SUMMARIES

Averchev O.Yu. – A comparative characteristic of morphological characters of eggs of chicken crosses *High Line W– 36* and *High Line Brown* depending on the age of hens

The study determines some regularity in a rapid egg mass increment in the chicken cross *High Line W– 36* at the age of 25-54 weeks as compared with *High Line Brown*. It shows that in *High Line W– 36* the egg mass increases mainly at the beginning of the laying (25-54-week age) period at the expense of a rapid increment of the mass of the yolk and the white. The yolk mass increased very fast. Due to this, the white/yolk ratio reduced from 2.7% to 2.17%. The brown cross displayed a high and almost stable ratio of 2.73%. The stabilization of the white/yolk ratio down to 2.1 begins at the age of 43 weeks, which is not typical of the poultry selected on the Leghorn basis. Egg energy value at the age of 54 weeks was higher in the white cross (641.8 kJ), as compared to the brown one (575.3 kJ).

Key words: shape index, energy value, big diameter of the white, big diameter of the yolk, egg mass, protein mass, mass of the yolk, egg shell mass.

Biryukova O.D. – The current state of pedigree resources of Ukrainian dairy cattle breeds

The paper monitors the state of pedigree resources of Ukrainian dairy cattle and shows the reduction in the number of sires used for the reproduction of the breeding stock, especially in Ukrainian breeds (by 45% within the past three years). Major Ukrainian breeds reveal a 20-25% decrease in the stock and a 35-40% decrease in the number of breeding ranges. However, the numbers of highly productive cows as well as productivity indices are increasing.

Key words: genealogical structure, breeding value, inbreeding, pedigree resources, strains.

Parasochka I.F., Bodryashova K.V., Sydorenko O.V., Zhuravel' A.P. – Microevolutionary processes in the population of big red pigs

The study considers some features of the genetic structure of the local breed of big black pigs by blood groups, and analyzes the genotypes of the *Dzvenyache* farm population according to the genes of estrogen receptors (ESR) and melanocortin-4 (MC4R). The EAE system records a higher number of homozygous genotypes in all herds. According to the results of the certification in 2011, a lower consolidation and number of homozygous genotypes characterize the stock of the *Dzvenyache* farm. The pigs reveal polymorphism of the studied genes ESR and MC4R. The research shows that all animals except Lira 646 (BB) and Rosa 242 (MM) sows are heterozygous according to the markers of quantitative characters.

Key words: immunogenetic markers, gene pool, big black pigs, allele, genotype, homozygosis, genes ESR, MC4R.

Boroday V.P., Zadorozhniy A.A. – Ways of establishing a pedigree foundation in table poultry breeding in Ukraine

The article identifies current priorities of the development of broiler farming and the main problems of poultry production. It underlines a unique character of the project undertaken by the partnership *Agrica food products,* and good prospects for the current trends in world pure-strain poultry farming.

Key words: table poultry breeding, cross, selection, project.

Buyuklu G.I., Pysarenko A.V. – The current state of the conservation of the gene pool of red steppe cattle

The examination of seven pedigree herds of red steppe cattle shows that their productivity is 3343 - 4410 kg milk per lactation (fat content is 3.75 – 4.18%). According to the genotypic structure, the populations are composed of purebred animals and genotypes that include a different share of the red steppe and improving breeds. Out of 1944 cows, 328 are purebred (16.9%), while in 74.8% of cows a share of the red steppe cattle is more than 50%.

Key words: cattle, red steppe cattle, gene pool, productivity.

Vedmedenko O.V., Karpenko O.V. – Simulation and prediction of live weight of brown laying chicken crosses

The paper makes a comparative evaluation of the application of T. Bridges and F. Richards models for the description and prediction of the live weight of brown laying poultry crosses. The T. Bridges model is shown to have a higher prediction value, which allows recommending it for the study of poultry growth regularities at an early age.

Key words: live weight, asymptota, embryo stage, kinetic growth rate, exponential growth rate, growth curve, ontogenesis.

Vdovychenko Yu.V., Omel'chenko L.O., Ivina-Malyarenko O.S. – Natural resistance of south beef cattle

The study shows that cows of the southern beef cattle reveal developed and effective mechanisms of natural resistance that provide temperature homeostasis, colloidal and osmotic pressure, activate cell and humoral factors of non-specific resistance, and ensure animals' health, as well as their high productivity and reproductive capacity under the conditions of temperature load.

Key words: non-specific resistance, homeostasis, temperature load, heat resistance, albumin, γ-globulins, cell and humoral factors of immunity.

Vovchenko B.O., Tretyakova L.V. - Phenotypical variability of the main breeding characters of the Askanian astrakhan sheep

The paper looks at the lamb and meat productivity of young Askanian astrakhan sheep produced from mothers of different constitution types. The research results show that the level of variability of the main characters of meat productivity ranged between 1.7.and 42.1%.

Key words: sheep, Askanian astrakhan sheep, productivity, character variability.

Vovchenko B.O., Shytets' A.V. – Meat productivity of purebred and hybrid young rams

The study assesses mutton-making qualities of hybrid sheep produced by crossing Askanian fine-fleece ewes with crossbred Askanian rams. The carcasses of hybrid four- and eight-month-old lambs contain by 0.6-1.3 % more of first grade meat than of purebred ones. Hybrid young sheep produced by 12-month-old rams have advantages over purebred Dnipropetrovs'k type in first and second grade meat quality: 93.52 % versus 91.90 % .

Key words: mutton, meat productivity, dressing percentage, sheep breeds.

Vovchenko B.O., Klyuyenkov V.O. – The evaluation of breeding and productive characters of ewes of the Dnipropetrovs'k type of Askanian mutton and wool sheep

The study of ewes of the Dnipropetrovs'k type of Askanian mutton and wool sheep makes it possible to evaluate the dynamics of their growth and development, fattening and reproductive characteristics as well as the efficiency of their use.

Key words: ewes, polycarpic effect, survival rate, productivity.

Herasymenko V.V. – Immunogenetic aspects of the conservation of the gene pool of local pig breeds

The paper investigates the efficiency of using genetic systems of erythrocytic antigens and some polymorphic proteins of blood serum for the gene pool conservation of the closed population of the Ukrainian steppe specked pig breed.

It recommends to select parent forms according to the genotype with the aim of producing the offspring with an increased level of heterozygosis according to a complex of genetic systems of marker genes. Breeding should be supplemented with individual selection for the young replacement stock that has integrated genotypes typical of the breed.

Key words: marker genes, integrated genotypes, heterozygosis level, gene pool conservation, local pig breeds.

Hyl' M.I., Kramarenko S.S., Volkov V.A. – Allele pool monitoring of the Ukrainian black speckled dairy cattle

The article studies the molecular variability of genealogic lines of the Ukrainian black speckled dairy cattle. It presents a genetic characteristic of these breed and structural formations, their genetic similarity and diversity, and evaluates the degree of genetic differentiation and genetic similarity by the frequency of erythrocytic antigens.

Key words: allele, locus, erythrocytic antigens, breed, dairy cattle, genetic similarity, genetic differentiation.

Gryshyna L.P. – The improvement of the methods of assessing the breeding value of boars-sires in the pedigree stock

The article assesses the breeding value of boar-sires of the big white pig breed according to daughters' productive characters taking into account mothers' produc-

tivity. This method is designed to test sires in homo- and heterogenous selection variants by sows' productivity.

The results prove the expediency of using neutral type sires for improving the lines and types within one breed; however, equalizing and dominance types are expedient to use in crossing and hybridization for increasing the manifestation of the heterosis effect according to the productive characters.

Key words: prepotency, boars-sires, phenotype, stud type, heritability, reproductive characteristics.

Guzeyev Yu.V. – Buffalo breeding in Ukraine: past, present and future

The article features the past and present state of buffalo breeding in Ukraine, considers their utility characters, and substantiates the need for the industry's revival in Ukraine.

Key words: buffalo, gene pool, population, productivity.

Zadorozhniy A.A. - Direction of researches on plant-breeding work on the row of signs

In the article analytical materials are given in relation to scientific researches which are conducted in Russia on plant-breeding work. Different plant-breeding-technological receptions are considered (inherited signs, conversion of forage, increase of embryonic and post-embryonic vital functions with the use of domestic selection, additional biotests, type of iris, ecologically harmless physical and chemical factors of influence on incubation eggs and chickens in early age).

Ivanov V.O., Nesterenko O.P., Kremins'ka T.V. – Adaptive properties of pigs under the conditions of commercial pork production

The article considers the effect of the adaptation of pigs to the local environment of industrial pork production, and outlines ways of resolving the problem for raising their productivity.

Key words: pigs, adaptation, productivity, pork production.

Karateyeva O.I. – The development of linear measurements of dairy cattle of different breeds

The article presents the results of studying the use of the main linear measurements of animals for the description of points and build type of mature cows of the Ukrainian black speckled cattle, Ukrainian red and red steppe dairy cattle under the conditions of southern Ukraine.

Key words: breed, height at crest, slanting trunk length, chest depth, width and girth, shank girth, linear measurements, points.

Kislins'ka A.I. – Thermoregulation in pigs of foreign populations during their adaptation to the conditions of southern Ukraine

The article presents a comparative characteristic of the main indices of thermoregulation of a foreign population of big white pigs of Hungarian selection under the conditions of the Mykolayiv region.

Key words: big white pigs, population of pigs of Hungarian selection, Land-

race, Duroc, body temperature, respiration frequency.

Kyrychenko V.A. – Genetic features of different lines of sheep of the polycarpic type of the Askanian astrakhan breed according to hemoglobin and transferin loci

The paper focuses on the investigation of genetic features of different lines of sheep of the polycarpic type of the Askanian astrakhan breed according to the distribution of genotypes and alleles of polymorphic hemoglobin and transferin loci. It shows that genetic differences between the lines studied according to polymorphic protein loci do not contrast significantly and have a low level of differentiation.

Key words: sheep, line, locus, hemoglobin, transferin.

Kovalenko V.P. Nezhlukchenko T.I., Nezhlukchenko N.V. – The main managerial tools for livestock breeding

The article proposes a system of controlling selection changes in populations of farm animals by assessing the effect of selection through the dynamics of character variability and parameter curves. It considers the types of effects when breeding for higher productivity or consolidation of the main economic and utility characters.

Key words: breeding process, population, selection character, breed formation, distribution histograms, dynamics of changes

Kovalenko V. P., Nezhlukchenko T.I., Shkarapata Y.E., Lemeza I.S. – Management and monitoring of breeding processes in livestock production when selecting for highly productive populations with the application of the best world gene pool

The articles presents an overview of the experience of solving the tasks of information provision for the breeding process using information technologies, computers and genetic and mathematical methods; a system of monitoring the process of improving the existing lines and developing new lines and types in pig breeding, poultry farming and sheep breeding.

Key words: monitoring, genetics, breeds, lines, crosses, selection.

Kovalenko V. P., Pelykh N.L., Pankeyev S.P. – Reproductive characters of sows of the big white breed of the intrabreed type УВБ-3 depending on a new index of maternal properties

The study determines the reproductive characters of sows depending on the survival rate (based on the data of four farrowings). It shows that class M^+ sows reveal the highest indices (farrowing IV); the polycarpic effect in this class was 11.7, milk production was 55.8 kg; in farrowing III the polycarpic effect was 13.6, milk production was 79.4 kg; litter mass at weaning at the age of 60 days was 206.2 кг.

For specifying the effect of the factors under study on the variability of the reproductive characters of sows, a one-factor dispersion analysis was made. It shows the most significant influence of the polycarpic (89.0%; $P<0,001$) and big-fetus effects (25.0%; $P<0,01$); in this case, F-criterion was 4.18 and 8.30, which exceeds probability threshold I and III according to the Fisher's criterion.

Key words: reproductive characters, breeding, index of litter evenness, piglet's mass/sow's mass ratio, survival rate, share of influence, Fisher's criterion.

Bashchenko M.I., Kovtun S.I. – The current state and prospects for biotechnology applications in livestock production

The paper analyzes the current state of biotechnology applications in livestock production and outlines a strategy of using modern breeding methods based on cattle embryo transplantation. It describes the embryo transplantation situation in advanced countries of the world and substantiates the prospects for efficient application of biotechnology methods in Ukraine's animal husbandry.

Key words: cattle, embryo transplantation, early embryogenesis, sexed sires' sperm.

Khalak V.I., Kozyr'V.S., Martyushenko V.L. – Points of pigs of different genotypes and their relationship with fattening, slaughter and meat-making qualities

The article features the results of studying fattening, slaughter and meat-making qualities of young pigs of different genotypes, biochemical indices of blood serum, and establishes their correlations.

Key words*:* young pigs, genotype, fattening, slaughter and meat-making qualities, biochemical indices of blood serum, correlations

Kostenko S.O., Dragulyan M.V. – Prediction of the polycarpic effect in pigs with the help of cytogenetic and DNA-markers

The study identifies the frequencies of alleles and genotypes of genes *FSHR, NCOA1, ESR,* and *PRLR* in Ukrainian meat and Welsh pigs. It reveals the advantage of Ukrainian and Welsh sows of certain genotypes over their analogs. The cytogenetic tests conducted show that a higher frequency of cells with micronuclei in animals with a desired and transit genotype is accompanied by a lower polycarpic effect ($r= -0.30$) and lower offspring survival rate, $r= -0.48$ ($0.99>P>0.95$).

To develop a selection strategy, we provide marker profiles of pigs reflecting their genotypes according to cytogenetic and DNA-markers.

Key words: Sus scrofa, pig, FSHR, NCOA1, ESR, PRLR, micronuclei, Ukrainian meat pigs, Welsh pigs, survival, polycarpic effect.

Kudryk N.A. – Prospects for the development of a new Askanian astrakhan sheep breed

The paper analyzes the state and prospects for the development of the Askanian astrakhan sheep breed. It views a complex approach to the production and processing in the sphere of astrakhan sheep breeding as the main way of enhancing the efficiency and competitiveness of the industry.

Key words: Askanian astrakhan sheep, sheep, lambs, line, intrabreed types, competitiveness, astrakhan sheep breeding.

Kushnerenko V.G, Surzhenko M.V. – Environment x genotype interaction and its impact on egg production of meat-layng poultry

The paper examines the environment x genotype interaction in the process of breeding a new group of the meat-laying type (when poultry are distributed on different decks of the battery). It shows that layers of the Prydniprovs'ky type display

the additive norm according to egg production indices in class M^- and according to live weight when they are placed on the upper decks.

Key words: poultry farming, genotype, egg production, egg mass, environmental impact.

Lanovenko O.G. – The possibility of using genetic markers in selection for the productivity of inbred *Gallus domesticus L* populations

The paper considers the possibility of using intrapopulation frequency of blood groups B- and E-systems of poultry (Gallus domesticus L.) for the prediction of the productivity and vitality of separate populations, as well as for breeding a selection method. It underlines the necessity of using as genetic markers those traits that show phenotypic polymorphism.

Key words: genome, DNA-markers, intrapopulation polymorphism, blood groups, artificial selection.

Lytvynenko T.V., Bun' Yu.S. – The efficiency of breeding Ukrainian black specked dairy cows by milk productivity characters

The study focuses on the effectiveness of the breeding method by lines, and their influence on the milk productivity indices of Ukrainian black specked dairy cows. It also reveals correlations between economic and utility characters (milk yield and fat content) in high-yielding cows.

Key words: cow, breed, line, milk productivity.

Lyubyns'kyi O.I., Shuplyk V.V., Kasprov R.V. – Selection and genetic evaluation of the udder in cows of the Carpathian intrabreed type of the Ukrainian red specked dairy cattle

The paper makes a selection and genetic evaluation of morphological and functional features of the udder of cows of different breeding groups of the Carpathian intrabreed type of the Ukrainian red-specked dairy cattle. It shows that the cows' udder is well adjusted to modern machine milking. The study identifies positive correlations between daily yields and characters responsible for the shape, size, and volume characteristics of the udder: girth, depth, width and length of the anterior quarter. There was also a high correlation with the udder index and the speed of letting down milk.

Key words: bull, udder, milk yield, index, correlation.

Mel'nyk V.O., Bondar A.O., Kravchenko O.O., Starodubets' O.O. – Reproductive quality of sows and reproductive capacity of boars-sires of different genotypes under the conditions of breeding farms

The paper examines the reproductive qualities of purebred sows and young female hybrid pigs camboro (ВБ×Л), and reproductive qualities of purebred and terminal boars cantor (Д×П). The study shows higher reproductive qualities of hybrid sows in comparison with purebred ones, and a high reproductive capacity of terminal boars under the conditions of breeding farms.

Key words: sows, boars-sires, reproductive quality, reproductive capacity, crosses and hybrid animals.

Sheremeta V.I., Opanasenko O.S. – **Assessment of the reproductive ability of boars by the ejaculation index**

The study shows that mean ejaculation index values obtained after two trials make it possible to assess the reproductive ability of boars and to select sires with high indices of the amount and concentration of sperm, as the coefficient of multiple correlation between these characters is valid ($p < 0.05$) and has a high degree of reliability ($r = 0.563$).

Osadcha Yu.V. – The impact of incubation eggs on the vitality of ostrich embryos

The paper analyzes the results of the incubation of 1807 ostrich eggs based on their pre-incubation distribution into classes according to the mass. It determines egg mass parameters for efficient incubation results: higher hatchability, embryo vitality, survival rate.

Key words: ostrich, egg mass, hatchability, embryo vitality.

Ostapenko V.I. – Morphological characters of eggs and allometric dependence of their constituents in best world poultry crosses

The article examines the impact of genotypic features of egg-laying crosses on the variability of egg mass and its constituents: yolk and white mass. Allometric dependences analysis shows that yolk mass and yolk/white ratio are formed most rapidly. It is recommended to consider the regularities established in the assessment of table and incubation eggs.

Key words: white, yolk, allometric dependences, incubation, egg-laying poultry crosses.

Papakina N.S., Plaskal'nyi A.I. - Assessment of the productivity of offspring

The study assesses ram sires by the quality of their offspring, determines some indices of economic and utility characters, and provides a general characteristic of sires of the Tavrian type of the Askanian fine-fleece sheep under the conditions of the breeding farm *Chervonyi Chaban*.

Key words: sheep breeding, Tavrian type, sires, utility characters.

Pastukhova T. A. – The effect of fertilization age of Charole heifers on their further productive and reproductive ability

The article presents the results of studying the effect of fertilization age of Charole heifers of Ukrainian selection on the reproductive ability of cows. The fertilization of heifers before the age of 14 months and after the age of 24 months leads to a decrease in their further productive and reproductive ability.

Key words: heifers, Charole, fertilization age, survival of the young, reproductive ability.

Pelykh V.G., Khyzhnyak V.Yu. – Points of pork pigs under the conditions of the breeding farm *Stepnoy* in the Zaporizhya region

The paper makes a comparative assessment of duroc and landrace pork pigs, provides indices of their productivity and determines a relationship between the polycarpic effect and trunk length and chest girth.

Key words: duroc and landrace pigs, intrabreed type, pork pigs, productive and fattening qualities, genetic potential, precocity.

Pelykh V.G., Chernyshov I. V., Levchenko M.V. – Gene pool of pork pigs and prospects for its application in pig breeding

The article features the main pork pig breeds in Ukraine and outlines the prospects for their application in pig breeding. It also describes the best genotypes of constitutionally strong and highly productive pedigree animals.

Key words: pork pigs, gene pool, Ukrainian pork pigs, Poltava pork pigs, landrace, duroc, red-belt pigs, red-belt pigs, Welsh pigs.

Pysarenko A. V. – Analysis of the milk production level of cows in the genesis of the red steppe dairy cattle stock

The study examines different selection methods in the process of the red steppe dairy cattle stock formation on the breeding farm *Prymorsky*i (Zaporizhhya region) and shows the possibility of raising milk production through purebred selection. The use of Anglers in improving selection contributes to higher fat content in milk, but reduces milk yields in hybrid animals in comparison with purebred cows.

Key words: gene pool, red steppe dairy cattle, genesis, selection, milk production.

Pysarenko N. B. – Breeding and genetic features of cows with different periods of economic use

The study looks at the breeding and genetic features of cows with different periods of the economic use and compares life-long use indices in carriers and non-carriers of some alleles of the EAB-locus. It shows that certain alleles of the B-system have a different selective value and can be used in breeding for a greater longevity of dairy cattle.

Key words: economic use, ended lactation, alleles of EAB-locus, breeding value.

Severov O.V., Rozhkov V.V., Miroshnychenko I.P., Smorochyns'kyi O.M. – The efficiency of using landrace boars on big white sows under the conditions of a breeding farm

The article presents the results of studying the use of landrace boars on big white sows under the conditions of a breeding farm. It analyzes the fattening and slaughter qualities of purebred and hybrid young animals, and determines the economic efficiency of pork production on the farm.

Key words: boars-sires, sows, gilts, average daily increments, dressing percentage.

Smorochyns'kyi O.M., Filimonova Yu. – The assessment of meat production of the Ukrainian red dairy cattle

The article provides a comparative characteristic of the fattening and slaughter qualities of non-castrate male calves of the Ukrainian red dairy cattle. It analyzes the economic efficiency of beef production using the genotypes under study.

Key words: male calves, technology, fattening, growth intensity, meat production.

Starodub L.F. - A comparative assessment of the level of genetic load in the genome of cattle on some Ukrainian breeding farms

The study examines the features of spontaneous chromosome variability of cattle, analyzes age and breed variability of the karyotype, and considers the effect of red pigment mutation on the level of karyotype stability in animals.

Key words: karyotype, animal breeding, mutations, genetic monitoring, domestication.

Kovalenko V.P., Stryzhak T.A., Khvatov A.I., Khvatova M.A., Akimov O.V. – The application of mathematical functions in identifying growth regularities and live weight prediction in pigs

The paper determines the possibility of using genetic and mathematical models of growth for early prediction of end growth indices in different age periods, as well as prediction accuracy and adequacy of predicted and actual forms of the growth curve. The study points out that the mathematical models of Brodi-Shmalhausen, Pytter-Bertalanfi, Bridges, Richards display high prediction accuracy and adequacy of the curve predicted for all age periods.

Key words: mathematical modeling, prediction accuracy, growth curve.

Sudyka V.V., Bushtruk M.V., Starostenko I.S., Tytarenko I.V. – Modeling alternative variants of a selection program for breeding dairy cattle populations

The paper shows that the most significant factors influencing the genetic progress in populations are: a) the number of bulls-sires, and cows in the active portion of the population inseminated with the sperm of bulls under study; b) the number of effective daughters per one bull assessed by its offspring; c) the spermatheca for a long-lasting conservation of the sperm of the sires studied.

Key words: breeding process, bulls under study, genetic progress, spermatheca, red-specked and black-specked cattle, lines.

Topikha V. S., Lykhach V. Y., Lugovyi S. I., Konovalov I. V. – Bacon-making qualities of landrace pigs

The study investigates bacon-making qualities of landrace pigs and their different combinations. It shows that increased bacon production is achieved when purebred landrace pigs are used together with hybrids produced through direct and reciprocal crossing of landrace and duroc pigs.

Key words: pigs, landrace pigs, bacon-making qualities.

Topikha V. S., Mel'nnyk V.O., Kravchenko O.O. – Age dynamics of points parameters of boars of different genotypes

The article presents the results of studying the dynamics of such measurements as trunk length and chest girth at the shoulders as well as the index of solid build in the context of age and breed. It identifies some specific features and establishes a

relationship between the index of body build compactness and sex dimorphism in boars-sires of different pork genotypes.

Key words: trunk length, chest girth at shoulders, index of solid build, sex dimorphism.

Dubyns'kyi O.L. – Specific features of meat productivity formation in animals of different genotypes of the southern beef cattle

The paper presents the results of research into the formation of beef productivity of different genetic subtypes of the Tavrian type of the southern beef cattle. It reveals a reliably higher growth intensity and energy in male and female calves with low heredity of the zebu genetic subtype, as well as a higher formation and growth intensity in the age periods under study.

Key words: beef cattle breeding, phenotype, southern beef cattle, genotype, growth intensity.

Tunikovs'ka L.G. – The application of modern selection methods in pig breeding

The paper shows the expediency of using the efficient combination of growth constants in breeding highly productive animals. It develops selection indices and determines the expediency of applying Bridges' model to the assessment of pigs by a complex of characters.

Key words: growth, kinetic and exponential growth rate, selection indices, reproductive and fattening qualities.

Khvostyk V. P. – The genetic structure of F_2-F_3 geese according to ovoproteins in the process of producing a dimorphous population

The paper examines the genetic structure by protein loci of egg protein of F_2-F_3 geese in the process of developing a dimorphous population. The level of heterozygosis was 13.75-15.00%. According to their genetic structure, F_2-F_3 geese are similar to Rhein geese that took part in their selection.

Key words: geese, polymorphism, alleles, locus, level of heterozygosis, egg protein.

Tserenyuk O.M. – Polymorphism of QTL genes in pigs of new stud units in Landrace and Wales breeds

The paper investigates the polymorphism of QTL genes – RYR1, PRLR, ESR and MC4R in animals of stud units developed in Landrace and Wales in comparison with Ukrainian Landrace pigs of home selection and Wales pigs of English selection. It also makes a comparison with the polymorphism of corresponding genes in Big White pigs.

Key words: QTL, RYR1, PRLR, ESR, MC4R, pigs.

Shabayev O.V., Onyshchenko V.A. – The characteristic of qualitative characters of eggs of promising poultry crosses

The article considers morpho-physical characters of eggs of poultry crosses *High Line White* and *High Line Brown*. It reveals genotypic and ontogenetic regular-

ities according to the characters of egg quality of different crosses that can be used in further selection.

Key words: genotype, cross, laying poultry, egg mass, shape index, egg mass percentage, yolk mass.

Shablya V.P., Zadorozhna I.Yu. – Breeding and economic efficiency of early prediction of milk productivity

The paper provides selection and economic results of the approbation of a method of early prediction of milk productivity based on the points of heifers. It shows that early selection using this method ensures an effective cull of low-value animals at an early age, and leads to additional profits.

Key words: heifers, breeding, early selection, prediction, economic efficiency, cull, points, milk productivity.

Shcherbyna O.V. – Specific features of growth and development of the young generation of laying poultry

The article presents the results of assessing the growth of chickens of the laying cross *Isa Brown* under the conditions of Ukraine during a 90-day period of keeping.

It studies the dynamics of the live weight and survival of chickens according to different distribution groups, and analyzes the degree of variability.

The paper also examines the average daily increment of chickens in equal-weight groups, and reveals an advantage of the poultry under study over the control group.

Key words: cross, average daily increment, population, survival, live weight.

Yasyuk I.I. – A comparative study of the fattening qualities of young pigs of different combinations

The paper considers the fattening qualities of young pigs produced from Poltava pork sows and boars of different productivity lines. It shows that under efficient feeding conditions hybrid gilts descending from Poltava sows and landrace and red white-belt boars had the best characteristics.

Key words: sows, boars, crossing, average daily increment, feed unit.

Maslyuk A. M. – Age dynamics of reproductive characters of Ukrainian white steppe sows

The paper provides the results of studying the age dynamics of reproductive characters of Ukrainian white steppe sows taking into account the farrowing number. It shows that the polycarpic effect increases up to the sixth farrowing and then gradually reduces and remains at the first class level. The greatest litter mass was recorded in the third farrowing, but it somewhat reduced in further farrowings.

Key words: pigs, age dynamics, polycarpic effect, milk production capacity, litter mass.

Kotendgy G.P., Levchenko I.V. – Assessment of the reproductive qualities of cows of the Sumy intrabreed type of the Ukrainian black-specked cattle

The paper presents the description of the reproductive characters of the Sumy intrabreed type of the Ukrainian black-specked dairy cattle depending on the origin and line.

Key words: reproductive qualities, Sumy intrabreed type, milk yield, fat content.

Mykytyuk V.V. – Hereditary determination and variability of selection characters of the offspring of sheep under the influence of mothers

Based on the three-factor and dispersion analyses, the study determines a joint impact of live weight, length and wool yield on the heritability of those characters by daughters. It shows that the most significantly organized factors influence the variability and heritability of the live weight of ewe lambs.

Key words: breeding process, sheep, newly developed type, dispersion analysis, consolidation.

Khmelnychyi L.M., Salohub A.M. – Slaughter characteristics of male calves of the specialized beef cattle of the Sumy region

The paper presents the results of studying male calves of the specialized beef cattle of foreign (Aberdeen-angus, Light Aquitaine, Limousine) and home selection (Ukrainian beef cattle) that at the age of 18 months showed high slaughter and beef-making qualities, the Limousine cattle having the highest indices.

Key words: beef cattle breeding, breed, selection, precocity, slaughter qualities, fattening.

Pol's'ka P. I., Kalashchuk G. P. – The outstanding import-substituting genetic resources of Ukraine for the revival of sheep breeding on a new qualitative basis

The article describes the distinctive features and feeding rates of sheep of intensive types: Askanian crossbreds and Askanian black-headed sheep selected at the research institute of livestock breeding *Askania Nova*; they are used as an improving gene pool in different regions of Ukraine for producing the Askanian mutton-wool sheep with crossbred wool.

Key words: sheep, selection, intensive types, genetic productivity potential reached, feeding rates, newly produced breed.

Kopylova K.V., Dobryans'ka M.L., Voronenko V.I, Nazarenko V.I. – The genetic structure of the population of the grey Ukrainian cattle according to two types of DNA-markers

The paper analyzes the genetic structure of the population of the grey Ukrainian cattle according to two types of DNA-markers – QTL and ISSR. It examines polymorphism by the loci of tyrioglobulin (TG) and calpaine (CAPN1 530) genes that participate in the formation of meat productivity characters.

Key words*:* tyrioglobulin (TG), calpaine (CAPN1 530), ISSR, cattle.

Gars'ka N.O., Peretyat'ko L.G. – Points indices and productivity of sows of different families of the Poltava pork pigs

The paper provides the results of research in blood and productivity characters of sows of different genealogic structures of the Poltava pork breed under the conditions of the breeding farm *Bilovods'kyi* in the Lugansk region.

Key words: Poltava pork pigs, families, sows, productivity, blood, leucocyte

formula, albumin, globulin, alanine-aminotransferase, aspartate- aminotransferase, protein.

Zalitsayeva A.V. - Some features and regularities of the manifestation of the egg production character of modern highly productive crosses

The study looks at one of the most important characters of productive and reproductive qualities of poultry: egg production and its indices: age of the beginning and build up of egg laying, egg production intensity, and the duration of the egg production cycle.

It shows that Brown Highsex has advantages due to a more speedy egg production increase, a smoother drop in egg production, and a longer period of the egg production curve stabilization.

Key words: egg production, layer, egg production indices, White Highsex, Brown Highsex.

Kovalenko T.S. – Assessment of pig productivity using a complex breeding index

The study determines the prospects of using a breeding index for the assessment of the breeding value of pigs by the complex of characters. Based on the complex breeding index, it identifies the prepotency types of sires, which will favor efficient selection of animals with high indices of breeding characters.

Key words: pig breeding, complex breeding index, heritability coefficient, breeding differential, genotype, breed, prepotency, intrabreed type.

Suprun I.O., Shynkarenko O.A. – The impact of the participation of racing horses in traditional events on the effectiveness of their breeding

The article provides a historical background to the technologies of holding traditional events for racing horses on the Kyiv racetrack.

Key words: Orlov trotting breed, Russian racehorses, traditional events, closed and open events, racetrack trials, speed.

Zhulins'ka O. S., Ivanina O. V., Lobachova I. V. – The application of a ewe placenta-based tissue preparation to rams-sires in the anestrous period

The paper presents the results of administering a ewe placenta-based tissue preparation to rams-sires. The study records the improvement of separate hematological and biochemical blood indices, stimulation of hemopoesis and some immunity links under the effect of this biogenic stimulator. It does not record any negative influence of the preparation on sperm production by rams-sires. The application of the preparation according to the pattern used prevented a seasonal drop in quantitative and qualitative characters of sperm production. The study suggests the expediency of using this placenta-based tissue preparation to prolong the period of sperm production by rams in the anestrous season.

Key words: ram, tissue preparation, blood biochemistry, leucoformula, sperm, placenta.

Balabanova I.O., Vorontsova I.E. – A technology of milk processing without preservatives

The paper evaluates a technology of manufacturing kefir and sour cream without using preservatives, which ensures safe and quality production with maximal conservation of natural properties of milk.

Key words: milk, preservatives, bactofuges, food safety.

Nezhlukchenko T.I, Pryakhina Yu.V. - The substantiation of technologies for producing additional raw materials of sheep

The study assesses the possibilities and prospects of producing sheep cheese from the milk of fine-fleece sheep. It also analyzes modern technologies of sheep's milk processing.

Key words: sheep breeding, milk processing, technological features

Novgorods'ka N. V., Novalenko N.O., Mykytyuk A.V. – The quality and safety of cream spread with the use of milk fat substitutes

The article studies vegetable fats for compatibility with milk fat, and their influence on the fat-acid composition and organoleptic characteristics of the finished product.

Key words: milk fat substitute, spread, fat acids, peroxide number, butter.

Pelykh V.G. Balabanova I.O., Gorbonos D.V. – The impact of biologically active supplements (BAS) on food characteristics and technology of cheese production

The paper features a description of a technology of hard rennet cheese *Rossiyskiy* production and its food values.

It considers the prospects and expediency of cheese production using biologically active supplements (BAS), and examines their effect on the food and technological characteristics of cheese.

Key words: cheese, biologically active supplements (BAS**)**, food and physiological value, functional foodstuffs.

Pelykh V.G. Balabanova I.O., Vlasenko A.P. – Changes in the taste of Roquefort cheese during curing

The article describes a change in the taste, and improvement of commodity values of Roquefort cheese after the curing process as one of the technological stages in cheese production.

Key words: technology, curing, Roquefort cheese**,** cow's milk, sheep's milk, density, color, taste, smell, pattern.

Rybalko V.P., Birta G.O., Burgu Yu.G. – A relationship between histological characters of the longest muscle of the back and meat quality

The study shows that muscle tissues of pigs slaughtered at a live weight of 100kg differ both in shape and size and structure, and are characterized by a significant variability of the diameter of muscle fibers. Based on the variability of muscle fibers, their regeneration and degeneration, differences in structure and shape it is possible to assess the active processes of their growth and development.

Key words: breeds, quality, meat, muscle bundles, connective tissue, muscle fibers, histology, fiber diameter.

Rozputna O.A. – Mycobiota of grain crops in Ukraine and the distribution of toxicogenic Fusaria producing zearalenon (F-2 toxin)

The article makes a mycological analysis of samples of grain seeds of seven regions of Ukraine. It identifies the mycobiota of feeds that is quite diverse but in it dominate Fusarium, Penicillium, and Mucor fungi. These species most often infested corn and soybeans. 65 cultures of genus Fusarium were toxicologically investigated: 4.6% of them were toxic, 41.5% were slightly toxic, the rest turned out nontoxic. Zearalenon was produced by nine strains of the cultures. F. moniliforme and F. Graminearum species synthesized the highest amounts of F-2 toxin.

Key words: mycobiota, micromycetes, fungi of genus Fusarium, zearalenon.

Khomin M.M. - Biochemical processes in cows, milk productivity and quality under different amounts of selenium nanoaquacitrate in their rations

The study shows that the application of selenium nanoaquacitrate in the feeds of cows of groups II and III (30 and 60 mkg Se/kg of the dry matter of the feed) activates deintoxication processes (blood concentration of phenolsulfates and phenolglucoronides), improves milk quality, especially in group III (higher vitamin A, calcium and fat content). Milk productivity of cows from group II during month four, and from group III in months four and eight of the research was higher than in the control group by 4.4%, and 7.3 and 3.9% correspondingly.

Key words: cows, blood, milk, selenium nanoaquacitrate, deintoxication processes, productivity, milk quality.

Kuz'menko L.M. – The impact of concentrated sunflower cake on slaughter qualities of pigs and physical and chemical characteristics of slaughter products

The study identifies a tendency toward a higher dressing percentage of pigs having different amounts of concentrated sunflower cake in their combined fodder. The dressing percentage was by 2.47 % higher in animals with 15 % of concentrated sunflower cake in their diet. The samples of the longest muscle of the back had a higher amount of amino acids, mainly inessential ones. The meat of pigs reared on combined feeds where half of the amount of soybean cake was substituted for concentrated sunflower cake revealed a higher food and biological value than in the control group due to more protein.

Key words: combined feed, average daily increment, fodder consumption, dressing percentage, meat, lard, amino acid.

ПОЛОЖЕННЯ ПРО ФАХОВЕ НАУКОВЕ ВИДАННЯ «ТАВРІЙСЬКИЙ НАУКОВИЙ ВІСНИК»

Науковий журнал видається за рішенням науково-координаційної ради Херсонської області Південного центру Національної Академії наук України, вченої ради Херсонського державного аграрного університету та Президії Української Академії Аграрних наук з 1996 року. Зареєстрований у ВАК України в 1997 році «Сільськогосподарські науки», перереєстрацію пройшов у червні 1999 року (постанова президії ВАК № 1-05/7), у лютому 2000 року (№ 2-02/2), додатково «Економіка в сільському господарстві», у червні 2007 року (№ 1-05/6) додатково «Іхтіологія» та у травні 2010 року «Сільськогосподарські науки» (№ 1-05/3). Свідоцтво про державну реєстрацію КВ № 13534-2508 ПР від 10.12.2007 року.

Журнал публікує нові теоретичні, практичні, аналітичні, узагальнюючі, постановчі та науково-методичні статті з актуальних питань аграрної науки. Основні фахові напрямки: землеробство, рослинництво, овочівництво та баштанництво; тваринництво, кормо виробництво, збереження та переробка с.-г. продукції; меліорація і родючість ґрунтів; іхтіологія та аквакультура; регіональна економіка АПК і розміщення продуктивних сил, економіка природокористування і охорона навколишнього середовища; підприємництво, менеджмент, маркетинг, правове забезпечення галузей АПК, економіко-математичне моделювання.

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