

**Grygoriuk I. P., Kalinichenko V. M., Malynska L. V.** Prospects of increase of the state energy assurance by means of phytoenergy // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 7–10.

The article deals with the necessity of urgent search of new alternative sources and technologies of power production with the use of renewable resources. The perspective of the cultivation of plants which effectively accumulate sun energy in the process of photosynthesis for the increase of energy assurance of the country has been grounded. The availability of phytoenergy use in the context of stable ecologically and economically balanced state development has been analyzed. Much attention is paid to the importance of scientists' concentration on selection of new plant varieties with a high activity of photosynthetic apparatus and ability to accumulate biomass of the appropriate quality regardless of nutrition conditions.

**Zhemela G. P., Barabolya O. V.** The baking quality of soft winter wheat depending on the damage of grain by a bedbug-tortoise // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 11–13.

The degree and the character of damage of soft winter wheat grain have been considered that worsens physical properties of grain: the masses of 1000 grains, natures, glassiness, amount and quality of gluten, bakery properties. It is the result of action of protease enzyme that is secreted by a bedbug-tortoise in the process of grain damage. The agrotechnical, biological and chemical methods of bedbug-tortoise control do not guarantee complete liquidation of its harmfulness. Method of inactivation of protease enzyme in the process of preparation of dough for baking bread due to the use of water solution (0,2-0,4%) of acetic acid provides the receipt of bakery qualities equal to undamaged grain that is used for preparation of flour and baking.

**Pisarenko V. M., Ponomarenko S. V.** Basic leaf-cutting wreckers of cultivated cabbage in the Poltava region // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 14–15.

Production harvests of cultivated cabbage of high quality is impossible without timely application of measures on protecting of it from harmful insects. The question of study of specific composition and long-term seasonal dynamics of quantity of basic wreckers of cabbage is probed in Ukraine and Poltava region. In the conditions of the Poltava region among the specialized wreckers of cabbage the most widespread is cabbage owlet moth (*Mamestra brassicae* L.) cabbage diamond-back moth (*Plutella maculipennis* (Curt.) and cabbage white butterfly (*Pieris brassicae* L.).

**Pysarenko P. V., Kolesnikova L. A.** Features of the leading system of wheat seedlings under stress of the oil // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 16–19.

Defined morphological manifestations of toxic and inhibitory properties of the components of crude oil leaf blade cross-section (hereinafter – LP) wheat seedlings.

The dynamics of formation of the conduction system LP fourth leaf model of agricultural test culture in the early stages of ontogeny in the presence of stressors. Established that soil contamination crude oil at a dose of 5 ml/kg observed stimulation of the elements of mechanical tissue LP, which is manifested in the growth of their size and quantity. Moderate pollution (10–20 ml/kg) causes an asymmetry – tropism placement SVP is relatively large central SVP, reduce the size of big farm support while increasing that of the average SVP, accumulation of elements of mechanical tissue. Increasing doses of oil pollution to 50 ml/kg significantly affect the development of leading LP and leads to the appearance of emptiness and phloem elements xylem medium and large SVP fine masses, which probably formed products of dissimulation, degradation and catabolism.

**Malynovska I. M.** An influence of fire upon the soil microbiocoenosis state of lea lands of not enough and long standing // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 20–24.

The study of the postpyrogenous and background plot state of light- and twenty-year lea lands has been shown that an influence of fire occurs on different mechanisms every three and fourteen months after its passing. The general processes that take place on account of fire after three months are following: a decrease of the amount of microorganisms, their physiological and biochemical activity, the carbon and nitrogen compound migration intensification with the exception of humus, an increase of soil phytotoxicity. After fourteen months the mentioned tendencies remain apart, from humus decay activity and phytotoxicity- they are reduced.

**Kuz'menko N. V., Krasylavets' Yu. G., Lytvynov A. Ye., Stankevych S. V.** Chemical protection of spring rape from pest and diseases // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 25–29.

Toxikation of seed material before sowing by mixture of insecticide and fungicide mordant is a necessary measure in modern system of spring rape protection from pest. During Cruciferae fleas mass colonizing of shoots, seed sowing material treatment guarantees desirable result only till two-pairs of leaves phase. During vegetation period for spring rape sowing protection it is necessary to spray additionally the sowing by insecticides which are allowed for using.

**Puzik L. M., Obratsova Z. G.** The peculiarities to form vegetable marrow yield depending on climatic conditions // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 30–32.

Based on years of research studied the effect of the sum of effective air temperature and rainfall during the growing season on yield and zucchini on the basis of statistical data processing methods disperse, correlation and regression analysis using Statistica package Excel and found that the variability of the yield was low (5.39% ), but inferior to the sum of temperatures (7.38%) and rainfall (16.63%). Statistical parameters of

meteorological factors and yields indicate that between yield and total precipitation and the sum of effective temperatures there is little feedback.

**Zhemela G. P., Kurochka A. O.** The influence of predecessors on the elements of the structure of productivity and quality of winter wheat grains depending on high quality characteristics // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 33–36.

The influence of the predecessors on the elements of the structure of productivity: the amount of productive stems per 1 m, the amount of grains in the ear of wheat, the mass of 1000 grains, the nature, the glassiness of different sorts of soft winter-annual wheat according to the biological characteristics was examined. It was found out that the best predecessors were pears and annual bean herds. The sorts Zemlyachka, Volodarka, Dobirna had the best physical indicators of grain quality.

**Glushchenko L. D., Kalinichenko S. M., Doroshchenko Yu. I., Bilan V. M., Zaporozhets L. N., Bilanovich O. L.** Economic and power efficiency of application of different systems of fertilizers under winter wheat on typical black soil in Left-bank Forest-steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 37–39.

Application of fertilizers is one of the most important directions of productivity increase of crops and improvement of soil fertility. With the increase of doses of mineral fertilizers the prime cost of 1 cwt of winter wheat grain rose, but a net profit and the coefficient of power efficiency diminished. Exploitation of soil without application of modern technologies of crop growing and, in particular, without taking measures on reproduction of his fertility will result in the catastrophic decline of soil fertility.

**Koval V. V., Natalochka V. O., Tkachenko S. K., Minenko O. V.** Dynamics of waterborne contaminations of agricultural purposes by salt of high-density metal in the conditions of poltava region // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 40–44.

Laboratory studies undertaken between 2002 and 2008 by Poltava Regional state design and technology centre for protection of soil fertility and foodstuff quality concluded that surface and ground waters of the Poltava Region are not contaminated by heavy metals salts. Therefore, these conditions allow our region to develop agro-ecological business and become a leader in the production of high quality foodstuffs and in particular ecologically clean products. However, one of the preconditions of this process is the availability of unbiased data on the agro-ecological state of ground and surface water resources and methods of land use in the current environmental conditions, which remain reasonably stable. The results of the studies undertaken in recent years show that environmental conditions in Poltava Region are among the most favourable in Ukraine.

**Pospelov S. V., Shershova S. V.** Researches of biological activity of lectin-containing extracts of purple coneflower (*Echinacea purpurea* (L.) Moench.) // *News of Poltava State Agrarian Academy*. – 2012. – № 1. –

P. 45–49.

The biological activity of the lectin containing extracts of *Echinacea purpurea* and their components by testing on watercress salad sprouts was investigated. It's established that the lectins that contained in extracts of all commodities, depressing the test system at a concentration of 10% -0.1%. In further dilution of extracts of leaves and stems of *Echinacea purpurea* did not significantly affect or inhibit the growth of shoots of watercress salad. Complete extract of rhizomes with roots in concentrations of  $10^{-1}$ - $10^{-4}$  slightly stimulated, but in subsequent dilution of extract – inhibited the test object. Testing extracts inflorescences of *Echinacea purpurea* showed stimulation shoots to 25% of control at concentrations  $10^{-2}$ - $10^{-8}\%$ . The effect of protein components more depressing than stimulating the test object was established.

**Trygub O. V., Liashenko V. V.** Estimation of drought resistance in various by origin genotypes of buckwheat (*Fagopyrum esculentum* Moench.) // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 50–54.

The article deals with studying of collection samples by fruitful characteristics and morphological indicators in contrast conditions of environment. The hydrothermal coefficient was used as an additional index of cultivation conditions. Tolerance degree to action of extreme conditions of various characteristics of a vegetative organism is defined. Among studying group of buckwheat the genotypes have been picked out with the improved ability to adaptation in enough droughty conditions which are valuable initial material for selection of highly productive grades with considerable potential of stability to a drought.

**Poltoretskiy S. P.** Influence of features of agrotechnics on the productivity and quality of grain of different sorts of buckwheat in the conditions of Right-bank Forest-steppe of Ukraine // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 55–59.

The results of two-year researches of growing buckwheat varieties Elena and Amazon indicate that wide-row sowing with 30 cm row spacing is the most appropriate method of sowing under conditions of unstable moistening of southern part of Right-bank Forest-steppe. The application of this method in combination with seeding rate of 3 million germinable seeds per hectare made it possible to form an optimal leaf area for both varieties and get a considerably higher yield.

**Barabolya O. V.** Formation of grain quality of hard spring wheat, terms and methods of its harvesting // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 60–64.

It has been found out that the synthesis of dry substance in grain proceeds to the complete ripeness of grain regardless of background of fertilizers at the sufficient soil and air moistening, the increase of dry substance ceases with coming of middle of cereous ripeness of grain at soil and air drought. Both weather conditions and background of a fertilizer and predecessors influence the synthesis of albuminous substances in grain. Albumen content in-

creases in grain as far as ripening. The basic amount of gluten is synthesized in grain in the middle of the suckling state. Albumen and gluten content is more in arid years in the period of ripening than in moist years.

**Doroshkevich N. V., Shevkoplyas V. N.** The detection of new highly productive isolates of fungus *Pleurotus ostreatus* (Jacq.: Fr.) Kummer by their tolerance to coefficient of habitus // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 65–68.

In this work the estimation of economical and biological quantities of new isolates of the *P. ostreatus* fungus in intensive cultivation condition on solid substrate (husks sunflower) as most wide spreading in Ukraine was made. It was found out that all cultures of oyster mushroom are able to form fruiting bodies without temperature shock and additional influence of other external factors. The morphological and biological peculiarity of new isolates of the *P. ostreatus* fungus that is a size of fruiting bodies, fruiting bodies and accretes quantity and size of hat-fungus has been found. The calculation of fruiting bodies habitus of the new isolates of oyster mushroom has been done. By resulted experiments the most perspective isolates (B-99 and K-99) against with HK-35 control strain for industrial cultivation has been found.

**Klimenko A. N.** State of the landed resources of pool river of gorin' // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 69–73.

Aiming results of researches from the study of the agrarian ecological state of earths of the agricultural setting of river of Goryn' basin on the indexes of ecological stability, level of the anthropogenic loading and state of agrarian landscape. It is set that relatively the satisfactory state is characterize territories of districts which belong to the area of Polesya, and the most vulnerable and unstable are territories of districts of area of Forest-steppe.

**Zinchenko Ye. V.** Safety of garden-stuffs of egg-plant depending on terms of storage // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 74–76.

The brought results over of safety garden-stuffs of egg-plant of different subspecies's and type of sort, that kept under various conditions and types of container. Found out the optimal terms of storage of egg-plant with the minimum natural losses of mass of garden-stuffs and to the greater standard product output. Ways of storage of fruits of an eggplant of different subspecies and type of sort, and their influence on a chemical compound after each period of storage are studied. Efficiency of use of different kinds of packing and storage conditions for a concrete investigated grade is proved.

**Sokolova V. M.**, Apricot fruits respiration intensity in dependence on the method of their treatment by antioxidant composition AKM // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 77–80.

It is established that the studied methods of processing the apricot fruit is the most effective way to spray the fruit with a solution of antioxidant compositions AKM before harvest, which provides forming on the apricots surface film of uniform thickness, which reduces the res-

piration intensity of fruits in 1,4–1,5 times.

**Dichenko O. Yu.** Recurrence of mass reproduction of sugar beet pests in Ukraine // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 81–83.

Recurrence of mass reproduction of sugar beet pests has been studied. Investigations proved that mass reproduction of sugar beet pests was observed cyclically rather than periodically. Synchronism of population cycles with sudden changes of of solar activity has been shown. Solar activity is recommended to use for prediction of the beginning of next mass reproduction.

**Lebedev S. N.** Prognosis of reproduction of malicious generations Lobesia botrana in conditions of plain-steppe of Crimea // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 84–87.

Provides information on the intent of the development of malicious generations Lobesia botrana of the leaf roller on vine plantations of plain-steppe Crimea from abiotic factors: the average daily air temperature, amount of precipitation, relative air humidity, as well as the area of leaf surface bush of grapes. On the basis of these data developed mathematical models of forecasting of the development of the phytophage, that allows to optimize the frequency and timeliness of protective measures in the fight against this pest on a particular cultivar of grapes.

**Kholod S. G.** Display of sign the "productivity" and its elements at the collection of millet samples of different ecological and geographical origin in the conditions of South Forest-Steppe of Ukraine // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 88–94.

The results of three-year study of collection set of millet samples, different originally (from 34 countries of the world) and to biological status (local and plant-breedings varieties, lines) on a sign the "productivity" and to its making elements in the contrasting weather terms of growing are resulted in the article. The coefficients of variation and level of cross-correlation connections are certain between these indexes. It is set that most productive were samples by an origin from Ukraine, Japan, India, Morocco and France. 20 high-yield samples of millet are selected with a stable index on years, which are recommended as a initial material for a selection on stabilizing of the productivity.

**Chernenko V. L., Semenenko I. I.** Polymorphism of the genetic diversity collections tomato greenhouse crops the resistance to fusarium wilt and other economic-biological characteristics // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 95–98.

The article presented the results of studying the level of variability of complex traits of important collections of tomato greenhouses (*Solanum lycopersicum* L.). Genetic diversity of collection features 43 samples of four botanical subspecies. Theoretically proved and practically realized the possibility of successful selection of contrasting and stable on the basic parameters of forms (isolines) of the tomato. All of them are today used in the breeding program of this culture in heterosis.

**Herman M. M.** Influence of mineral fertilizers and pre-

sowing treatment of seeds on the formation of physical features of dough and baking indices of grains of soft winter wheat // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 99–102.

The article describes the results of three-year study of influence of mineral fertilizing and pre-sowing treatment of seeds on the formation of physical features of dough and baking indices of grains of soft winter wheat. Influence of pre-sowing treatment of seeds by the growth regulator and bacterial preparations on the background fertilizers  $N_{25}P_{25}K_{25}$ ,  $N_{50}P_{50}K_{50}$ ,  $N_{75}P_{75}K_{75}$  has been observed. It is characterized by high indicators of steadiness and resistibility of dough, a weak ability of dilution and a high valorimetric estimation. The research has proved the increase of bread volume using pre-sowing treatment of seeds by preparations polymixobacterin (150 ml/t) and diazophit (150 ml/t).

**Seydaliyev N. Ya.** Influence of norms of fertilizers and the mode of irrigation on the productivity of cotton plant // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 103–106.

The efficiency of using fertilization and irrigation regime on the abscission of plant organs and on the mass of one cotton box has been studied in bifactorial field experiment in Mil - Garabagh valley. It was determined that these two factors influenced economical and biological indices. The maximal increase due to effective norms of fertilizers application is observed.

**Tronchuk I. S., Rak T. M., Chyzhanska N. V.** The structure and nutritiousness of diets for milk cows with the annual milk from productivity 6-9 thousand kilograms // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 107–111.

The perspective physiologically and economically proved structure of diets for highly productive milk cows has been developed. The research carried out by authors has shown that at high daily milk productivity it is necessary to limit a dose of a corn silo to 25-30 kg per a head for a day, and to increase the concentrated forages by 46-54 % on nutritiousness with the aim of normal consumption of demanded quantity of forages in diets. Offers concerning the organisation of high-grade feeding of milk cows throughout a year that guarantees manufacture of high-quality profitable milk are given. Intensification level: annual milk productivity 6000-9000 kg; expenses of forages on 1 kg of milk - 9-10 MJ of exchange energy.

**Birta G. A., Burgu Yu. G.** Influence of genotype on meat qualities of pigs // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 112–114.

Genetic research made it possible to detect the degree of heritability of economic characters as well as their correlation under certain conditions of swine feeding and maintenance. Knowing and using these characters in selection and breeding work allows us to improve breeds in the desirable direction of productivity. It is practically impossible to divide the characters into those which depend on inner factors or on environmental conditions only. But the degree of effect produced by all of them on formation of certain animal qualities in the process of

development can be detected. That is particularly important as far as the characters conditioning productive qualities of animals are concerned. The data of the research conducted confirm that when with the same live weight, Poltava meaty pigs, Large White and Mirgorod pigs had different slaughter and meaty qualities under the same feeding and maintenance conditions.

**Vatsky V. F., Velychko S. A.** The influence of separate factors on mass of calves at birth and suckling productivity of their mothers // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 115–118.

The article deals with research of influence of duration of embryogenesis, speed of embryo growth, sex of calves, maternal and paternal influence on mass of calves at birth, and also to influence separate of these factors (duration of embryogenesis, speed of embryo growth, mass of calves at birth) on the suckling productivity of cows-mothers. It has been found out that mass of calves at birth depends on speed of embryo growth and does not depend on duration of embryogenesis, which, without regard to a biological conditionality, has a high limit of changeability. The substantial connection of indexes of embryo development and mass of calves at birth with the suckling productivity of their mothers has not been fixed. The substantial connection of embryo development indexes and mass of calves at birth with the suckling productivity of their mothers has not been found out either.

**Shkromada O. I.** The toxic effect of metal oxides on the animal organism // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 119–121.

Article is devoted to safety, and effectiveness of nano-metal oxides: titanium dioxide. Red iron oxide pigment and copper sulfate. Toxicological studies have shown that metal oxides ( $Fe_2O_3$  i  $TiO_2$ ) exhibit their bactericidal activity in concentrations 0,2-2 mg/l. They have very low cytotoxicity, and lethality. Nanopowder is characterized by copper 60 % toxicity in the dose 50 mg/kg and the maximum expression of toxicity in the range 125-500 mg/kg.

**Manjos A. F., Peredera O. O., Lavrinenko I. V., Peredera R. V., Gernosek I. A.** Dynamics of biochemical indexes at experimental invazuvanni of crawls by an exciter // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 122–124.

The development of hepatic form eymeriozu rabbits characterized by biochemical changes in serum parameters. Indicators of enzymes of serum AST, ALT, LDH HHTP, LF in the early stages of the disease were not specific, but only pointed to the reactions of liver cells and biliary tract. At 6 th day of the experiment, despite the absence of clinical signs recorded increased activity of ALT, AST, HHTP, indicating violation of the structure of the liver. Preferential increase in activity of ALT over AST in patients with rabbits at the 16 th day of research is the result of acute inflammation in the liver parenchyma. Higher values HHTP, ALT, AST in serum corresponds to the presence of cytolysis syndrome that develops after disruption of cell integrity, which includes

data from enzymes: hepatocytes and biliary tract epithelial cells.

**Kirichko B. P., Zvenigorodska T. V., Parchenko V. V.** The new derivative of 1,2,4-triazoly antimicrobial action study // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 125–126.

The new derivative of 1,2,4-triazoly – АИ 99 and АИ 100 combinations – antimicrobial action has been study. The microbial sensitiveness of present combinations has done by diffusion technique of agar by use special made disks. The АИ 99 and АИ 100 combinations antimicrobial action of 0,5-1% concentration has been established. Most expressive antimicrobial action АИ 99 and АИ 100 combinations have been against *Corinobacter pseudodiphtheridicum*, *Str. pyogenes* and *Staph. spp.* and weak with reference to *P. vulgaris* and *E. coli*.

**Paliy A. P.** Study of stability atypical mycobacterium in relation to disinfectant preparation «Ecocid S» // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 127–129.

The results of researches of stability of atypical mycobacterium are resulted I, II, III and the IV groups on classification of *Raniona* to the bactericidal action of disinfectant preparation «Ecocid S». It is set as a result of the conducted researches, that atypical mycobacterium, related to the the same group on *Ranionu*, have a different level of stability to the action of the same disinfectant. By the most steady culture in relation to preparation «Ecocid S» there is *M. fortuitum*, and by the least stability – the cultures of atypical mycobacterium types of *M. gordonae*, *M. flavescens*, *M. triviale*.

**Sorokova V. V.** Pathologoanatomic appearance of dog dirofilariasis caused by *Dirofilaria immitis* // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 130–134.

The article contains materials about the pathologoanatomic changes of dog dirofilariasis caused by *Dirofilaria immitis*. Pathomorphological researches showed emaciation, anemia mucous membranes, protein steatosis, nefrozonefrit, venous hyperemia and pulmonary edema, hypertrophy and acute enlargement in the right part of a heart, hydrothorax, ascites and gematuria. Also are shown the changes non-specific for disease: catarrhal-hemorrhagic gastroenterokolit and hemorrhagic diatez. In the heart, lungs and pulmonary arteries of dogs, died of dirofilariasis, found mature parasites *Dirofilaria immitis*, which led to the death of the animals.

**Peredera R. V., Saharova O. Y.** Smoothing mediolateral disbalance of horses hoofs // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 135–137.

Reasons abnormality of hoofs functions and optimal methods of treatment disproportions of medial and lateral coffin walls of horses are considered. Established that mediolateral disbalance is found out at 92% of horses because of deformation of hoofs and accompany with arrhythmia of motion, inefficient movement of limbs, sometimes lameness and having an ache of shoulders, back and loin. Gradual decrease of mediolateral disproportion and creating of form that according to the

right anatomical parameters of healthy hoof are general methods of treatment of disease

**Dmitrenko N. I.** Syndrome of "swimmer" at newborn puppies // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 138–139.

The syndrome of "swimmer" isn't a hereditary disease, and in its occurrence and development a considerable role adverse factors of environment (too firm or soft surface in an arena play, a slippery floor, infringement in an organism of a parity of calcium and phosphorus, etc.). Illness is accompanied by heart deformation, underdevelopment of lungs and a thickening of joints which connect edges to a backbone. After timely, correct treatment, at application of massage of a thorax and swimming animals completely recover.

**Aranchiy V. I., Zorya O. P., Pisotskiy A. A.** The need and importance of economic regulation of agricultural production // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 140–142.

Generalized theoretical approaches regarding the need and importance of economic regulation of agricultural production in terms of market development. The role of the state in the regulation of agricultural production. Found that economic regulation of agricultural production should be carried out within the agricultural policy through the use of price, credit and investment and tax mechanisms to develop a viable agricultural production.

**Makarenko Y. P.** Identification of farms of essence and size // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 143–147.

Essence of farms and their identity is certain to the peasant economies after the signs of production units, will hire workers, to the level of marketability, «peasant» and «farmer». Authentication of farms is set after criteria: proprietor of farm, management and production process, integration with other forms of management, control functions after a production, sizes of enterprise. Small agrarian enterprises are differentiated after the sizes of land-tenure on the personal peasant, domestic and farmer.

**Kharchenko N. V.** Analysis of practice of dividend payments // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 148–153.

The methods of determination of fund of dividends are investigated. The necessity of realization of analysis of practice of dividend payments is educed. The process of payment of dividends by Ukrainian companies is described. The examples of calculation of fund of dividends are shown after the method of free balance of net profit of the current period, calculation of fund of dividends after the method of total sum of free balance of net profit of the current and retained earnings of past years, calculation of fund of dividends after the method of permanent size of dividends, calculation of fund of dividends after the method of proof increase of dividends in an absolute value, calculation of fund of dividends after the method of proof increase of dividends on a corresponding percent, calculation of fund of dividends after the method of permanent coefficient (interest) of

payments, calculation of fund of dividends after the method of permanent and variable part of dividends at forming of variable part of dividend after the increase of absolute value, calculation of fund of dividends after the method of permanent and variable part of dividends at forming of variable part of dividends after an increase on a corresponding interest. The indices of market activity of joint-stock company are analysed.

**Balanovskaya T. I., Gogulya O. P., Nowak O. V.** Formation qualitative human resources as condition of effective management // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 154–158.

The composition of directors and specialists of agrarian enterprises was analyzed. Sociological research data of Ukrainian and foreign scientists on the managerial staff characteristics (their professional knowledge, skills, experience, qualifications) and their impact on the work efficiency was represented. The main requirements for the materials staff according to the survey results were presented. The data on preparation of specialists in agrarian and environmental branches was given. The need for forming of the high quality personnel was grounded.

**Ghazaryan H. R., Badalyan M. E.** The ways of rising the role of information and consulting in agricultural development of Republic of Armenia // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 159–163.

Agricultural enterprising mostly depends on effective functioning of formative and consulting system. At present time agricultural production in Armenia has a low level. This with other reasons is caused by imperfection of informative and consulting system. For effective work of this service it is necessary to enlarge its network, activate the work of scientific and educational institutions, to rise the level of the state support and make the role of television more important.

**Voronko T. V.** Determination of essence and main objectives of regional marketing as a component in regional politics // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 164–167.

In the article essence and main objectives of the regional marketing specifics its functioning at modern conditions are considered. Put the accent on circumstances that restrain the development and functioning of marketing on all levels of management. It is suggested to supplement purposes of regional marketing. It should be noted that coming forward as a part of regional economic politics, the regional marketing differs in orientation on the decision of region problems and includes development and realization of conception complex development of economy and social sphere of territory, directed to the decision of its social and economic problems.

**Babitsky L. F., Padalka V. V., Lyashenko S. V.** Economic efficiency of industrial introduction of a torsion and percussive cultivator of soil // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 168–171.

The necessity of use of active soil cultivators for improvement of physical and mechanical properties of

farm lands has been proved. Results of calculation of economic efficiency of use of a torsion and percussive soil cultivator have been presented. Economic efficiency of use of torsion and percussive soil cultivator has been confirmed. The economy of fuel has been experimentally confirmed in the technological process of non-turnaround soil tilling by the unit in structure MTZ-80 + a torsion and percussive soil cultivator in comparison with a known prototype.

**Goryk A. V., Kovalchuk S. B., Yakhin S. V., Landar A. A.** Analytical and experimental determination of carrying capacity of the elements of the carcass of stadium "Vorskla" named after Alexey Butovsky (Poltava) // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 172–177.

Results of investigation of the technical state of structures podium building of the stadium "Vorskla" named after Alexey Butovsky (Poltava). Based on field measurements of the transverse deflection of sloping crossbars of the carcass, with a maximum filling with spectators of grandstands, was developed model of the spatial carcass of structures, which allowed to predict service life. Identified priorities for the cause and effect defects and their impact on the technical condition of the building structures. Was developed the recommendations regarding the safe and reliable operation of the stadium "Vorskla" (Poltava)

**Lykhvenko S. P., Kharak R. M.** Experimental research of stability of rectilinear motion of tractor in the conditions of a different coupling of driving-wheels // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 178–180.

In the article results of experimental research of stability of rectilinear motion of the MTZ-80 tractor are represented during work on a surface with a different coupling of wheels and quiescent load on a hook depending on the rate of movement. It is set that for providing of rectilinear motion at the differential drive of wheels of back bridge it is necessary to turn the front wheels of tractor on the average on a corner 2,18 degrees, and at the hardly blocked drive - on 5,16 degrees. It is multiplied the corner of turn of wheels at growth of rate of movement of tractor. Measurement of parameters were carried out with the use of tensometric devices.

**Stepovaya O. V., Bulavenko R. V., Roma V. V.** Analysis of the state of surface water of Poltava region in control sites // *News of Poltava State Agrarian Academy*. – 2012. – № 1. – P. 181–184.

The ecological estimation of a condition of river waters of Poltava region in areas of placing of treatment facilities which has allowed to estimate a situation developed in investigated water objects is spent and to classify them on degree of suitability for water use principal views. The estimation of quality of surface water was carried out on the basis of the analysis of the information of sizes of hydrochemical indicators in comparison with their corresponding values of maximum permissible concentration.

**Avramenko N. I.** Scientific substantiation and develop-

ment of measures of eutrophication control // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 185–188.

The main factors that help to reduce the number of blue-green algae are considered. The intensity of the process of eutrophication of water in the river Vorskla has been established. The optimal conditions for cyanobacteria have been determined. The results of studies on examination of the impact of various chemicals on the reproduction of microorganisms have been presented. Eutrophication processes of the Vorskla River from which agroecological information was collected have been characterised. The number of blue-green algae has been specified. The measures on control of eutrophication process of water in the river Vorskla have been developed.

**Machuskyy O. V.** The selection of media for the accumulation of *Bacillus anthracis* Sterne 34F2 // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 189–190.

There were outlined the need of developing and introducing of new preparations for anthrax prevention. The nutrient media for accumulation of *Bacillus anthracis* Sterne 34F2 were selected. Also the main parameters of selected media had been displayed. In the accordance to the results of research we established the optimum dense media, which contain 100-120 mg% of amine nitrogen, has pH of  $7,4 \pm 0,2$  and manufactured by Hottinger digest.

**Yatsenko Yu. V.** Physical characteristics of mixed feeds and original ingredients after mechanical treatment // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 191–195.

This article highlights the experimental research results on physical characteristics of mixed feeds and original ingredients after mechanical treatment. Absolute dry matter (DM) density was tested in wheat, corn, barley, soy-bean, cake, rape seed meal and bran. Inner friction coefficient and repose angle were computed. The experiment resulted in grinding module impact on inner friction coefficient and repose angle. Total dry matter value ranges from 1,35 up to 1,47g/cm<sup>3</sup> for the various wheat sorts in particular. Inner friction coefficient forms 0,51 by 2,3 mm grinding module value and 42° repose angle for mixed feeds. Inner friction coefficient equals 0,67 and 43° repose angle by 1,76 mm grinding module value for complete feeds.

**Portyanko T. V.** A role of microflora in influence of periodontium disease of cats // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 196–197.

The literary over are brought data about influence of microorganisms of dental name-plate on development of illnesses of periodontium. Specific composition of microflora of oral cavity is certain at the used for setting fire diseases of periodontium for domestic cats and comparatively with clinically healthy animals. It is set that a coccal microflora prevails at gingivitis, in particular yellow-green staphylococcus, part of enterobacters increases at parodontium. An investigational sensitiveness of the distinguished microorganisms to the antibiotics and these recommendations are to their application.

**Grygoriv J. J.** Economic efficiency of spring false flax growing in Pricarpattya region // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 198–200.

The article deals with results of investigations from 2009-2011 in a stationary field experiments on sod-podzol soils concerning the study the effectiveness of various growing technologies on spring false flax productivity and thus the economic efficiency of this crop growing. The dependence of elements of crop yield and productivity on the use of mineral fertilizers has been found out. It has been concluded that fertilization had a significant impact on seed productivity of spring false flax and on the rate of cost and profitability of spring false flax seeds.

**Opriya A. T.** Methodological support of economic forecast (in the context of hypothesis of stability and regularity development of phenomena in the temporal space) // News of Poltava State Agrarian Academy. – 2012. – № 1. – P. 201–207.

In the article methodological approaches are considered at prognostication of economic indicators taking into account the tendencies of their motion in temporal space of the past coming from hypothetical conception of regularity development of phenomena in the temporal space in the future. Generally speaking about extrapolation of temporal rows on the base of correlation-regressive design by the choice of the scientifically grounded line of trend style, as to the mathematical and analytical function which depends on quality of prognosis. Methodical approaches are illustrated the examples of specific calculations.

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