

**Grinnik I. V., Patyka V. P., Shkatula Yu. N.** Microbiological basis for improving productivity and quality of grain crops // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 7–11.

The main approaches to activation of the plant-microbic interactions which is a powerful factor in increasing productivity of agrocoenosis have been considered. It has been shown that stabilizing base for most technologies of grain crops growing are legumes which share in the structure of sown areas should be 25-40%. Considerable attention is paid to biologization of crop growing.

**Moseichuk A. A., Boiko I. A.** Estimation of drinking water quality in sources of decentralized water supply in Poltava region // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 12–17.

The dynamics of the change of drinking water quality in the sources of decentralized water supply in Poltava region on chemical and bacteriological factors for the last years have been analyzed. It has been revealed that its state remains unsatisfactory. The map of Poltava region has been designed on the base of calculations of the complex index of water pollution and the regions on pollution class have been found out. It has been concluded that quality of water in sources of decentralized water supply in Poltava region for 2010 can be referred to the class of «low pollution». The recommendations on improvement of the situation in estimation of drinking water quality have been given.

**Marenych N. N., Verevskaya E. V.** Analysis of agricultural and weather factors influence on yields and possibility to estimate winter wheat crop production in Ukraine // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 18–22.

In the process of analysis of agricultural and weather factors influence on winter wheat yields it was revealed that the critical factors for the yield formation are (totally in Ukraine): the quantity of days with temperatures below 17 °C; the quantity and intensity of precipitation; the number of days with temperatures exceeded 0 °C and 5 °C in winter time period. All above listed weather changes effect historical yields and make them differ very much year to year. Thus, using above listed factors winter wheat yield equalizations and coefficients that may be used for yield forecast were calculated. The consistency of the equalization's results for winter wheat production was discovered for total Ukraine winter wheat production number. But these equalization's coefficients need to be corrected with simple regression equalization every year. Correlation coefficients between the real yield and estimated yield under the calculated equalizations is 0.71 and 0.64, when  $p < 0.01$ . As yield is the main factor of winter wheat production in Ukraine, so this method could be used for estimation of wheat production and used for official wheat crop prognosis to lead the agricultural policy in Ukraine.

**Dubrovin V. A., Teslyuk V. V., Kovbasenko V. M., Kovbasenko K. P.** Efficiency of application of mikobio-preparation “Mikosan B” in technologies of vegetable

growing // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 23–25.

Positive biological efficiency in plants diseases control due to increasing their resistance to phytopathogen was found out while spraying vegetables (potato plant of Lugivska variety; tomato of Lagidny, Bobrytsky, Khoriv, Borivsky varieties; cucumbers of hybrid F<sub>1</sub> Rodnichok; onions of Skvyrska variety; melons of Tavrychanka variety; water-melons of Stoksa Kyivsky variety) in vegetation process according to the prediction of their damage by their pathogens by mikobio-preparation “Mikosan B” and ferule acid and composite mixture of these preparations.

**Kiryan M. V., Kiryan V. M., Pavlyk S. A.** Evaluation of gene pool samples of soft winter wheat, less common varieties of wheat and wild relatives on productivity and quality of grain in Forest-steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 26–31.

The article deals with the results two-year (2008-2009) study of worldwide collection of samples of soft winter wheat, less common varieties of wheat, wheat amphidiploids and wild relatives of wheat on indicators of productivity and quality of grain. In these studies the authors succeeded to allocate more than 90 sources of high grain productivity and quality of grain from the collection of wheat Ustymivka experiment station of plant production. In the southern Forest-steppe (Poltava region) the maximum expression of the characteristics of grain protein content in wheat varieties at the level of 24,7 % in wild relatives (goat grass) – 31,0 % was recorded. Preliminary study of amphidiploids indicates the presence of valuable features, such as high protein content in grain (20,9–28,6 %). According to this index there are some forms, which in their composition have the genes of *T. timopheeva*, *T. boeoticum*, *Ae. tauschii*, *Ae. ventricosa*, *Ae. umbellata*, *Ae. mutica*. Their involvement into selection will enable greatly to enrich the assortment of high - quality wheat.

**Ganhur V. V., Sokyрко P. G., Len O. I.** Weeding and water content spring barley crops depending on methods of cultivation // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 32–35.

Research results of Poltava Institute of APV named after M.I. Vavilov NAAN received during 2008-2010 indicate a clear pattern of big reserves of productive soil moisture on the variants of shallow basic cultivation without a plow compared to plowing. Shallow cultivation by different soil tillage tools provided a slight increase of soil hardness values. However, at the time of harvesting in the depth of 25-30 cm under the influence of natural processes soil hardness is smaller and indicators of hardness equalize for all variations of cultivation. Replacement of plowing on 20-22 cm by shallow cultivation using different instruments has increased the number of weeds in barley crops, but virtually there was no impact on their air dry weight.

**Nazarenko G. I., Shokalo N. S.** Introduction of a castor-bean tree in the conditions of the south-western part of Poltava area // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 36–38.

As a result of global warming and possibility of changing climate in Ukraine the south-western part of Poltava region according to agro-climatic conditions satisfy the biological requirements for growing castor plant (*Ricinus communis*). Castor plant is a valuable industrial and medicinal plant of tropical Africa and Asia. Adapting to climatic conditions of southern Forest-Steppe area castor plant forms high biometric characteristics and ensures crop yield about 30 centners per a hectare. Successful usage of this crop in agriculture helps to solve the problem of castor-oil in Ukraine.

**Shevchuk L. M., Denysyuk O. F.** The model of the dependence of the ascorbic acid content in black currant and strawberry fruits on weather conditions // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 39–43. The effect of weather conditions on the ascorbic acid content in strawberry and black currant fruits during the period of their growth and development has been found out by means of the regressive analysis. The model of predicting the future yield with C-vitamin content has been developed. Strong positive influence of the sum of effective temperatures higher than 10 °C (correlation coefficient is 0.772) on ascorbic acid content in berries of strawberry has been found out. The basic influential meteorological components that determine C-vitamin content of black currant fruits are sums of active temperatures higher than 5 and 10 °C as well as of maximum and average temperatures higher than 10°C (correlation coefficient is -0,811; - 0,842; -0,722; -0,759 respectively).

**Yastremska L. S.** Biotechnical aspects of transformation of agricultural waste into energy resources // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 44–46.

Some aspects of biotechnological process intensification of biogas formation in the transformation of agricultural waste by native mesophilic microflora of manure have been studied. The optimal time for the beginning of hydrolytic stage of substrate transforming at neutral pH level has been determined. It has been shown that the increase of biogas output is possible due to mechanical processing of substrate (straw) cellulose content and the use of selected anaerobic mesophilic cellulolytic microorganisms association. The research results can be used in the manufacturing process of biological fuel in industrial biogas plants.

**Kalashnyk V. F.** Technological evaluation of bell pepper fruit depending on the irrigation mode // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 47–49.

The article provides the data of three-year research concerning drip irrigation influence on basic technological characteristics of bell pepper fruit of various degrees of ripeness. The study shows that these conditions double the crop yield and weight of the fruit, as compared to the control set and the ratio of waste products after peeling is reduced to 15,5 %.

**Barylko M.H.** Peculiarities of the inheritance of a number of quantitative traits in hybrids F<sub>1</sub> F<sub>2</sub> of spring vetch (*Vicia sativa* L.) // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 50–53.

The paper deals with the results of two-year investigation

on inheritance of quantitative characters in *Vicia sativa* L. hybrids F<sub>1</sub> F<sub>2</sub>. A different pattern of inheritance was observed for various characters in *Vicia sativa* L. hybrids F<sub>1</sub> F<sub>2</sub> – from depression to positive domination or heterosis. Hybrid combinations which had heterosis nature of domination by signs of seed domination were found out taking into consideration a wide range of inheritance.

**Herman N. N.** Improvement of sowing qualities of seeds of soft winter wheat depending on the pre-sowing seed treatment // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 54–57.

The results of three-year investigations of influence of presowing seed processing by growth regulators, phosphate mobilization preparations and protectant upon energy, laboratory and field germination of seeds and survival value of winter wheat varieties are given. The comparative description of winter wheat variety on increasing seed germination depending on preparation is made. According to the data of our scientific investigations the highest laboratory and field soft winter wheat germination with applying bacterial agents such as polymyxobacterium and diazophite in the doze of 150 ml/t is found out, and growth regulator Vympel (120 ml/t) and Agat-25K (60 g/t).

**Kovalenko N. P., Diadko I. I.** The importance of links of crop rotations in improvement of sanitary state of agricultural crops sowing // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 58–61.

The sharp growth of contamination of sowing and dry mass of weeds has been observed in the conditions of insufficient moistening, except bare fallow. The tendency of the considerable diminishing of amount of weeds and their dry mass has been marked in all of links of crop rotations according to the years of investigation. Direct dependence has been set between the quantitative and gravimetric indices of contamination by weeds and reverse one – between the noted indices and productivity of agricultural crops.

**Dorotyuk E. M., Prudnikov V. G., Kolisnik O. I.** Modern state of Aberdeen-anguse breed in Ukraine and ways of its improvement // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 62–63.

The article presents the results of research of modern state of Aberdeen-anguse breed in Ukraine and methods of its subsequent improvement in the direction of breeding a new Ukrainian anguse meat breed. Taking into account the modern requirements of market economy, major direction of a selection is breeding a new Ukrainian anguse meat breed on a base of a Aberdeen-anguse cattle which is capable during a long period of time to keep the high average daily increases of living mass at the level of 1200–1500 gm at slow accumulation of fat.

**Polishchuk A. A., Bulavkina T. P.** The dependence between indices of the digestion of diets with protein supplements of a different nature and their chemical compound // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 64–67.

The results of research of interrelation between the digestion coefficients of nutrients as well as the use of nitro-

gen, calcium and phosphorus in an organism of pigs when feeding pigs with diets containing protein supplements of a different nature and their chemical compound have been presented. It has been found out that the chemical compound of protein supplements did not influence the digestion of dry, organic substances, fat, cellulose, and nitrogen free extractive substances. The indices of nitrogen correlated with protein level in all groups of animals. The origin of protein supplements does not influence nutrients digestion in pigs diet and the metabolism in their organism.

**Sukhanova S. F.** Power exchange and conversion of nutrients in the geese consumed various forms of selenium // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 68–71.

It has been found out that the use of a preparation of the organic form of selenium "Sel-Plex™" in structure of mixed fodders for geese-broilers has allowed to increase efficiency of the use of exchange energy by 1,70 %, in comparison with introduction in mixed fodder of control group of selenite of sodium.

Protein transformation of a forage in food protein at introduction of the preparation of "Sel-Plex™" in geese diets has increased by 1,41 ( $P < 0,01$ ), and conversion of exchange energy of a forage – by 1,02 ( $P < 0,01$ ), in comparison with the geese-broilers consumed selenite of sodium.

**Birta G. O.** Morphological composition of carcasses of pigs // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 72–74.

Growing demand for high-quality pork obligates to discover the most effective methods of not only increase of meat output but also increase of its quality. The long-term research shows the possibility of complex purposeful selection on the increase of length of carcass and its succulence without worsening of pork quality. The selection on the decline of thickness especially influences the increase of succulence of pig carcasses. The subsequent increase of production of high-quality pork is possible on the basis of introduction of methods of mass improvement of existent breeds with the wide use of the phenomena of heterosis at the industrial crossing and hybridization. The use of separate existent meat breeds can be instrumental in the considerable increase of output of meat in carcasses and increase of its quality.

**Golub N. D., Chukhleb E. V.** Improvement of productive and pedigree qualities of pigs of pedigree reproducer on the farm «Rodyuchist'» of Sumy oblast // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 75–80.

Perfection of pigs of large white breed in LTD «AF «Rodyuchist'» is conducted according to «Program of selective – pedigree work with the herd of pigs» which is developed every 5 years. It is based on homogeneous selection on basic selected signs, estimation of repair sapling on the own productivity, organization of valuable forage base. The herd for 100 basic sows has been created. Multifetation of sows with 2 and more farrows makes 11,3 piglets, mass of nest at age of 2 months is 180,4 kg. The estimation of repair sapling according to the own productivity deter-

mined the age of achievement of living mass 100 kg – 204,8 days, thickness of salted pork fat-26,9-28,1 mm. Profitability of the pig breeding branch is 49,3%.

**Kuzmenko L. M., Vyslanko A. A., Bankovskaya I. B., Zinovyev S. H., Martyniuk I. A.** The effectiveness of the new preparation use – fodder acidifier with chelate combination of microelements content – in young pigs fattening // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 81–85.

In scientific and farming investigation the influence of the new veterinary preparation Kronotsyd-L with chelate combination of microelements content on productivity indices, fodder conversion, biochemical blood indicators, meat quality and economic expediency was studied. The diagram of the investigation supposed the use of mixed fodder with the same composition in control and experiment groups but in the experiment group with water the preparation was unsoldered. Received results of the investigation show the effectiveness of its use in young pigs fattening. The optimal dosage to use has been found out. The recommendations for its use in practical pig breeding have been given.

**Rak T. M., Yatsenko L. I.** The bee during ages // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 86–90.

The analysis of literary sources and information about life and development of bee families in a historical aspect is given. It is found out that people paid attention to the life and organization of labour in bee families and also products of their vital activity from ancient times. People created a great number of legends, myths, proverbs, sayings and aphorisms about life and development of the bee, about nourishing, medical, cosmetic and embalming qualities of beekeeping products. Also bee labour is represented in numerous works of art and architecture.

**Yevstafyeva V. O., Mikhailyutenko S. M.** Spread of intestinal nematodosis of geese in the farms of Poltava area // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 91–93.

According to the results of coproovoscopical investigation considerable spread of intestinal nematodosis has been found out for the geese in the farms of Poltava area (Globinsky, Zinkovsky, Novosanzharsky, Chornukhinsky districts), namely: amidostomoses, ganguleterakoses, capillarioses. From a number of geese parasitosis a maximal percent was got by monoinvasions (50,8 %). Polyinvasions (49,2 %) consisted of associations: amidostomoses + capillariosis, capillariosis + ganguleterakosis, amidostomosis + ganguleterakosis, amidostomosis + ganguleterakosis + capillariosis.

**Peredera Zh. A., Shcherbakova N. S., Fotina T. I.** Pharmaceutical compatibility of the ingredients contained in the complex preparation "Bi-septum" // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 94–97.

The article presents data on the substantiation of the new complex preparation "Bi-septum" which is recommended for the prevention and treatment of bacterial diseases of poultry. It consists of Tilozin bail, oxitetracycline and ascorbic acid. It has been found out that the major active ingredients of "Bi-septum" in solid aggregate condition

(water-soluble powder) were a pharmaceutical compatible and could be used in the complex preparation, the solution can be stored without destruction to 15 days.

**Shatohin P. P., Suprunenko K. V., Karysheva L. P., Kanivets N. S.** Influence of vitamin A injected to pregnant mares by different ways on indicators of albuminous exchange in serum of foals // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 98–100.

The article concentrates on indicators of the content of general albumen and albuminous fractions in serum of foals received from pregnant mares injected by vitamin A by different ways. It has been found out that in foals from the 30th day of life the indicator of general albumen content in control and two experimental groups has grown in relation to the first days of life within an authentic difference ( $p < 0,001$ ). On the 60th day of investigations the given indicator increased by 32 % in each investigational and control group in comparison with the first study. The most probable changes of indicators  $\alpha$ - and  $\gamma$ -globulin fractions of serum were observed on the 30th day of life.

**Petrenko A. A., Kone M. S., Tsybulko O. O.** Epizootological information about parvovirus enteritis of dogs and comparative estimation of efficiency of treatment charts of in LTD «Vetservice» in Poltava // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 101–104.

Pedigree and age-dependent sensitiveness, seasonality of origin and dynamics of manifestation of parvovirus enteritis of dogs have been studied in the conditions of veterinary clinics of LTD “Vetservice” in Poltava. A new chart of treatment of parvovirus enteritis of dogs which is more effective than the generally accepted basic methods has been developed and offered by us. Importance of the use of chemotherapeutic facilities is grounded on the separate stages of development of infectious process. The age-dependent groups of dogs which better respond to treatment have been found out. It has been concluded that enzootic phenomena of parvovirus enteritis was more evident in a spring-summer period. The dogs of German sheep dog breed are more inclined to the infection.

**Milanko A. A., Avramenko N. A.** Clinical and epizootic aspects of cattle clamidiosis // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 105–108.

Clinical and clamidiosis epizootic characteristics of cattle has been presented. The clinical manifestations and the course of clamidiosis infection have been described. The results of conducted experiments showed that the selected clamidiosis parasite of cattle had multiplied and cultivated in 6–7-day old chicken embryos by infection in the yolk-sac with abundant accumulation of elementary cells. Comparative diagnosis of clamidiosis infection of cattle using the methods of RPR and ELISA carried out under production conditions showed that 14,8% of IFA effectively and successfully could replace labor-intensive RPR.

**Peredera E. A., Lavrinenko I. V., Peredera R. V.** Dynamics of biochemical indices of serum at experimental invasion process of rabbits by the stimulant *E. stiedae* // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 109–112.

The development of hepatic form of eymeriosis in rabbits

is characterized by the biochemical changes of serum indices. The gradual diminishing of amount of albumen has been found out on a background of low content of general albumen, considerable increase of direct and indirect bilirubin. Changes of biochemical indices on the initial stages of disease are not specific, they specify on separate violations from the side of a liver and metabolic processes. On the late stages of the disease hyperbilirubinemia and cholestasia have been found out. The decline of level of glucose and general calcium has been registered which specifies on violation of carbohydrate and mineral exchanges.

**Peredera Zh. O., Shcherbakova N. S., Peredera O. S.** The problem of quality and safety of meat and by-products // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 113–115.

It has been found out that the main reason of by-products culling was pathological changes caused by invasive disease of cattle and pigs (fasciolosis, echinococcosis, dicroceliosis). Bacterial dissemination of the pig liver in echinococcosis increased in 35 times, and of the bovine liver and in fasciolosis – in 40, and in dicroceliosis – in 45 times. Slaughter products derived from infected animals are dangerous food that can cause toxic infection and food toxicity, because they are contaminated by conditionally pathogenic microflora (*E. coli*, *St. salmonellae*).

**Slyusar G.V.** Dynamics of biochemical indices of blood serum of dogs with different methods of treating wounds // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 116–119.

The dynamics of biochemical parameters of blood serum of dogs with different methods of treating wounds are given. It has been found out that the development of inflammatory processes is accompanied by dysproteinemia, hyperhamaglobulinemia and hypoalbuminemia. Destruction of tissues is characterized by the release of specific enzymes and increase their activity in blood. Using an ointment for the treatment of methyluracil with miramistin, hyaluronic acid and trifuzol normalizes biochemical parameters in a shorter time.

**Aranchiy V. I., Zorya O. P., Petrenko I. I.** Credit in the system of financial support of investment development of agricultural enterprises // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 120–124.

The necessity of credit support for agricultural producers and the role of credit as a source of investment have been grounded. The features of the agricultural enterprises that affect their relationship with commercial banks have been considered. The problems of crediting of agricultural sector in conditions of financial crisis have been studied. The reasons that restrain the intensification of credit activity of economic entities have been determined. The directions of improvement and modernization of bank crediting system of agrarian formations have been suggested.

**Makarenko Yu. P., Pistunov M. I.** The use of method of discounting in setting of norms of size of commercial credit of small forms of agrobusiness // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 125–130.

The borrower – as one of the main subjects of small

agrobusiness – it is offered to make changes to a technique of a limit of the credit of the farmer, having added with their indicators which would consider the future cost of money. For this purpose the cost value and trade inventories are increased by a method of discounting under an index of requirement of the prices in annual calculation. The future cost of indicator EBITDA considers function which answers (corresponds) to the basic forms of periodic and unperiodic economic processes and use of the optimizing approach of a finding constants of functions. The discounting method increases money funds and debts. Methods of determination of the present credit amount of the farmer – the borrower and definite terms commodity loan are offered.

**Suprun A.N.** The institutional factors and mechanisms of adjusting of agrarian production and market // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 131–135.

Absence of effective government control of agrarian production and market resulted in its extremely grave condition which is characterized by the slump in production, strengthening of unemployment as well as the decline of living standard of population. One of the reasons which predetermine a crisis situation in an agroindustrial production is a loss of functions of state administration on major directions of its functioning.

**Dorofyeyev A. V.** Influence intensification consequences of agriculture on the ecological equilibrium of environment // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 136–141.

Ecological consequences of agriculture intensification are considered. Application of the alternative ecological systems of agriculture, diminishing of the use of mineral fertilizers, pesticides and other chemicals in the agricultural production are offered. Reasonability of conversation to adapted technologies based on the differential use of natural resources, technogenic factors and adapted potential of cultivated crops as well as to landscape systems of agriculture has been grounded.

**Petrosyan S. A.** Investment climate in Armenia // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 142–146.

The article deals with current policy on the improvement of investment climate in Armenia that will attract the stream of foreign capital and will help to develop economy of the country. The analysis of modern investment situation in Republic Armenia testifies that there are a number of factors that block activation of investing process in the economy of Republic Armenia, among which it is necessary to mark the following: corruption and lawlessness; political instability; mistrust to the banking system and its ineffectiveness. Presently the policy of the state is directed on the improvement of investment climate that will attract new streams of investments.

**Dmitrikov V. P., Kharak R. N., Protsenko A. V., Kolumeets V. I.** Technology of processing of waste lead and zinc galvanic elements. Report 1. Processing principles, chemical reactions // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 147–150.

An ecological estimation is given. The ways of migration

of waste lead and zinc galvanic elements and accumulators into water and soil are considered. The chart of their processing developed from mechanical and chemical parts is offered. Chemical reactions and kinetics of processes during the complex processing of waste galvanic elements as well as dependence of their degree of dissolution on different factors are studied. In laboratory terms utilization peculiarities put into the basis of subsequent technological processing.

**Babitsky L. F., Landar A. A., Padalka V. V., Lya-shenko S. V.** Theoretical determination of counterbalance parameters of cutter of torsion and percussive soil ripper // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 151–155.

A theoretical model is grounded and the results of its research on determination of cutter mass of torsion and percussive soil ripper are considered. Theoretical dependences of inertial system of the cutter with counterbalance for designing working implements are given. The structural parameters of elements of soil ripper for its stable vibration effect on soil are determined. The analysis of the results was confirmed by the positive effect of the offered structural solution on the parameters of execution technological process of soil tilling.

**Shkurko V. S.** Influence of weather conditions on productivity of spring barley and possibilities of forecasting crops // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 156–159.

Influence of weather factors on formation of productivity of spring barley on the basis of generalization of meteorological supervision and the statistical data is analysed. Using methods of pair and plural regress, attempt to define the pattern of dependence on investigated factors is made. It has been found out that with the help of regressive models it is possible to predict productivity of spring barley with reasonable probability. Results of the analysis of the long-term data testify that critical factors for formation of spring barley productivity are a number of days with temperatures lower than 0 °C in April ( $r = -0,26$ ), an amount of precipitation in March ( $r = 0,21$ ), April ( $r = 0,39$ ), May ( $r = 0,35$ ), June ( $r = 0,14$ ). The productivity equations have considerable variability depending on conditions of the concrete year that is caused by their great variability. The typical feature is negative correlation between the factor of productivity variation and the productivity ( $r = -0,67$ ).

**Chayka T.A.** Efficiency of organic farming in Ukraine // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 160–164.

In the article the current state of organic agriculture and features of the market of organic production in Ukraine are examined. The evaluation of efficiency of organic production is carried out according to the leading enterprise of Poltava region (private enterprise "Agroecology") and agrarian educational institutions (National institute of bioresources and natural resources management of Ukraine, Mykolayiv state agrarian university) as preconditions of its development in the agrarian sector of the economy. For the first time the indicators of evaluation of

productivity of organic production are grouped according to the criteria: economic, energetic, business, ecological, social.

**Shevnikov D.N.** Influence of mineral fertilizers and microbe preparations on the formation of firm spring wheat yield // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 165–168.

The application of microbiological preparations polymyxobacterium and diazophite depending on the background of mineral nutrition in growing technologies has been studied and analyzed. Their efficiency concerning the increase of grain quality has been found out. The increase in productivity is achieved on different backgrounds of mineral fertilizers in growing technologies after application of polymyxobacterium: without fertilizers – 0,96 t/ha, on the background N45P45K30 – 1,42, on the background N45P45K30 – 0,48 t/ha. Diazophite entailed the increase respectively – 0,38 t/ha, 0,88 и 1,29 t/ha. In combined application of biopreparations the increase in productivity was at the level of each preparation or decreased.

**Kolesnikova L. A.** Impact of oil pollution of soil on chlorgenhime component of leaf of spring wheat seedlings // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 169–173.

A morphometric analysis of changes in content of chlorgenhime component of a leaf blade (hereafter – LP) of the fourth leaf of spring wheat seedlings grown in the soil modulated contamination, respectively, of the following levels: 0, 5, 10, 30, 40, 50 ml of crude oil per 1 kg of soil. Three effects of oil polluted soils on the development chlorgenhime LP have been identified microscopically. It has been found out that small amounts of oil pollution (5 ml/kg) stimulate physiological processes of proliferation and hypertrophy of chlorgenhime cells in the cytoplasm which significantly increases the number of grains of chlorophyll. Mean doses (10–20 mg/kg) significantly affect the development of chlorgenhime, and large ones (40–50 ml/kg) cause its irreversible changes.

**Tsukanova M. O.** Description of growth and development of heifers of different lines of Znamyansk type of Polesya meat breed // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 174–176.

The results of study of growth and development of heifers of different lines of Znamyansk type of Polesya meat breed are presented. Influence of lines on growth and development of heifers has been studied. It has been found out that heifers of line of Radio operator 113 were larger and showed the best productive qualities. It has been proved that the heifers of line of Radio Operator 113 showed higher energy of growth under the identical conditions of feeding and keeping that allows them at 18-month age to attain living mass of 465 kg, of Pet – 440 kg and of Present – 455 kg.

**Rudenko V. B.** Microflora of the skin and mucous membranes of healthy dogs // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 177–180.

The data concerning the analysis of specific structure of

the microorganisms isolated from the skin and mucous membranes from clinically healthy dogs have been given. It has been shown that a microbial landscape is basically presented by grampositive cocci. In 77,5 % of cases microbial associations were isolated, almost always different kinds of staphylococci were necessary components. In 77,5 % of cases microbial associations were isolated, and in 22,5 % – monocultures of microorganisms. Almost always different kinds of staphylococci were necessary component of associations. Over half of associations was two-componental (61,3 %).

**Belobrov V. V., Martynova O. L.** Determination of the optimal dose for biostimulator vaccinating poultry against Newcastle's disease // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 181–182.

Immunity stimulating tissue preparations made from chicken embryos was used to increase the level of immunity in vaccinated birds against Newcastle's disease. The optimal dose of immunity stimulating tissue preparation for chickens of two weeks of age with the introduction of enteral inoculation was determined within 0.1–1.0 cm<sup>3</sup> on the following parameters: a titer of antihemagglutinations, a thymus index, a spleen index, an index of Fabricius bursa, a live weight. Immunity stimulating dose of tissue preparation prepared by Filatov's method from chicken embryos at immunization of birds against Newcastle's disease was 0.5 cm<sup>3</sup>.

**Teslenko P. V., Peredera O. S., Zayika O. V.** Cattle sanitation leucosis in "Voskoboinyky" Ltd. of Poltava region // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 183–186.

The method of the herd sanitation from leucosis in Australia with the use of ELISA test in the investigation of milk and serum has been presented. The existent methods of cattle herd sanitation from leucosis according to operating instruction and recommendations of professor L. I. Nagaeva have been analyzed dealing with the sanitation by complex methods using liquid adsorbable inactivated vaccine against leucosis of cattle and the use of RID-negative calves from leucemic cows for the herd recreation. Recommended method allows to make healthier cattle herd from leucosis for a short period of time.

**Drozhchanaya K. V., Peredera E. S.** Comparative estimation of methods of bacterial muddiness determination of air // *News of Poltava State Agrarian Academy*. – 2010. – № 4 – P. 187–188.

The article deals with comparative estimation of ability of different methods (Kokh's method, Krotov's apparatus and membrane filters) to find out bacterial muddiness of air that are used for determination of sanitary estimation of air of housing for poultry and stock-raising, and also determination of the method which allows to define the available amount of microorganisms. Kokh's method and Krotov's apparatus have a low catching ability in stock-raising rooms. Reliable data about presence of microorganisms in the housing air where animals of different breeds are kept can be obtained with the help colloidal membrane filters № 3.

## ANNOTATION

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**Zhdamirov E. Yu.** Adaptive system of enterprise management // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 189–192.

The essence of notion “adaptive management” is determined as a managerial activity that is organized in interrelated complex of actions of management subjects directed on support of competitiveness thanks to management mechanism realization of innovation processes by managerial system parameters monitoring. The functions of adaptive management system are considered. Major quality parameters for management system are analyzed.

**Zhdamirova A. O.** Price, financial and credit and tax relations as a source of diagnostics of agricultural enterprises competitive advantages level // News of Poltava State Agrarian Academy. – 2010. – № 4 – P. 193–196.

The essence of the notion tax relations is determined as relations which appear on the basis of tax norms which settle, change or cancel tax payments, participants of which endowed with subjective rights and duties related with tax payments. The ways of agricultural enterprises tax system perfection are considered. The peculiarities of realization of price relationship in Ukraine are analyzed.