, which is a component of yields, significantly positively correlates with the total number of pods and branches and negatively – with height of trunk. The mathematical model on economically valuable indicators of morphological characters was received.

Novitska N. V., Barzo I. T. Optimization of nitrogenase activity in chickpea nodules on typical chernozem steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 42–43.

The results of the effect of fertilizers and seed inoculation on the efficiency and productivity of nitrogenasation of chickpea

varieties Roseanne are reported. The application of nitrogen fertilizer on the Right Bank of typical chernozem steppe of Ukraine promotes interaction of mineral nitrogen from natural populations of nodule bacteria. Yield of chickpea varieties Roseanne on variants without the application of fertilizer and inoculation was higher than in the variants with fertilizers normally $N_{30}P_{60}K_{60}$ without inoculation of seeds.

Serdjuk M. E., Gogunska P. V., Gaprindashvili N. A. Influence of weather factors on forming chemical composition of plum fruits // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 44–48.

The influence of sum of active temperature which was higher than 10°C , the rainfall's amount and the hydrothermal coefficient (HTC) on forming of soluble solids, organic acids, sugar and ascorbic acid of plum fruits has been investigated. The results of the correlated analysis give the opportunity to confirm that it's not the weather of all vegetative period gives the most essential influence on the formation of the rate of plum fruit chemical composition in conditions of the South Steppe of Ukraine, but the weather of the last month before the harvest gives that influence when the most active forming of its quality takes place.

Priss O. P., Zhukova V. F. The dependence of yield and quality of tomato fruits from weather conditions // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 49–51.

The effect of weather factors on the yield and the quality indicators of tomatoes grown with drip irrigation is explored. Correlation analysis established a strong dependence of the amount of active temperatures for growing tomatoes and yield, standard products, dry matter in fruits. A strong positive relationship between the amount of precipitation during the growing and the level of nitrates in fruits was defined. A weak correlation between the level of precipitation and yield was shown. A strong influence of relative humidity of air at the standard products and the level of nitrates, dry matter in fruits was found.

Prymak E. I. Origination and formation of clover sowing in the context of evolution of systems of agriculture in Ukraine and Russia // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 52–57.

The meaningfulness of sowing of clover in the context of transition from fallow to improving grain-growing, multiple grass rotation and crops rotatory systems of agriculture has been grounded. Attention is accented on the difficult way of forming scientific and practical bases of the systems of agriculture with sowing of clover. The role of centuries-old tilling practice and cultural and economic development in formation of clover sowing has been shown.

Shoferistov E. P., Bunchuk E. I. Peach with red leaves of plant introduction and selection of Nikita botanical garden – National scientific centre // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 58–60.

Creation of decorative shapes, suitable for landscaping, especially in conjunction with obtaining marketable products of high quality is very timely. Peach with red leaves is a valuable source material for the breeding of decorative forms. It inherited a good sign of the red colour of the leaves, which facilitates the cultivation of decorative planting with red leaves forms. The results of the study of pomological qualities of fruits of the initial parental forms of the introduced peach with red leaves and its selection forms have been produced. Their advantages and possibility of practical use in the further selection and nursery gardening in the conditions of the Crimea have been shown.

Kolesnikov L. O., Kolesnikova O. L. Asia-Pacific elements of dendroflora of Poltava state agrarian academy park // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 61–65.

Environmental-geographical analysis of dendroflora of Poltava state agrarian academy park has been conducted. Flora of the park has been divided on geographical distribution. A genetic analysis – a division of flora on the criteria of geographical origin and history of dissemination; a botanical and geographical analysis – establishing connections of this flora with other kinds of flora have been executed. Plants, descended from the Asia-Pacific region, have been selected. The ecological standard of these plants is resulted: their requirements to the edaphic factors of environment are indicated as well as to terms of luminosity, temperature, phytopathologic stability. An environmental and phytocenological analysis – a division of flora on the terms of sprouting – is done.

Birta G. O., Burgu Yu. G. Physical and chemical composition of fat // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 66–69.

Pork fat is a high-nourishing food product which contains such irreplaceable fat acids, as linolenic and arachidonic, which enter the complement of cell nucleus and influence on the recreation of posterity. In fat there is more irreplaceable fat acids than in cow butter. Fat is an obligatory component not only for the production of sausages but also for the feed of people of hard physical work as a high-energy product. Using 30–50 grammes of pork fat in feed provides day's norm in irreplaceable fat acids, that makes 3–6 grammes. The results of experimental works on the study of influence of physical and chemical properties of composition on quality of fat of pigs of different breeds depending on gravimetric standard are given in the article.

Golub N. D. Combinational compatibility of large white breed pigs in individual genealogical lines and families // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 70–72.

The article represents the aspects of reproductive and feed qualities of certain lines of boars and sows as well as their combinative ability to produce multiple births. The best combinations are installed between the boars genealogical lines of Gromkiy and Soya, Swat and Taiga, Shalun (VBUP) and Chernaya Ptichka –11 piglets and more. Due to the feed characteristics of boars and sows genotype there were showed good results. Average daily gains were obtained at 614–795 gram, the weight of 100–202 kg was achieved in 178 days, the working costs of foodstuff per 1 kilo growth are 3.42 to 4.21 units. The best due to the feed qualities are the genealogical lines of SWAT, Gromkiy, Shalun, Orion male pigs and the large white breed boars of Danish origin.

Usachova V. E. Productivity of Vietnamese loose belly pigs and their hybrids // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 73–75.

The results of the study of reproductive, fattening and meat quality of pigs in Vietnam loose belly breed «in a cleanness» and in crossing with the male hogs of large white breed are given in the article. It is set that the use of crossing leads to improvement of reproductive ability of sows on multiple pregnancy, large fetus, to living mass of one pigling. Gilts of the Vietnamese loose belly breed yielded to the crossbreed sapling on intensity of growth and development and slaughter-weight. Fattening of crossbreed genotypes was instrumental in the improvement of fattenings and meat qualities.

Girya V. M. Appropriateness of the theory of prepotent in livestock sector // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 76–79.

The separate aspects of theory of animal prepotent are considered. The analysis of the different views of scientists of the past and present times as to its significance in evaluating the productivity of producers in the ability to transfer their best features are given. The concept should be based on the laws of genetic inheritance, the dominant or homozygous state of quali-

tative and quantitative traits. Use in research of modern methodological approaches concerning the definition of breeding and genetic traits of animals prejudices the existence of the theory of prepotent in livestock sector.

Vatskiy V. F., Velychko S. A. Early ontogenesis indexes of suckling cattle and possibility of their use for increase the productivity of suckling herds // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 80–84.

The features of connection of embryo development indexes of calves with the level of their next suckling productivity as first-calf cow are studied. It is set that more productive cows are characterized by less mass at birth, but a difference is not reliable. Short and middle duration of embryo development is instrumental in the display of high milk productivity. Using of indexes of embryo speed of growth and relation of calf birth mass to mass of mother next to the indexes of duration of embryo development and birth mass during the estimation of organism individual features allows to find more productive cows immediately after their birth.

Tkach E. F. The blood structure and its relation with milk production of cows of different ages and levels of productivity // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 85–88.

The article presents the results of biochemical and morphological study of bovine blood of Ukrainian black and white dairy and Holstein breeds and its relationship with milk production. It has been proved that the level of milk production is associated or is in direct proportion to the intensity of metabolism in animals. The positive correlation between total protein levels and milk yield of cows and between albumin and milk yield has been stated. No regular relationship between the number of leukocytes and milk production of cows of both breeds has been revealed.

Dedova L. O. Evaluation of maternal qualities of cows of created Simmental Beef breed of different lines // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 89–90.

The results of the study of maternal qualities of cows of created Simmental beef breed of different lines are given in the article. It has been found that cows of Abrikota, Metz, Ahilesa lines are characterized by the best mothering qualities, reproductive ability. That determines their prospects in the formation of maternal herd. Linear cows of created Simmental beef breeds are characterized by relatively high milk production (1274–1370 kg first-born, second calving 1345–1535 kg, third and older 1489–1620 kg), which ensures normal growth and development of young animals. Significant differences for milk production between animals of different lines were not found, however cow lines Metz, Ahilesa and Abrikota differed from others with higher milk production. That determines their number in the formation of maternal herd of Simmental beef breed.

Zamazy A. A., Kambur M. D., Pikhtireva A. V. Improvement of methodology for determining the types of higher nervous activity in pigs // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 91–93.

The data on the improvement of the methodology for determining the types of higher nervous activity in pigs are given in the article. The essence of the alimentary-motor technique is to create a series of motor responses that determine the properties of the nervous system of each animal separately. To determine the type of higher nervous activity of sow, you must determine balance and mobility of nervous processes. The definition of typological characteristics of the nervous system of sows can be realized by this method in a production environment familiar for animals (in the pigsty), with no arrangement of arena (ground) and the use of special equipment. It is not stressful and traumatic for sows.

Aranchiy S. V., Rudyashko D. O. Epizootologich monitoring of leucosis of cattle in Ukraine since 2000 till autumn 2012 (accounting) // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 94–96.

The data results of monitoring of epizootic bovine leucosis in Ukraine starting from 2000 and by September 2012 are given. Based on reporting animal health service of Ukraine as of November 2012, in Ukraine there are 2316 animals suffering from leukemia, which is 3006 animals less than for the same period last year. Unfavourable by leukemia farms are located in four regions of Ukraine: Donetsk, Luhansk, Rivne, Kharkiv. Anyhow the fight against above mentioned disease is strengthening and utilization of the virus from the regions in a whole is carried out. After a detailed analysis of health counterleukaemic events the leading scholars together with experts from the State Department of Veterinary Medicine concluded that it is necessary to introduce new and more effective methods of diagnosis of leukemia, primarily ELISA and PCR (enzyme analysis and polymerase – chain reaction) for accelerating health care more effective measures to eliminate leukemia in the farms of Ukraine.

Paliy A. P. Bactericidal properties of chloramines in relation to mycobacteria // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 97–99.

At carrying out researches it is established that disinfectants «Cloramine B» and «Cloramine T» show bactericidal properties of rather atypical mycobacterium and the causative agent of tuberculosis. It is established that «Cloramine B» causes death of mycobacterium at application in concentration of 5,0 % at an exposition 24 hours, and a preparation «Cloramine T» destroys test cultures of mycobacterium at action in concentration of 3,0 % at an exposition 24 hours. It is possible to apply chloramines as reference disinfectant preparations when studying tuberculocidal properties of new chlorine containing disinfectant preparations.

Paska M. Z. Content of sulfhydryl groups and glutathione in bull calves of Volyn meat breed of different types of higher nervous activity under action of biologically active compounds // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 100–102.

It is set that the content of sulfhydryl groups, overall, reduced and oxidized glutathione depends on the type of higher nervous activity in fattening bull-calves of Volyn meat breed. The highest levels of sulfhydryl groups, total, reduced and oxidized glutathione were found in animals of strong equilibrium inert type. Importance of the research is stipulated by study of this issue in fattening steers of Volyn meat breed of different types of higher nervous activity when added to the diet of plant-vitamin and mineral supplement «Mikrovitolip».

Obukhovska O. V. Effect of protective level of inactivated vaccine against Avian mycoplasmosis in experiment on chickens // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 103–105.

The protective properties of the experimental series of inactivated vaccine against Avian mycoplasmosis was studied in the experiment on chickens. It is shown that twice intramuscular immunization provides 100 % protection of the birds from clinical manifestations of the disease and 95 % of the birds from infection by *M. gallisepticum* S6.

Bogatko N. M., Sakhnyuk N. I. The influence of sanitation and hygiene of Coldroom of meat processing enterprises on the security of raw meat during storage // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 106–109.

Technological modes of meat cooling in the cooling ($t = -1^{\circ}\text{C}$) and cold ($t = -12^{\circ}\text{C}$) cells do not have a bacteriostatic effect on the life of molds. Most fungi contamination of air and plaster

walls of the chamber (cooling and refrigeration) was observed in their lower end at a height of 0.5 m above the floor. Compliance with process storage of raw meat, high-quality disinfection provide satisfactory sanitary conditions of cooling and cold storage.

Khariv I. I. Indexes of cellular immunity of turkeys affected by associative eymeriozo-histomonoz invasion and treated by brovitakoktsyd in conjunction with fetus of milk thistle // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 110–112.

In the intestinal mucosa eymeriyi and histomonady produce metabolic products that are toxic to different systems and tissues of turkeys. They reduce the activity of sensitized cells (cell type), inhibit specific phase of immunity provided by antibodies (humoral type), slow down the phase of nonspecific immunity, which is represented by different immune cells. When turkeys have eymeriozo-histomonozniy invasion faster and complete renewal of nonspecific immunity is found if brovitakoktsyd was given together with milk thistle fruit.

Sklyarov P. N. The effect of vitamin A on the morphological status of the placenta and fetus in goats // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 113–115.

Morphological and functional changes, disturbance of its structure, atrophy and destruction of the ending villi, degeneration and desquamation of the villi epithelium have been observed in placenta of animals with vitamin A deficiency. In addition, there was a smaller number of cotyledons (8.2%), lower weight of the litter (18.6%), the area of chorionic villi (21.7%), and significantly higher: body weight (14.9%) and organs: heart (6.7%), lung (5.6%), stomach, bowel (14.4%), liver (23.9%), kidney (at 7.8–10.1%), spleen (29.2%), brain (11.4%), adrenal gland (17.7%), thyroid (24.4%), uterus and ovaries (6.4%)

Bordyugov K. S., Bordyugova S. S., Cot V. S. Other methods of determination of ovulation in dogs // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 116–119.

The current methods for the determination of the ovulation in dogs are analyzed in a review article. A lot of female dogs who are considered infertile – are normal, healthy, fertile animals, whose alleged failure to give birth is connected with misunderstanding of the physiology of reproduction by their owners. Pairing should be planned during the fertile period or period of fertilization. These periods can be set with the help of different methods that we have reviewed and analyzed.

Rudenko P. A. Identification of susceptibility to antimicrobial strains of lactic acid bacteria isolated from clinically healthy cats // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 120–123.

The paper shows that the isolated cultures showed high sensitivity to antibiotics of β -lactams (except for *L. acidophilus* № 24, *L. plantarum* «Victoria» № 22, *L. rhamnosus* № 5, *L. rhamnosus* № 20 and *L. rhamnosus* № 26, which were characterized by significant variability of sensitivity to antibiotics of this group, which demonstrates the great potential of these microorganisms), resistance to aminoglycosides, lincosamides, and fluoroquinolones (except for gatifloxacin, which has proved to be highly effective against all microorganisms of lactic acid).

Vynyarska A. V. Comparative analysis of epizootic situation of intestinal helminthiasis of primitive horse breeds // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 124–127.

We held monitoring of epizootic situation that deals with invasion of horse diseases that had been held in the horse farms of different forms of ownership and with different types of allowance in Ukraine (Lviv, Ivano-Frankivsk and Transcarpathian regions) and in Poland (Wojewydztwo Warmiesko-Mazurskie). We established that the animals were invasioned by Nematodes,

Cestodes and by protozoan. Clinical manifestations of helminthiasis depend on the level of contamination of horses as well as on balanced rations, food supply.

Bryzhan I. A. The conditions and factors of transition of Ukraine to the model of sustainable development // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 128–133. The necessity of the Ukraine's transition to sustainable development model is discussed in the article. It is emphasized that Ukraine can solve current problems of ensuring economic growth in the conditions of limited and depletion of natural resources, the threat of a man-made disaster, only by using the principles of sustainable development, which harmonize economic, social and environmental components of growth. Main preconditions are analyzed and a set of tools and activities to accelerate the realization of sustainable development in Ukraine is proposed.

Petrosyan S. A., Manucharyan M. G. System of insurance against risks of investment activity in Armenia is an important component of the investment climate // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 134–137.

Importance of insurance of investment risks for attracting foreign investments in Armenia is grounded in this article. The proper information support is important to foreign investors to reduce the degree of political risk. As practice shows, regardless of the real state of investment situation of this country, foreign investors are inclined to examine as a country with the highest degree of risk that country about which they have a minimum information. For the future of Armenia, this fact is extremely important. And as Republic Armenia is a «young» country (since the moment of declaration of independence at the beginning of the 90s), with the limited space, small quantity of population, disposed in an unstable region with complicated political relationships with two neighbouring countries (Azerbaijan and Turkey), Armenia does not always properly appear before a foreign investor as politically, economically and culturally developed country.

Kazaryan H. R. Improving competitiveness of peasant farms in Armenia // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 138–145.

The level of competitiveness of farms is still low in Armenia because of their small sizes, low level of governmental support, low development of infrastructures, mechanization and other factors. In our opinion, increasing the competitiveness of farms is possible by optimizing their sizes, increasing the availability of credit resources, mechanizing of production, in putting affective systems of insurance and subsidy, etc. otherwise the farms in Armenia will develop with the same low pace.

Kostenko E. M. Enumeration of typical plans of multifactorial experiment // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 146–150.

The method of multifactorial experiment of typical plans enumeration, based on representation of MFE plans in the form of serial sequences is offered. The decision of stage-by-stage problems of the method is considered. Properties of plans of MFE serial sequences are investigated, estimations of their quantity are received, and procedure of base serial sequences set formation and typical variants of plans of MFE structures is described. Examples of optimum plans of MFE catalogues are resulted. Application of the offered method will allow to simplify the process of choice of minimal plans of MFE for a plenty of factors.

Lyashenko S.V., Padalka V. V. Improvements in mechanization and the technology of potato cultivation in home gardens // News of Poltava State Agrarian Academy. – 2013. – № 1. – P. 151–154.

Increase of potato yields is possible by the increase in the ac-

cumulation of moisture in a fall-winter period, below than level of landing of potato. Existing tillage home gardens do not allow moisture to accumulate in the required quantities and store it during the potatoes growing season. Technical solution of problem is offered by the use of facilities of small mechanization which are equipped with the working parts of the improved construction. A proposed scheme is recommended for the technological process of creation of the underground ducting's soil on private gardens.

Ponomarenko S. V. History, conformities to natural laws and prognostication of mass reproduction of basic cabbage pests in Left-bank Forest-steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 155–157.

Modern looks to possibility of the use of ecological factors (sun activity) for prognostication of mass reproduction of populations of insect pests on the example of basic cabbage pests in the conditions of Left-bank Forest-steppe of Ukraine are analysed. Taking into account actuality of prognostication of mass reproductions of basic leaf-eating pests of cabbage from the order of Lepidoptera (Mamestra brassicae L., Pieris brassicae L.), the retrospective analysis of historical data about mass reproductions of the latter in space and time is done and the high-quality prognosis of their appearance on territory of the Poltava area is developed.

Avramenko N. I. Species of algae in the river Vorskla what causes «blooming» water // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 158–162.

Results of researches of the study of eutrophication processes, in particular the features of dynamics of quantity of different types of algae in the different districts of the Vorskla river are brought. Specific composition of water-plants that results in a «water-bloom» in the river, in Poltava and surrounding villages is described. It is underlined that in most cases the eutrophication of reservoirs is caused by multivariablealgae. Development of almost «clean» monocultures of some species is registered also. The possible biotic and abiotic factors that cause the phenomenon of «flowering» water are examined.

Kuzmenko O. K. Formation and forms of organization of ecological audit on agricultural enterprises // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 163–167.

Formation of ecological audit in Ukraine and forms of organization of ecological audit on the agricultural enterprises of the country is considered. Objects and subjects of environmental audit are defined. The analysis of basic factors and stages of forming of ecological audit is conducted on agricultural enterprises. The chart of organization of ecological audit on agricultural enterprises is offered.

Odarjuk O. O. Ekologo-legal regulation of rational use of land resources // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 168–170.

The analysis of increase of use of natural resources by man and its influence on self-reproduction of biosets is carried out. Advantages of ekologo-landscape land management in system of territorial planning of agricultural land tenure in comparison with traditional methods of the organization of territory are proved. The necessity of creation of information base of formation of ecological factors of use of land resources is considered.

The adverse action of degradation processes and their impact on agriculture is analyzed.

Svintitskaya K. V. Medicinal plants in the process air disinfection of poultry houses // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 171–173.

The possibility of using officinal plants during air disinfection of poultry houses has been given. Essential oils of officinal plants have a wide range of antimicrobial action against many pathogens and immunocorrective properties which assist reducing morbidity and increasing poultry productivity and safety. The mechanism of antimicrobial action of such officinal plants as peppermint, garden sage, and fennel was studied during the experiment. The doses of essential oils which help to reduce bacterial air contamination were determined.

Golubtsova M. V. Dynamics of biochemical parameters of blood of chickens at associative invasions // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 174–177.

During the life blood of birds proteins play very important physiological role in the complex metabolic processes. Changes of biochemical composition of chickens blood by experimental infestation reflects the development of pathological and immune processes and demonstrate the stress state of the organism, which allows to objectively assess the impact of various factors on the body of infested chickens. Changes of biochemical parameters in blood were accompanied by hypoproteinemia, hypoalbuminemia, hyperglobulinemia, dysproteinemia.

Vygovska K. L. Differential diagnostics of cats mammary tumours // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 178–182.

The article represents results of clinical and histological researches of cats mammary tumours. 79 animals from 7 months to 18 years old brought in the clinic with mammary gland tumors took part in research. Histological researches of tumors confirmed a diagnosis: benign tumors: 10 – fibroadenomatose, 4 – lobular, 6 – of adenomatose, 7 – the mixed structure, 52 malignant tumors (adenocarcinomas). Among malignant tumours the standards of infiltrative and noninfiltrative carcinoma which have tubular, papillar or solid structure, are selected. Histological researches are enable to prognosticate disease activity, and in the case of malignant tumours to plan adequate therapeutic targets for the maintainance of health of animals or for the improvement of quality of their life.

Mikhailiyutenko S. N. Epizootical situation as regards to helminthoses of geese on the farms of the Poltava region // *News of Poltava State Agrarian Academy*. – 2013. – № 1. – P. 183–185.

On results of coprostatic researches of considerable number of geese of different age groups on the farms of different forms of ownership of the Poltava region (Globino, Zenkov, Poltava, Mashevka, Myrhorod, Novosanzhay, Chernukhy, Chutovo districts) the following gastrointestinal nematodothes have been recorded: amidostomosis (37.6 %), gangulenterakosis (30.37 %), capillariosis (19.92 %), trichostrongylosis (6.26 %). It is established that the degree of the damage of geese by the agents of helminthoses depends on age, season of the year and form of ownership of the farm.

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