UCC 636.2:636.086

Kulik M.F., corresponding member of the NAAS, doctor of agricultural science
e-mail: kulikmf@mail.ru
Institute of feed research and agriculture of Podillya
Skoromna O.I., candidate veterinary science., docent
e-mail: oksanas7777@rambler.ru
Vinnytsia National Agrarian University
Obertiukh Y., candidate of agricultural science, research associate
Institute of feed research and agriculture of Podillya

THEORETICAL GROUND OF EVALUATION FEED IN MILK PRODUCTS DEPENDING ON THE CONTENT OF CRUDE FIBER AND SPEEDS THEIR PASSAGE THROUGH THE GASTROINTESTINAL TRACT

Cows with low, medium and high productivity, namely 12, 20, 30 and 40 kg daily milk yield is obtained, that is, eat different amounts of dry substances in feed ration and fermentation process their is located in the same dimension of time, that is, 24 hours. During this time, the gastrointestinal tract each cow must rid for the reception a new portion dry matters feed ration. It turns out that the more the cow eats feed, the less time is located fodder mass in the rumen and enters into her small and large intestines.

It is confirms that the cows of high productivity prevails almost 1.7 times the intestinal digestion compared to of low productive and load on the process of protein digestion more as 2.7 times is higher.

Thus in the before-stomachs of cows high performance reduced fiber digestibility, which in the dry matter weight of the feed also contains less than in the low-cows. This gives grounds to make a conclusion about inadequate depressive effect on fiber digestibility and productive action voluminous feed in the intestinal tract of cows of different levels of performance.

Fiber feed, which creates a large surface area in the cavity of the digestive tract of cattle and other herbivores at its optimal content — activates and at higher concentrations — inhibited enzyme activity chyme small intestine of agricultural animals and poultry. In relation to microbial enzymes content rumen blind and colon of cattle fiber performs the role only an inhibitor of enzymatic activity.

Evaluation of alfalfa green mass conducted for cows with daily milk yield of 12 to 40 liters and the need for dry matters ration for different performance levels of crude fiber content in dry matter and the coefficient of depressive actions fiber as contained in the feed, according to its physiological needs. The need for crude protein to form 1 liter of milk makes 120 grams, considering depressive action of fiber. The need for starch with sugar also makes 120 g for formation 1 liter of milk, but depressive effect on the digestion of starch with sugar is not manifested. An important indicator is the net energy of lactation and the use of crude protein and metabolizable energy for milk synthesis.

Indicator depressive action of crude fiber is expressed by the ratio content crude fiber in the feed dry matter to its physiological needs in foods ration also in dry matters. Thus, crude fiber content of dry matter in the green mass of alfalfa in the phase — mid flowering makes 32.5 % and physiological need her in the feed ration for cows with daily milk yield of 40 liters of milk is 17 %, the ratio of 32.5 % to 17 % makes 1.91 the depressive action.

The research of many authors shows that an increase of 1.0 % crude fiber content in vegetative mass of any plant reduces its digestibility by 0.5 %.

UCC 636.4.084.421

Lykhach A.V., candidate of agricultural science, docent
Lykhach V., doctor of agricultural science, docent
e-mail:
Mykolaiv National Agrarian University
Borodaenko F.A, chief technologist
Kosov V.V., main veterinary doctor
SVK "Agrofirma "MiG-Service-agro"

THE USING SODIUM CHLORIDE FOR PREVENTION KOLIENTEROTOKSEMIYI PIGLETS AFTER WEANING

At present time on pig farms often observed young pigs die because of the disease in kolyenterotoksemyu. Given this fact, the disease is a actual, becouse very often arises in pigs.

Kolyenterotoksemyya (edematous disease) – is infectious diseases of pigs predominantly the piglets after weaning which characterizes the dysfunction of the central nervous system, enterotoxaemia, edema formation in different organs and tissues. This disease get sick, as a rule, of the piglets after weaning with a greater weight. This occurs of the piglets after weaning at excessive and greedy use of large amounts of animal feed, especially unusual, indigestible. The treatment kolyenterotoksemyya is effective only at the beginning of of the disease. The main event should be prevention. The most effective and cheap method of preventing and treating the disease is the feeding of weaned piglets within the zoohygenic norms the sodium chloride.

In today's practice in pig production there is no clear opinion on the term of use of sodium chloride in order to prevention kolienterotoksemiyi piglets after weaning. In this connection, the main aim of these studies was to study period of use the sodium chloride of the piglets after weaning for preventing kolienterotoksemii. To this end, we conducted a scientific experience in the conditions of Agricultural company "Mig-Service-Agro" of Mykolayiv region and have formed 5 experimental groups of weaned piglets with a live weight of 8 kg on the principle of analogues.

During the studies, we found that the best option for preventing kolienterotoksemiyi of piglets is feeding sodium chloride 4 days before and 4 days after weaning, since almost the first day the pigs consumed sodium chloride and exhibited great interest in the mineral feed, and therefore had significantly higher productivity quality during rearing than their peers.

Thus, the largest live weight recorded in the IV experimental group of pigs who had free access to sodium chloride 4 days before and 4 days after weaning – 37.8 kg and significantly higher than the animals I, II, III, V experimental groups.

This fact helped raise the average daily weight gain of piglets in group IV rearing - 404.2 g, in contrast to peers I-III groups – 321.8 384.1 grams. Thus, survival piglets was highest in pigs IV experimental group – 98.8%.

In our opinion, the physiological effect of sodium chloride for the prevention kolienterotoksemiyi of pigs is the existence of "potassium-sodium pump".

First through the tiniest pores are pumped out of cells sodium. As a result, the concentration of sodium in the intracellular fluid decreases in the presence of salt. Other the sodium ions penetrate through the protective membrane into the cell. Occurs a constant exchange of fluids between the outside and inside of the cell. Otherwise the there is an accumulation of fluid around intracerebral shell and provokes edema, and then nervous oedematous forms of motion sickness.

UCC: 636.084:636.087.7

Balukh N. M., candidate of agricultural sciences
e-mail: Baluh-nata@mail.ru
Vinnytsia national agrarian university, Vinnytsia, Ukraine

DIET ENRICHED BY ENZYME AND PROBIOTIC SUPPLEMENT

Nowadays enzyme and probiotic supplements are an important component for mixed fodders preparation, because their positive influence was proved many times. Probiotics and enzymes positively influence on intestinal flora of animals, reduce the risk of the gastrointestinal diseases, and thus increase their productivity. That's why the aim of our work was to research the influence of feeding by feed additive Proenzyme as a part of quail's diet. It was proved that the live weight of quails of the 4th researched group increased by 10.3% ($P<0,05$) on the 7th day of experiment.

There was a considerable increasing of life weight from the 14th day in all researched groups by 36.7%, 24.8%, 20.2% ($P<0,001$) than in control one.

Fully balanced diet for poultry facilitates the productivity increasing, health and the preservation of poultry.

The quails of the researched groups has the high preservation for 4 weeks, it was from 94% to 98%. After dividing the quails into males and females the researched groups have had the higher preservation than control one; the quails of the second group had 98% of preservation, the poultry of the third and fourth group had 94.0% and 96.0% at the end of the experiment.

Nowadays there is a great interest towards using the probiotic preparations for poultry both in Ukraine and abroad. As a rule, their usage helps to solve such problems as increasing the effective usage of nutrition, poultry productivity, inhibiting the growth of pathogenic and pathogenic gut, stimulating the immune system; helping to boost the economic results of production and ensuring environmental safety products. Lack of traditional means efficiency directed toward the young poultry preservation causes the necessity of usage of principal new effective preparations. Probiotics and enzymes can meet these needs because they contain living microorganisms associated with normal physiological and evolutionary reasonable digestive tract flora and have a positive effect on the host organism.

UCC 636.3.085.2: 663.031.1

Berezhnyuk N.A., Candidate of Agricultural Sciences, docent
e-mail: nataber_13@mail.ru
Vinnytsia National Agrarian University

USE OF THE ENZYME PREPARATION LADOZYM "RESPECT" IN FEEDING SHEEP

In different regions of our country since ancient times sheep-farming had been the traditional livestock sector. Economic usefulness of sheep gives the advantage compared to other farm animals.

To study the effect of enzyme Ladozym "Respect" on the performance of sheep Equity Research was conducted at the farm "Bohonytske" of the Institute of Fodders and Agriculture of Podillia of the Academy of Sciences of Ukraine.

The experiment was performed by analog groups method, so two groups of four heads each were formed. The average weight of the animals at the beginning of the accounting period in the control group was 47.8 kg, and in the research group - 48.2 kg. Deviations between groups were about 1%. Duration of the preparatory period was 5 days and the accounting period - 8 days.

The basic diet contained cereal hay - up to 80% of the total dietary intake, wheat bran and sunflower meal - 10% for each nutrient. The animals were fed twice a day.

The total amount of fodders that were fed to the animals was:

- Cereal hay - 1.4 kg;
- Wheat bran - 0.13 kg;
- Sunflower meal – 0.10 kg.

General supportive nutritional intake was 1.03 feeding units.

To the basic diet of the experimental group enzyme preparation Ladozym "Respect" was introduced at the dose of 1.6 gr per head per day. Before the study of the diet supplements the mixture of concentrated fodders with enzyme preparation in a ratio of 1 kg of the preparation per 1 ton of fodder was prepared.

In order to determine the level of nitrogen fixation by experimental sheep under the action of the enzyme preparation Ladozym "Respect", nitrogen balance was measured.

The data obtained indicate, that in the control group animals excreted with feces 35.1% of nitrogen, and in the experimental group - 33.4%, which is 1.7% less. Nitrogen excretion with urine in control animals was 31.0% and in the research group - 30.2% of the amount received with food.

According to the obtained data we can conclude that nitrogen fixation in the research group of animals was on 3% better compared to the control group of animals.

Before the experiment, in order to align groups of animals upon the live weight, their weighing was held. At the beginning and at the end of the accounting period of the experiment weighing of the animals was also conducted in both groups. The animals were weighed before feeding in the morning when the gastrointestinal tract is free from the remnants of food.

The increased digestibility of nutrients at sheep fed with enzyme Ladozym "Respect" also affected the live weight of the animals. Thus, during the experiment at sheep of the second experimental group average daily gain was 9,56% higher compared to counterparts of the control group which was fed with the main diet.

Thus we can conclude that the use of the enzyme Ladozym "Respect" in feeding sheep at the dose of 1.6 gr per head per day leads to the increase in live weight gain.

Economic efficiency of livestock production is determined by the use of methods and techniques of work that lead to the improved performance of the industry with simultaneous reduce of the cost of production, that is unit cost reduction.

Taking into account the data given above, we calculated the economic efficiency of the studied additives in the production conditions.

Thus, the use of the enzyme Ladozym "Respect" in feeding sheep led to the increase in average daily gain on 9.56%, while the cost per unit fell on 3.0%. Earnings per 1 kg of live weight has increased on 63% and profitability increased on 3.2%.

UCC 636.087.8

Gutsol A.V., doctor of agricultural science, professor
e-mail: GutsolAV@rambler.ru
Mysenko O.O. candidate agricultural science, assistant professor
e-mail: Olga_Adler@ukr.net
Vinnitsa national agrarian university

USE ENZYME PREPARATIONS IN FEEDING YOUNG PIGS DIFFERENT AGE GROUPS

Recently feeding farm animals attaches great importance to the use of various bioactive substances, affecting the metabolism. This includes enzymes that increase the nutritional value of feed for act as biological catalysts that contribute to the breakdown of complex compounds to monomers and accelerate hydrolysis of organic matter, thus improving nutrient absorption of food.

Multyenzymes composition MEK-BTU-5 in pig feeding has been used because the purpose of this study was to determine the most effective dose and explore productive effect of diets of young pigs differen age groups for use in feeding their drug MEK-BTU-5.

Studies conducted on pigs of large white breed groups matched by analog. In experiments had four groups of animals where control was the first group that during the experiment received basic diet (OR). The rest ─ the second, third and fourth groups were added to the MEK-BTU-5, respectively, in quantities of 0.1 grams, 0.3 grams and 0.5 grams per head per day.

Studies have shown that adding an enzyme preparation MEK-BTU-5 Forage mixture suckling piglets in an amount of 0.3 g on the head per day leads to increase average daily growth in 31h and reduce the cost of feed for 1 kg increase in 13,5%.

Use multyenzymes compositions MEK-BTU-5 in the diets of weaned piglets improves their average daily increments to 13,4-20,9% and reduce the cost of feed for 1 kg increase in 11,6-17,4%.

In young pigs feeding growing enzyme preparation MEK-BTU-5 in an amount of 0.1-0.5 g/head. per day, increases the average daily increases of 11,5 – 21,25% and reduce the cost of feed for 1 kg increase in 10,8-11,26%.

In use in fattening diets of young pigs enzyme preparation MEK-BTU-5 in an amount of 0.1-0.5 g per head per day, increases of average increases of 8.9 - 15.9% and reducing the cost of feed for 1 kg of growth to 8-13,7%.

UCC 636.025:636.085

Didorenko T.O., postgraduate
e-mail: taniadidorenko@meta.ua
Tyagyn O.V. postgraduate
e-mail: panasuk.ri@gmail.com
Zdor L.P., Senior Researcher
Institute of feed research and agriculture of Podillya

MILK PRODUCTION AND MINERAL COMPOSITION OF MILK COWS AT FEEDING DRY AND WET CANNED CORN

The use of high moisture grain becomes more popular as costs of handling dry feed grains increase. For cattle feeders in particular, storing grains as high moisture can be one practice that can

improve their competitive position and reduce costs. Using high moisture grains allows greater opportunity to design a system that will minimize harvest, storage, and feed processing costs.

Grains such as sorghum and wheat have been stored as high moisture, but corn is the principal high moisture grain stored. High moisture corn can be processed and stored as whole shelled corn, ground shelled corn, or ground ear corn. When deciding whether to dry or store high moisture corn, consider the following advantages and disadvantages.

Advantages of High Moisture Corn: costs incurred during artificial drying are eliminated; high moisture corn can be harvested two to three weeks earlier than corn harvested for dry storage; dry matter losses from field and harvesting can be decreased by 3–8 percent for corn harvested at 25–30 percent moisture compared to corn harvested for dry storage; greater potential exists for the use of higher quality residues.

Disadvantages of High Moisture Corn:

Loss of some marketing flexibility compared to dry corn; additional processing equipment may be needed; additional storage facilities may be needed; spoilage can be a problem, and storage losses may be higher than for dry corn if high moisture corn is not properly ensiled and fed at adequate rates; high moisture, fermented corn may require better bunk and feeding management than dry corn.

Feeding Value of Immature or Early Harvested Corn

When corn has been planted late or growth halted because of an early frost, the harvested grain may be immature and the nutritional value considerably different than that of corn reaching maturity. In the typical dairy cattle ration, the digestibility of immature corn is expected to be similar to the digestibility of mature corn.

In general, immature corn is higher in protein than mature corn, but similar in energy. Test weight is lowered considerably depending on degree of immaturity. Immature corn that is incapable of being shelled can be harvested as ear or snapped corn, but will have a lower energy value than mature snapped corn. As corn progresses from the milk stage to full maturity, the percentage of corn in a corncob mix increases from approximately 60–80 percent of the total dry matter.

The research on the effects of wet canned corn to cow's milk production and found that when fed with this feed cows experimental group yields an increase of 7 %, fat content in milk by 5,7 % compared to the control group.

UCC 636.4:636.086

Kulik M., corresponding member of the NAAS, doctor of agricultural science
e-mail: kulikmf@mail.ru
Institute of feed research and agriculture of Podillya
Krasnoselska M., aspirant
e-mail: marina.krasnoselska@yandex.ru
Vinnytsia National Agrarian University

SLAUGHTER INDICES OF PIGS AT USE IN FEEDING EXTRUDED SOYBEAN IN COMBINATION WITH BIOLOGICALLY MINERAL SUPPLEMENT BASED ON LYSINE AND SAPONITE

Studies were carried out on fattening young pigs in KFKH Zvezda S. Malinki Pogrebische district of Vinnytsia region. It was formed 2 groups of 15 pigs (large white breed x Landrace) in principle, the method of group analogues given live weight of animal, age, breed, body condition,

health status. The farm produced feed grain wheat feed, barley and extruded soybeans. The fattening was conducted for periods from 35 to 45 kg of live weight daily davance feed was 1.8 kg, 45-55 kg, respectively 2.0 kg, 55-65 kg — 2.5 kg, from 65 to 75 kg — 2.5 kg. The composition of feed consisted of 40% feed wheat, 45% barley and 15% extruded soybean. The feeding of from 75 to 110 kg were carried out on compound feed with a content of 10% extruded soybean, increasing by 5% barley. A research group with the same periods of fattening received feed with the included 3% mineral supplements instead of 3% of barley grain. Lysine in the protein in the feed of the control group of pigs was 4.1% to 75 kg live weight and from 75-110 kg of live weight lysine was 3.8%, whereas in the experimental group, these figures were at the level of 5.9% to 75 kg and 75-110 kg respectively of 5.7%. Feeding of animals was carried out according to the established norms, the content group in premises for rearing and fattening pigs. Handing out ration (feed) to the trough in dry bulk form once every few days. Animals ' access to water was free. Live weight gain of animals was determined, using the individual weighting, which was performed in the morning before feeding for two adjacent days. Individual weighing of animals was performed during the laying of the experience, at the end of the surge period, and monthly after the experience. According to the obtained results determined the gross and average daily gains, cost of feed per 1 kg increase and held control slaughter Guinea pigs to study the lethal qualities. During slaughter, samples were taken of muscle tissue and fat and internal organs for laboratory tests.

Assessment of meat efficiency and quality of products of slaughter carried out according to the standard technique with the definition before slaughter weight, carcass weight and carcass output. Quality and sensory characteristics of muscle, adipose tissue and morphological examination of internal organs was studied on three typical animals from each group .

In average the sample of the longest back muscles at selected levels 9-12 thoracic vertebrae was determined such physico-chemical parameters: moisture content, nitrogen, and fat according to standard techniques; water-holding capacity and tenderness of meat – baling method according to Grau and Hamm in the modification of V. Volovenko and Would. Kelman; the intensity of coloration – a colorimetric method for Fasonom and Carcamera; active acidity (pH) – potentiometric method on odometer universal EV-74; marbling – calculation methods. Obtaining high average daily gains of pigs at 820 g is justified by the increase in the content of lysine in protein to 5.7-5.9% and the provision of vitamins, trace elements and mineral substances in the composition of the saponite.

The results obtained at the time of slaughter of experimental animals convincingly demonstrated a difference in favor of the experimental group in obtaining the flesh (meat) of 7.2% in kind is 6 kg at almost the same slaughter weight of pigs. Weight of fat in the control group was 27.5 kg, and experienced a total of 22.4 kg, 5.1 kg less. The length of the carcasses of pigs of the control group was 106 cm, and experienced 8 cm long, corresponding to an increase of 7.5% and almost the same amount in interest compared to the yield of the pulp (meat). Average backfat thickness of pigs oldn group was at the level of 2.98 cm and the control of 3.46 cm or 16% more. It should be noted that the fattening pigs of the experimental group reached a live weight of 119 kg in 27 days earlier than the control.

Obtaining a difference in mass of internal organs of pigs between groups indicate a higher level of metabolism in the body the animals of the experimental groups liver weight in pigs of the experimental group compared to the control was greater by 8%, heart – on 21%, kidney by 7%, pancreas 8% stomach 6% and small intestine of 17%.

UCC 636.4.084.421

Novgorodska N.V., Candidate of Agricultural Sciences, professor assistant
e-mail: kafedrammim@yandex.ru
Fabianska O.L., assistant
Vinnytsia National Agrarian University

INFLUENCE OF DIFFERENT DOSES OF ZINC AND MANGANESE ON PRODUCTIVITY OF YOUNG GROWTH PIGS

Solution of balanced feeding and increasing of animal productivity requires to improve existing methods and develop new technical solution for producing balanced feeding additives that increase protein, vitamin and mineral sustenance of feed.

As usual, feeds, which included to rations, not meet to animal needs for mineral elements. Due mineral elements lack in rations mineral metabolism brokes, eating feeds and its digestibility worsens, decreases cattle increase, fertilization borkes, emerging diseases (rachitis etc).

In zootechnic practice indicators of mineral elements need providing and mineral feeding fullness are intensivity of animal growth, level of productivity, costs per produced unit, macro- and micro elements balance.

Norms of agricultural animals needs in mineral elements must be constantly clarifying with accounting of features of different climate zone of Ukraine. But in range of one such zone content of feeding plants can be different due to some factors. That's why, fullness of feeding rations by content of mineral elements determines with chemical analysis in every particular farm.

Also, animal need in macro and microelements depends from chemical nature, and how elements cooperate in metabolism, absorption and excretion level and ability to accumulate in organism.

In this article shown data of productivity action of mineral additive with mix of zinc salts and manganese carbonate salts which were feeding to animal in different proportions.

Is was established that feeding of mineral additive with zinc and manganese in carbonate forms with different proportions not equally causes effects on live mass growth. Best result was obtained when rations were balanced with mineral additive in zinc - manganese proportion 1,2:1.

UCC 636.2:636.084:636.085.54

Ovsienko S.M., Candidate of Agricultural Sciences, Associate Professor
e-mail: sovsi@i.ua
Vinnitsia National Agrarian University

METOD OF CONCERVATION AND USING THE WET GRAIN OF SORGHUM IN FEEDING OF HIGHLY PRODUCTIVE COWS

It was developed and tested the method of biological conservation and using of highly productive cows in feeding of wet grain of sorghum, which provides the long-term «aerobic stability» of canned feed by using the hay preservative ingredient flour of Galega oritalis L. which provides:

- conditions for the directed synthesis of lactic and acetic acids, which creates a satisfactory

aerobic stability for canned grain sorghum in the summer conditions of storage;

- improving the preservation of nutrients;
- improving its quality performance and reduces the cost of preserving the procurement and storage of wet grain sorghum by 4%.

It was made the comparative assessment of the nutritional value of canned and dry grain sorghum in the summer conditions of its use in feeding of highly productive dairy cows and was established its influence on the physical and chemical properties of milk and fatty acid composition.

UCC 636.612.32

Paladiychuk O., candidate of agricultural science, Associate Professor
e-mail: kafedraplv@mail.ru
Vinnitsia National Agrarian University

THE REACTION OF RETICULAR CORTEX AND ADRENAL MEDULLA IS ON THE FOOD SUPPLEMENTS

The impact of food on the structure of the body and generally interested researchers and practitioners for a long time. The effect of the feed additive can be challenging, neutral or worsening. In all these three effects in the middle of the body it`s undergoing the complex adaptive processes of different nature, depending on the chemical composition of rations without external manifestations.

The food supplements for pigs has a stress affect to the endocrine glands. The hormones has make the participation in adaptation to different levels of feeding, because it`s completely natural the relationship between the conditions of feeding and endocrine gland The food supplements has the affect of nutrients metabolism? that their are the necessary substrate for the hormones formation.

The adrenal glands synthesizes and secretes the hormones into the bloodstream, through which the body is adapting to changes in internal and external environment. The glands parenchyma leads to restructuring, what it changes their functional activity. The investigation of histostructure for different zones adrenal suggests the changes of their hormonal activity in response to the conditions of the bodies existence.

The cortex and medulla in the adrenal glands opposites for reactivity and origin. The neuroglial origin of medulla responds for primarily to the conditions of existence of animals to synthesis of adrenaline - a stress hormone. The adrenaline mobilizes the energy resources increasing the amount of glucose in the blood, the stimulating of fat oxidation, which it improves the overall of metabolism, which it`s influenced by hormones of the cortex for adrenal glands.

The reticular cortex has the closest contact with the adrenal medulla. The mutual influence between zones was thin connective tissue membrane that it enables penetration of one zone to another.

The hormones of medulla and the adrenal cortex are primarily important in the adaptation of the organism to changes in feeding.

It studied the macrostructure of adrenal samples on microscope MBS-9 – the size diameter, including cortex and medulla and the microstructure of cortex and hromafinovoy tissue of medulla. Also it determined the number of cores in 1 mm² and its dimensions (diameter, volume) and the volume of karioplazmy in 1 mm² of reticular cortex and medulla.

The adrenal weight was reduced for animals their carbonates – the salts of carbonic acid). When animals are fed acetates – the salts of acetic acid, the diameter of the adrenal glands was reduced, both due to the cortex and medulla.

UCC: 591.11:636.52:636.087.7

Podolian J.M., candidate of agricultural sciences, associate professor
e-mail: julia-lulu08@mail.ru
Vinnytsia national agrarian university

THE INFLUENCE OF PROBIOTIC ON THE HEMATOLOGICAL PARAMETERS OF BROILER CHICKENS

The mechanism of action of probiotic is the formation of the lactic and acetic acids; they are unfavorable pH environment for pathogenic and opportunistic pathogenic microorganisms, stimulate growth and biological activity of intestinal flora, it positively influences microbiota composition, besides probiotic microorganisms produce biologically active substances, enzymes and amino acids.

The objective of the research is the influence of probiotic "Probiol" on the hematological parameters of broiler chickens of cross Ross-308. The goal of our research was to establish the productive action of complete mixed fodders manufactured industrially and mixed fodders manufactured on the grain basis with adding of protein and vitamin and mineral additive. The experiment was conducted at the research farm of Vinnytsia national agrarian university. Two groups of day-old chickens-broilers of Ross 308 cross were selected according to conventional methods; each group had 20 heads. The experiment was conducted during 42 days.

It was proved that additional usage of probiotic supplement positively influences on the morphological and biochemical blood parameters. It was researched that feeding by probiotic "Probiol" is characterized by increasing hemoglobin levels by 14.9% than in control group. The number of red blood cells and white blood cells in broiler chickens blood has increased; they have been fed by probiotic with mixed fodder, but probable differences were not observed.

The usage of feed additive for broiler chicken feeding increases amount of total protein in the second group by 4.6%, glucose by 29.1%.

It was researched that consumption of probiotic with mixed fodder by broiler chickens facilitates the increasing of segmented cells by 0.4% and stab neutrophils by 0.1% than control level.

As a result of hematological research it was proved that morphological and biochemical parameters of the blood are according to the physiological norms.

UCC 577.12:598.261.7:636.087.7

Razanova O.P., candidate of agricultural sciences
e-mail: razanova_elena@rambler.ru
Vinnytsia national agrarian university

CALCIUM METABOLISM IN THE BODY OF MEAT BREEDS QUAILS FED BY APIVIT

The article gives the research results on calcium digestibility by young quails and quail hens, calcium level in the muscle-bone and eggs laid by quail hens fed by Apivit.

The aim of the work was to research the influence of feed additive Apivit on the level of calcium absorption by quails; the calcium concentration in products. The research was conducted on the young of quails and quail hens of breed Pharaoh. We have formed four groups; two groups were formed by the one day quails (100 heads); two groups were formed by sixty days quail hens (25 heads)

The feed additive Apivit (extracted supplement from the bee by-product) was given to researched poultry with water; the daily water consumption by quails was taken into consideration.

The material of research was blood, muscle, liver, cortical bones and eggs quails of the breed Pharaoh.

The young quails of the researched group had the higher level of calcium absorption by 12.6%, the quail hens had the higher level of calcium absorption by 15.6% ($P<0.001$) than the control counterparts. The usage of Apivit as a part of has caused the a slight increase of calcium in serum of young quails by 0.7%, of quail hens by 9.7% ($P<0.01$).

The more the level of calcium absorption by poultry the higher its level is in the muscle and cortical bones of quails; the level of calcium in the thigh and pectoral muscles of young quails has increased by 40.5 and 14.5%; the level of calcium in the thigh and pectoral muscles of quail hans has increased by 7.5 i 15.1%; the level of the calcium in cortical bones has increased by 0.36 and 0.26%.

The usage of Apivit as a part of has caused a slight increase of calcium in the liver of the young quails by 1.8%, quail hens by 2.5%.

As a result of research it was proved that the quail egg yolk of the second researched group has the higher level of calcium by 16.1% ($p<0.001$), the egg white has the higher level of calcium by 9.6% ($p<0.001$) than the counterparts of the first group.

The quail hens of the researched group have given by 3.2% egg masses higher. The quails of the researched group decreased calcium in the egg shell by 0.58%.

Consequently, the usage of feed additive Apivit for feeding young quails and quail hens allowed to increase the degree of absorption of calcium and calcium in muscle and bone.

UCC 636.085.53:661.155.8

Syrovatko E.M., candidate of agricultural Sciences, docent
e-mail: makcimovna@ukr/net
Vinnytsia National Agrarian University

THE EFFECT OF BIOLOGICAL PRESERVATION ON THE GUALITY AND THE PRODUCTIVITY OF THE SOILAGE

The effect of preservative with bacterial and enzyme action Litosyl plus on biochemical quality characteristics and productive effect alfalfa soilage made during the budding period using the roll technology was researched.

The organoleptic characteristics (colour, smell and structure), chemical composition (content of dry matter, crude protein, crude fat, crude fiber, MAR, ash) and content and ratio of organic acids (lactic, acetic, butyric) and ammonia nitrogen silage without preservative and with preservative Litosyl plus with dose of 4 g/t.

The cellulose of the dried alfalfa with humidity 49.54% has partly decomposed into monosaccharides under the action of cellulolytic enzyme complex and lactic acid bacteria as a component of Litosyl plus; it has created favorable conditions for the development of lactic acid bacteria and caused the active decline of feed active acidity to pH 4.54; the development of putrefactive microorganisms and butyric bacteria has stopped under this acidity. The released saccharides had a positive effect on the fermentation process, as a result the lactic acid content has increased by 5.0 % in the dry matter than in control group, the part of acetic acid has decreased by 28.7%. There was not butyric acid in the both samples. The lactic acid has increased from 73.5% to 80.3%.

The proteolytic processes have decreased under the action of bacteria and enzyme preparation; it facilitates the preservation of dry matter and protein. The soilage with preservative had the higher content of dry matter by 3.46%, protein by 7.67% while reducing fat content to 6.87%. The content of ammonia nitrogen, which is formed by the decomposition of protein during fermentation, decreased by 5.7 times compared to the control and was 1.62%.

The alfalfa soilage productive effect was researched in two groups of heifers of Ukrainian black and white breed, the method of analogue groups was used; each group had 12 heads. Feeding heifers repair by alfalfa soilage harvested by roll technology using bacterial-enzyme Litosyl plus with dose of 4 g / t has increased average daily gains by 6.8% while lowering the cost of feed for 1 kg; it has also increased metabolism energy to 3.23 MJ of or 5.3% .

UCC 636.087.7: 636.52/58

Tsaruk L.L., candidate of agricultural Science, Associate Professor,
e-mail: cll@vsau.vin.ua
Berezhnyuk N.A., candidate of agricultural Science, Associate Professor ,
e-mail: nataber_13@mail.ru
Vinnytsia National Agrarian University
Chornolata L.P., candidate of agricultural Science,
e-mail: chornolata@yandex.ua
Institute of feed research and agriculture of Podillya NAAS of Ukraine

INFLUENCE OF MIXED FODDER COMPOSITION ON MICROELEMENTS PROVISION OF BROILER CHICKEN

The experience of production of meat of broiler chickens shows, that maximum amount of high-quality produce possibly to obtain only under conditions, which take into consideration biological peculiarities of the poultry, its behavior and effect of the external factors. But the most important factor of higher chicken productivity is, of course, its rational and balanced feeding. With the regard of intensive growth of chicken sufficient mineral provision is necessary along with full protein supply.

The aim of the research is to determine the amount of microelements entering the broiler chicken body depending on the mixed fodder composition and the adopted amount of them.

The object of the study was mixed fodder, containing barley grain – 39%, grain wastes of wheat – 35%, soybean cake – 20 and mineral supplement – 6% (chalk, tricalcium phosphate). Due to the actual nutrition value of fodders (upon the results of the researches of the Podillia Institute of Fodders and Agriculture) the given recipe corresponds the need of broiler chicken and contains: exchange energy – 1232 kJ, raw protein – 21%, raw fiber – 3,4%, calcium – 1,5%, phosphorus – 0,8%, natrium – 0,3%, iron – 80mg, manganese – 60 mg, zinc – 40 mg, copper – 8 mg.

Utilization by the poultry of pure elements from different compounds is not the same. It is well-known, that the mineral composition of fodders and raw materials considerably depends on mineral composition of soils, on which the feed crops were grown.

Thus, the determined content of elements in mixed fodders showed, that soybean cake has the highest content of biogenic elements. But wheat and barley grain have comparatively high content of Fe.

Due to the conducted investigations the indicative availability of each element from barley grain, wheat grain wastes, soybean cake, chalk and tricalcium phosphate in the poultry's body was established. Fe, zinc, manganese and copperare best assimilated from soybean cake. But it is zinc that is best assimilated from plant fodders and kept in chicken bodies. The average availability of microelements from chalk and tricalcium phosphate is 40%.

From plant fodders the poultry will receive the highest amount of Fe (9,232 mg) and the lowest of Cu (0,939 mg), the need in which is also the lowest. Having compared the amount of the elements, which will enter the chicken's body with the need in them we can establish the amount which is necessary to ad into the mixed fodder. The conducted calculations show, that the mixed fodder used in broiler chicken feeding, provides 2.7 times higher content of iron and copper compared to the need. That is why, those elements do not need additional balancing. That should be taken into account as copper is a heavy metal and its content should not exceed the permissible level.

Along with it the content of zinc and manganese in mixed fodder does not meet the needs of chickens, their contentis 1.6 and 1.2 times lower correspondently, thus, it is necessary to introduce

them into its composition as a balancing supplement or premix. It must be remembered however that practically all premixes and mineral supplements available on the market contain, besides zinc and manganese, other elements.

Thus, mixed fodder for broiler chickens, which contains: barley grain – 39%, wheat grain wastes – 35%, soybean cake – 20% and mineral supplement – 6%, provides Fe and Cu content in 2.7 times higher than the need, when zinc and manganese provision is only 35.4 and 19.4% correspondently, what becomes the reason for developing a balancing mineral supplement containing zinc and manganese only.

UCC 631:631.153.3(479.22)

Aleksidze G., Acadamician
Dzhaparidze G., Acadamician
Keshelashvili O., Acadamician
Academy of Agricultural Sciences of Georgia
e-mail:anatoli@mail.ru

CONDITIONS AND PECULIARITIES OF FUNCTIONING OF AGRICULTURE OF GEORGIA WITH EMPHASIS ON MOUNTAIN FARMING PROBLEMS

Among the factors and conditions that determine a specific and unique character of the allocation, specialization and development of agriculture of Georgia, the natural conditions are crucial.

The territorial distribution of branches, i.e. territorial specialization is the following: viticulture, fruit and vegetable growing, grain crops (particularly wheat, barley and corn), melon and potatoes (early and late) growing, sunflower, fodder crops are mainly spread in the Eastern Georgia; hayfields and pastures are in the mountain area.

As for the livestock industry the most widespread branches are cattle breeding (everywhere), pig farming (including distant-forest-mountain), poultry industry (especially in the suburbs of Tbilisi), sheep farming (in the mountain area) and beekeeping (on the plots).

It has been found that compared with the crop production sector the livestock industry is developing relatively stable. Despite of this, plant cultivation occupies 50.2% of gross agricultural production, while the percentage of animal husbandry is 49.8% (it was 47-48% before 1990 and 22.9% in 1988). Viticulture occupies 5.6%, fruit growing – 9.4%, the growing of citrus – 5.7%, vegetable growing – 7.4%, potatoes growing – 7.6%, grain production industry – 11%, cattle breeding – 35.4%, pig farming – 5.1%, poultry industry – 7.2%.

It is used (in kg) per capita: wheat – 110 (compared with the physiological rate of 87.3%), potatoes – 47 (76.8%), vegetables – 58 (43.5%), vegetable oil – 8 (74.0%), sugar – 40 (98%), grapes and fruit – 36 (55.4%), meat and meat products – 27 (37, 5%), milk and dairy products – 135 (39.0%), eggs – 85 (35.4%).

So, bread and bakery products occupy 52% of all energy resources.

It's very strange and sad that 50% of the population consume significantly less calories (2,150 kcal per day) than it is required by rate (2,800 kcal). And about 22% of the population consumes much less than critical level (1,800 kcal) that is not justified medically.

In the livestock production sector pig and poultry farming will be developed more or less in all regions, but mainly in suburban areas; sheep farming – in the mountain areas; market segments

throughout the country should be rich in cattle production. It has to serve the base for extensive development of the food industry of meat and dairy.

UCC 591.5: 636.2.053: 636.083.3

Varpikhovskyi R.L., Candidate of Agricultural Sciences
e-mail: verel17@rambler.ru
Vinnytsia National Agrarian University

CHARACTERISTICS OF BEHAVIORAL REACTIONS OF HEIFERS IN LOOSE-BOXED CONTENT MODULE-GROUP CAGE AND DIFFERENT SIZES OF BOX FOR REST

These data were confirmed by similar studies conducted on heifers in the period of 7-9 months of pregnancy. That is, the rest of the heifers in the pits proved to be more comfortable with animals than with other methods of content, as evidenced by the greater amount of time was spent on this element of behavior.

Designated factor that affected animals is not manifested in the behavior of cows, heifers after calving heifers. This is evidenced by the duration of individual elements of the behavior of cows of the different ways the content of the heifers. Probably, the transfer of cows, heifers tethered on the contents in the stalls confirmed to a certain extent influence the method of keeping heifers on their behaviour.

Comparing the duration of individual elements of the behaviour of heifers in loose-box method, we can conclude that the perspective is the last option, because animals are in more comfortable conditions, as evidenced by the time that we have on feed intake. At the same time, for the frequent manifestations of individual elements of the behavior of the studied methods, the content of the heifers much of a difference is not established. As in the previous experiments, it is shown that despite the different periods of pregnancy of heifers, the most optimal in terms of behaviour was loose-box method of keeping less efficient loose-comboxbox and on deep litter.

Set a positive influence of compliance of sanitary and hygienic conditions of air environment of the premises and of the ways of cattle on the behavior of young animals, reproductive capacity of heifers, clinical and physiological status and milk production of cows, heifers.

Heifers in loose-box method in comparison with the content in deep litter, more standing time vacationing, less time consume food, but did not differ with the number of times of consumption of water, chewing gum, bedtime, and getting up from rest.

Compared to tethered content, loose-box method improves on average by 7 to 14 % of the motor activity of the animals, and does not affect the chewing of food, stay standing and lying down.

UCC 619;612.8:636.4

Zotko M.O., candidate of biological science, associate professor
e-mail:oksanaztk@gmail.com
Vinnytsia national agrarian university

THE INFLUENCE OF STRESS RESISTANCE AND STRESS SENCITIVE OF BOARS ON THE LEVEL OF CONDITIONED REFLEX ACTIVITIES AND SPERM EFFICIENCY

The experimental tests of stress sensitive and resistance by halothane method have proved that the boars of Landrace and Large White breeds are the most stress sensitive, respectively by 40.0 and 36.5%.

The Landrace breed has the largest number of stress resistant animals (70.5 %), the Large White breed has the smallest number of stress resistant animals (58.5 %).

It was proved that the stress resistant animals need fewer attempts with stuffed animal for getting first copulation and ejaculation in artificial vagina. The first conditioned reflexes appear at the first-seven combination of conditioned and unconditioned stimulus; the stress resistant boars need fewer combinations than stress sensitive boars by 32.8-100.2%.

Stress sensitive animals have lower characteristics ($P<0.05$-$P<0.01$) of conditioned reflex activity, it is characterized by slow formation of conditioned reflexes of the first copulation with phantom.

The stress resistant animals adapt more quicker to new conditions, allowed near to his person, the first reflexes occur without complications.

Stress sensitive animals have long starter reflex, slowly get used to new conditions, restless react to strangers and talks.

The stress stable animals of all breeds prevailed stress sensitive counterparts by the semen volume and sperm concentration respectively by 42.9-82.2 and 3.4-21.7%.

The boars of the Duroc breed had the largest difference of the semen volume; it was 82.2%; the difference is veritable at ($P<0.05$).

The stress resistant boars of all breeds had a tendency to a higher concentration of sperm in 1 ml of semen 3.4-21.7%.

The largest number of stress sensitive animals is among the Landrace breed and the Large White breed. The stress resistant animals have the first conditioned reflexes for copulation earlier than the stress sensitive animals. They also dominated stress sensitive boars by semen volume and sperm concentration, respectively by 42.9-82.2 % and 3.4-21.7%.

UCC 575.174.015.3:577.2.08:636.22/.28:637.5.053

Kolisnyk O.I., candidate of agricultural science
e-mail:
Kharkiv State Zooveterinary Academy

GENETIC STRUCTURE PECULIARITIES OF DNA SAMPLES AS FOR POLYMORPHISM OF 316 C/G GENE CAPN 1 PRESENCE AND GENE 282C/G (AY008267) CAST WITH THE HELP OF PCR

Quality beef production is one of the priority tasks of meat cattle breeding in Ukraine.

That's why the importance belongs to the estimation of genetic structure of breeds and stock-breeding paying attention to the genetic resources of animals. There is a possibility to estimate animals by quality indices of meat productivity, to study phenotypic forms variety and identify acceptable.

The polymorphism presence of C316G gene CAPN1 and 282C/G (AY008267) gene CAST, allele frequency and genotypes in 89 samples of stabilized cows' blood of Aberdeen Angus breed have been investigated with the PCR method.

Molecular genetics DNA analysis allowed to find the actual frequency of genotypes in tested animals. Among 89 samples from cattle, in which the polymorphism presence of C316G gene CAPN1 have been investigated, 12 animals (13,5%) have genotype CC, 30 (33,7%), genotype GG and 47 (52,8%) – heterozygote. The results of sample investigations which have been genotypic with polymorphism 282C/G (AY008267) gene CAST showed that 57 animals (64%) were homozygote with allele C, 2 (2,3%) – homozygote allele G and 30 (33,7%) - heterozygote.

The alleles frequency for each gene have been calculated with the help of given genotypes frequency. The alleles C and G frequency in genotypic samples for polymorphism 316C/G gene CAPN1 were 0,399 and 0,601 accordingly. The alleles C and G frequency in samples which have been investigated for polymorphism gene CAST – 0,809 та 0,192 presences accordingly.

The estimation of expected heterozygote for allele's frequency of both genes with the help of Hardy Weinberg's correlation has been done. The expected heterozygote for gene CAPN1 is 0,48 have been proved on the base of conducted investigations. The displacement of actual heterozygote compared with the expected one is 0,048.

The expected heterozygote for gene CAST is 0,31, while the actual frequency of heterozygote has been 0,337 and the difference between these indices - 0,027.

A slight violation of genetic balance because of displacement of actual and expected heterozygote amount for both genes has been found in conducted researches. The polymorphisms presence of 316 C/G gene CAPN 1 and 282C/G (AY008267) gene CAST have been studied with the help of PCR method.

There has been given an opportunity to find prospective animals for further selection with genotype (316 C/C gene CAPN 1 and 282C/C gene CAST) and study their genetic peculiarities.

UCC 636.39.083.37:636.034

Leppa A.L., assistant
e-mail: super_Leppa@ukr.net
Kharkiv State Zooveterinary Academy

INFLUENCE OF VARIOUS METHODS OF KIDS GROWING ON MILK PRODUCTIVITY OF GOAT DAMS

Goat husbandry in Ukraine is on the stage of becoming one of the most important industry branches in agricultural production that is necessary for solving many theoretical and practical goals.

Milk productivity of goats plays a great role in the increase of goat husbandry efficiency since goats' milk is a highly nutritive product and an indispensible food in the first 1,5-2,0 months of kids' life as has been mentioned by some authors.

Goats' milk productivity varies to a considerable extent depending on breed characteristics,

feeding and keeping conditions, age, place and lactation season, kids' quantity in a litter and methods of youngsters growing.

The study of influence on various methods of kids' growing and goats' milk productivity has been the objective of research.

Goat dams of the 1-st controlled group, whose kids were grown during milk period (from birth to 3 months age) on free suckling, were milked twice a day.

Goat dams of the 2-nd experimental group, whose kids were grown during milk period on regime suckling, from kidding to 3 months were milked once a day. They were milked twice a day from the third month and to the ending of lactation period.

Goat dams of the 3-rd experimental group, whose kids were grown on their own with the method of hand feeding, were milked four times a day for the first 10 lactation days and twice a day up to the ending of lactation period.

Milk productivity of goat dams of Zaanen breed according to the third lactation has been estimated by lactation duration, milk yield, and average daily milk yield, physical and chemical milk content.

Complex estimation of productivity, except quantitative and qualitative indices, has been added with study of lactation occurrence and its diagram that has an important meaning for the lactation estimation.

Milk yield in dams of the 1-st control group was 601 kg, dams of the 2-nd and 3-rd experimental groups - 705,9 and 784,7kg that is higher on 17,5 and 30,6 % ($P \geq 0,95 \ldots P \geq 0,999$) in comparison with dams of the 1-st control group that has been shown at goats' milk productivity estimation.

The average lactation duration in dams of the 1-st control group comprised 309,6 days, in dams of the 2-nd experimental group - 312,3 days, in dams of the 3-rd experimental group -316,4 days, that was higher than in other experimental groups.

The most constant lactation curve has been in the dams of 3-rd experimental group, and the most essential variation between maximal and minimal month yield has been noticed in the goats of 1-st control group, animals of 2-nd experimental group has been on intermediate position.

The average milk content of goats of 1-st control group in percentage equivalent exceeded the 2-nd and the 3-rd groups; however, the quantity of main components in milk in kilograms prevailed that has been noticed in physical and chemical content of milk.

The method of growth influences on the milk productivity of experimental goat dams of Zaanen breed in milk period that has been proved with the conducted research. Greater influence on dams' productivity has the way of kids' growing on their own with hand feeding.

UCC 636.2.061.4

Prudnikov V.G. doctor of agricultural sciences, professor
Dydykina A.I. postgraduate student
e-mail: ladialina5@mail.ru
Kharkiv State Zooveterinary Academy

EXTERIOR INDICES OF ABERDEEN ANGUS COWS AND CHAROLLAIS COWS OF NATIVE ORIGIN REGARDLESS OF LIVE WEIGHT

The growth of organism is assessed according to the live weight; however, it doesn't fully

depict its development. From point of view outstanding scientists, exterior study of cattle gives the concept about the development of separate parts of body, their size, strength constitution and productivity direction.

Nowadays, there is a wide variability in live weight in such breeds as Aberdeen Angus and Charollais. That's why the study of optimal live weight among breeds, which would combine high productivity and technology, has theoretical and practical meaning.

It has been paid a great significance to exterior or animal description by separate units in zoo engineering practice. Live weight is one of the important indices that characterize stock productivity especially for meat breeds according to many modern experiments.

To find out the connection between live weight and exterior of Aberdeen Angus and Charollais breeds of native origin as productivity criterion has been the objective of investigation.

The investigations have been conducted on cows of Aberdeen Angus and Charollais breeds of native origin. Three groups of full aged cows three calving and older of each breed have been formed for the experiment. The groups have been formed regardless from live weight per 10 heads in each with difference about 50 kg(I - 500-550 kg, II - 551-600 kg, III - 601-650 kg). Measures and indices have been determined as for general method.

Analysis of given data certifies that exterior of cows of Aberdeen Angus and Charollais breeds is typical for cattle of meat productivity direction and among breeds.

Aberdeen Angus cows have compact type of body structure, short and wide chest, and short limbs and well developed rare body part has been shown in exterior search.

Animals with 551-600 kg live weight and 601-650 kg have optimal correlation of separate body parts and correspond to all requirements of meat productivity type.

Cows of Charollais breed are characterized with long and strength limbs, deep and wide and long chest. Skeletal thinness of cows with 500-550 kg live weight has been found out in analysis of exterior indices of Charollais breed. Cows of Charollais breed with 551-600 and 601-650 kg live weight differ with proportional body development, clear defined meat characteristics and quite developed rare body part.

Cows of Aberdeen Angus breed have tender plump type of constitution, and Charollais cows – strong and thick have been proved.

Aberdeen Angus and Charollais breeds of native origin have wide variability in live weight that influence on exterior indices.

The most optimal live weight for cows of Aberdeen Angus and Charollais breeds is 551-600 kg and 601-650 kg.

UCC 636.2.034.082

Ruban S.Y., doctor of agricultural sciences, professor, corresponding member of NAAS
e-mail: rubansy@yandex.ru
MPK «Ekaterinoslavsky», Dnipro
Fedota O.M., doctor of biological sciences, professor
e-mail: afedota@mail.ru
V.N. Karazin Kharkiv National Uniersity
Danshin V.O., candidate of agricultural sciences, postgraduate student
e-mail: vadanshin@yandex.ru
Institute of animal sciences of NAAS
Mitioglo L.M., director
e-mail: ilia15061996@mail.ru
SEEF «Nyva», Chrystynivka, Chrystynivka district, Cherkasy region

EXPERIENCE AND PERSPECTIVES OF MILK PRICING (UKRAINE AND WORLD TENDENCIES)

Article is devoted to assessment of the state of prices and mechanisms of milk pricing in different countries of the world.

The difficult process of transition Ukrainian market to socially-oriented and controled one foresees creation of high-efficient agricultural economy based on absence of monopoly, free interaction between demand and proposition as well as free competition among producers. This is the basic mechanism of the low of cost in conditions of marketable production in the epoch of free competition which is formulated by some economists as the low of price.

In cases when prodoction of a certain commodity does not satisfy public demand, that is demand exceeds proposition, commodity price increases and vice versa. This classical scheme – the base of impetus of world economies, but in cases of production of some foods including milk it must be corrected. This forced action is based the simple for the majority of countries axiom: milk is human health and health of a nation as whole.

The mechanisms of milk pricing as well as dairy farmers protection programs implemented in some developed countris are considered. For example, in USA the Dairy Margin Protection Program (MPP-Dairy) of 2014 represents voluntary risk management program that offers protection to dairy producers when the difference between national average milk and feed prices (the margin) falls below a certain dollar amount (with premiums staggered) selected by the producer.

The basic factors influencing prices were shown (modernization of production through according credit mechanism, creating certain conditions of production and breeding work, icreasing number of working places by means of development of industrial eneterprises and middle business, advertisement, custom control etc.) and the role of organized state factors was proved. The economic aspects of reforming agricultural complex of Ukraine were pointed out. It was shown that breeding work is tightly associated with economic efficiency of milk production and, consequently, with pricing, and this association has dounble character: on one hand profitability of milk production directly depends on level of cow performance and it is impossible to increase it without efficient system of breeding work; on the other hand, the mechanism of milk pricing directly impacts on composition of selection indexes according to which sire and cow evaluation and selection are done, as well as on economic weights of traits included to them.

UCC 636.03:636.5(447)

Tsaruk L. L., candidate of agricultural Sciences, associate Professor
e-mail: cll@vsau.vin.ua
Vinnytsia national agrarian University

CURRENT STATUS OF AVICULTURE IN UKRAINE

In the article the modern trends in the field of poultry in Ukraine, by analyzing the dynamics of livestock production and export of main products - poultry and eggs, economic efficiency implementation. So, if in year 2000 enterprises of the industrial production of poultry contained only 20,0% of poultry, in 2010 its number increased to 53,0 and in 2016 - to 56,9%.

Most poultry is currently concentrated in Kiev and Vinnytsia regions, respectively 28,920,000 heads (13,6% of the total) and 28,148,000 heads (13,2%).

In the four leading regions concentrated 45,8% of poultry in Ukraine. The largest enterprises of the industrial production of poultry in Ukraine are:

- Private corporation "MHP" (MHP), which owns over 55% of industrial production of poultry in Ukraine;
- Company with limited liability "Complex" Agromars "-14%;
- Agroindustrial Corporation "Dnepr" – 7,5%;
- Corporation "Agro-Oven" - 6%.

In 2015, in Ukraine produced 1,145 million tons of poultry, which is 24 thousand tons Or 3% less than in year 2014. However, in 2016 for the period January - May 2016 produced 963 thousand tons of poultry, which is 1,6% more compared to the same period last year. In 2015, the profitability of poultry amounted to minus 6,1%.

The share of poultry meat from its total production in Ukraine in 2015 amounted to 50,3%.

In 2015, compared with the previous, egg production decreased by 14,3% - and amounted to 16,78 billion pieces. By contrast, exports rose by 5,4% - to 975 million pcs. Egg production in 2000 was profitable, but the peak level of profitability took place in 2015 and it was 60,9%.

Marked the main priorities for the further develop poultry industry, which is to increase poultry production by increasing the share proportion of poultry enterprises, using evidence-based management and planning and implementation of resource saving technologies of production, the use of modern genetic potential of species poultry, providing full-balanced feed, to expand the range of poultry, improving state regulation of prices for energy, feed and other inputs, the stability of government support and increased investment in the development aviculture in expansion of export business by selling as poultry meat and eggs, and their products.

Keywords: aviculture, poultry meat, eggs, production, profitability

UCC 591.5: 636.2.053: 636.083.3

Yaremchuk O.S., Doctor of Agricultural Sciences, Professor
e-mail: yaremчuk@vsau.vin.ua
Varpikhovskyi R.L., Candidate of Agricultural Sciences
e-mail: verel17@rambler.ru
Vinnytsia National Agrarian University

BEHAVIOURAL RESPONSES OF HEIFERS TO DIFFERENT SIZES OF BOX TO CONTAIN THEM

The research also determined that the time that heifers spend on the inspection of recreation – Boxing, depends on the depth of the latter, and its optimum value corresponds to the depth of 1,2-1,6 m. More comfortable for the rest of the heifers to 7 months of pregnancy, in terms of the length of the elements of their behavior before, during and after the holiday, there is a method of keeping loose housing with deep Boxing 1.4 m, and for animals 7-9 months of pregnancy 1.6 m are the dimensions of the design box associated with the live weight of animals, their body size, and physiological condition. Boxes with a depth of 1.8 m for the rest of the heifers were less comfortable. Comparing the duration of individual elements of the behavior of the heifers 7-month pregnancy for various options of loose ways, and tethered content, it is worth noting that the most promising turned out to be loose-box, compared to other methods (table. 1).

These data were confirmed by similar studies conducted on heifers in the period of 7-9 months of pregnancy. That is, the rest of the heifers in the pits proved to be more comfortable with animals than with other methods of content, as evidenced by the greater amount of time was spent on this element of behavior.

It is established that the behaviour of heifers for different sizes of Boxing to stay in most animals depends on the depth of the design, less on its length and width.

The optimal depth of the box for the rest of the heifers is of 1.2-1.6 m Box with a depth of 1.8 m is less comfortable.

UCC 339.13.637

Vlasenko V.V., doctor of biology science, professor
Левицкая I.V., doctor of ekonmoichnikh science, professor
e-mail: volodumurvlasenko@mail.ru
Vinnytsya trade and economic institute of KNTEU

CURRENT STATE AND PROBLEMS OF PRODUCTION AND CONSUMPTION OF MEAT BY THE POPULATION OF UKRAINE

Production of meat cattle annually in Ukraine is reduced, and for the last 20 years is unprofitable. However, the meat industry in our country has significant reserves and great prospects for development, the implementation of which is possible only if overcoming negative phenomena and processes in the agricultural sector.

General scientific methods applied knowledge of economic processes, analysis, synthesis, abstraction, deduction, monographic and special methods - abstract logic, balance, statistical and clearing and constructive.

Over the past year, after a sharp drop in meat production in 2015 observed some increase in total meat production, while significantly reducing the production of beef, veal and pork and increasing - poultry. Evident downward trend in meat production in private households and increase in agricultural enterprises - mainly due to poultry. Most problematic is the beef market, which shows steady constant layoffs. A clear trend is evident in the export of meat. Thus, in 2015 the export of poultry meat increased by 46% compared to 2014, and beef exports in 2016 fell by half compared with the corresponding period in 2015.

Ukraine in 2015 8 times reduced the import of pork. The largest share in the import structure covers poultry meat and its products - 93%. Imports of pork fell more than 8 times, and beef - more than 2 times.

Given the prevalence of poultry meat in total, and the fact that much of the output produced by private farms expedient implementation of a set of organizational and economic measures, directing state aid to support pork and beef; promote wide distribution network covering a small rural settlements; support initiatives implementing an effective relationship between households and agricultural enterprises to implement young cattle for fattening; incentives to attract foreign and domestic investment in the meat industry.

The study highlighted the trends in the market of meat in Ukraine showed that the sector develops mainly towards production and processing of poultry meat. The priority directions and prospects of development of meat production in Ukraine, namely focusing on the production of meats like pork, beef.

UCC 637.1 (477+100)

Voznyuk O.I., candidate of agricultural science, associate professor
e-mail: oksana_voznjuk28@rambler.ru
Vinnytsia National Agrarian University

FUTURE DEVELOPMENT OF DAIRY PRODUCTS ORGANIC PRODUCTION IN UKRAINE AND THE WORLD

The world economic crisis has reduced the temps of organic market development all over the world. Nowadays people cannot afford more expensive organic products. But experts say that richer consumers that used to buy the products with “bio” label will continue to buy them. Experts are also sure that as soon as economic system will improve the organic market will rapidly grow.

There are a lot of hidden problems, that’s why there is not a clear idea of the connection between real costs for agrarians and the price formation at different stages of technological production chain.

There is a market of organic products in Europe for 30 years

In Ukraine organic products market is developing very quickly. More than 40 percent of consumers are ready to buy free range products for higher prices. However, Ukrainian producers cannot meet the demand for "healthy food".

As a rule organic milk is produced mainly by the small family farms without antibiotics, synthetic hormones, pesticides or growth stimulants. The animals are kept humanely, they graze on certified pastures, and they consume only certified organic feeds of plant origin.

The production of organic products is determined by such three parameters as environmentally friendly raw materials, organic ingredientsand technological process. That’s why

organic farming has such environmental advantages as reduce carbon emissions, nitrous oxide and methane.

Annual certification, periodical inspection and suitable labeling provide conformity of organic products to strict organic standards. All the production stages of milk products are strictly controlled by certificated bodies.

Nowadays the producers have the tasks to expand the product range of dairy products and scientific substantiation of certain manufacturing operations regimes (pasteurization, separation, maturation) without hominization to form usual organoleptic qualities of certain types of organic dairy and fat-containing products for domestic consumers.

It is necessary to provide the consumer with foodstuffs based on organic compounds that are useful for human body, have a healthy effect if they are consumed regularly.

The level of buyer awareness should be higher; the consumer should be stimulated to buy organic products. It is necessary to expand the presence of healthy food in distribution network of Ukraine. The main problems of organic milk domestic market should be determined. The attention should be concentrated on the formation of market conditions in this area.