Abstracts of articles

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HEIFERS GENOTIP INFLUENCE FOR THEIR GROWTH, DEVELOPMENT AND REPRODUCTIVE QUALITIES

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Keywords: genotype, growth, development, precocity, fertility, delivery, calving.

The purpose of researches is increasing of economic and biological qualities of Holstein cattle breed in the conditions of the industrial production technology of milk due to genetic improvement. As a result of the conducted researches it is established that depending on breed and linear accessory of animals live weight of change and quality indicators of growth intensity aren't identical. So, dress cut weight from cow calves of the second skilled group at the birth made 35.8 kg that is 2.4 kg more, than in the first skilled group and 2.3 kg more, than in control group. For the entire period of cow calf breeding of the line Montvik Chifteyn of Holstein breed had superiority over thoroughbred black and motley contemporaries for 7.9%, and over cow calves of the line Reflection Sovering of 3.6%. The term of the first insemination in the second skilled group made 16.2 months, in the first skilled group 16.5 months, in control group the age of the first insemination made 18.6 months, thus at the first insemination animal all groups had almost identical live weight and made 385.0-388.0 kg. Thus, for increase of efficiency of dairy cattle breeding, in the conditions of milk intensive production technology we recommend to use animals of Holstein breed of the Montvik Chifteyn family.

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INFLUENCE OF UTEROMASTIN DOSES FOR THE EFFICIENCY OF OBSTETRIC PATHOLOGIES

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Keywords: pathology, endometritis, dose, exudate, uterus, vagina, sign, inflammation.

The purpose of research is increasing the efficiency of cows postpartum endometritis treatment due to drug Uteromasteen. For studies, from the number of cows with acute postpartum endometritis by the principle of steam analogues formed three groups of cattle by 10 animals each. In forming the group was accounted: calving, live weight, the level of milk production, the degree of

symptoms of the disease. The therapeutic efficacy of the drug in the treatment of acute Uteromastin after clan endometritis in cows was determined by the following criteria: general condition of the animal, the nature of the current post-natal period, the period of recovery, frequency of administration, the manifestation of the sexual cycle first stage initiation after desease, restore reproductive function of cows after treatment. It has been established that the administration at a dose of 100, 150 ml of cows clinical signs of acute fading post obstetrics endometritis was faster than at a dose injection of 50 ml. The duration of the treatment, at the dose of administration was 100 ml to less than 3.7 days of administration at a dose of 50 ml. The percentage of recovery at a dose of 50 ml injection was 30.0% less than at a dose of 100, 150 ml, and the restoration of reproductive ability of cows at a dose administration of 100, 150 ml was made up 100.0%, which is 14.3% more compared with the animals treated with the drug at 50 Uteromastin ml. So the use of tissue prep-rata Uteromastin plant and animal origin in a dose of 100 ml of shortening the term-a fruitful insemination of 25.7 days and the number of days to 28.2 days of infertility.

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CYTOLOGY VAGINAL MUCUS FOR DIAGNOSIS OF COWS POSTPARTUM ENDOMETRITIS

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Keywords: endometritis, cattle, cytology, vaginal, smear, cells.

The purpose of research is to increase the efficiency of diagnostic after the clan of cows endometritis in the early stages. Cytological studies of vaginal mucus in the postpartum period were carried out for 20 cattle black-motley breed at the age of 3-6 years, weighing 390-440 kg with an average milk yield of 3100 kg. According to the results of a retrospective analysis all the animals were divided into two groups according to the nature of flow of post-partum period. The study we have identified the following changes in the smears: the potential physiological course of the postpartum period the number of superficial cells in smears of the vaginal epithelium in the first day after calving was 58%, for endometritis – 21%; the number of intermediate cells in the normal course was 29.5%, for postpartum endometritis – 61.5%. Regarding the parabasal cells, the following picture: in physiological postpartum period, their number was not more than 11% of the total number of epithelial cells, and for the postpartum endometritis – 20%. Cytological evidence of vaginal mucus recommend using the first 9 days after calving when the clinical, morphological and haematological signs of obstetric complications is not yet time to develop.

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INNOVATIVE CORRECTION INCOME OF COWS REPRODUCTIVE FUNCTION WITH ACUTE POSTPARTUM ENDOMETRITIS

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Keywords: endometritis, reproduction, correction, fluid, hormoneque, complimentary, insemination.

The purpose of research is to increase the effectiveness of the treatment of cows acute postpartum endometritis due to the integrated use of myotropic and hormonal preparations. The material for the study were cows of dairy black-motley breed. Why after clinical examination revealed a cow patients with acute postpartum endometritis. Among the sick animals were formed two groups of 20 animals each (control and test). Cows in the control group were treated according to the scheme adopted in the economy, and the cows of the experimental group were administered the drug Metrolek-O at dose of 50.0 mL every 48 hours. After the treatment is still experimental group were divided into two groups (1 experimental, 2 pilot). The experimental animals were administered into 2 hormonal drug Follimag at a dose of 500 IU intramuscularly once. For the effectiveness of the drugs was judged by such indicators as the period of recovery, frequency of administration of the drug, restorement of reproductive function, the period of reproduction insemination, the number of days of infertility. Results of the study was found that use of the drug Metrolek-O at a multiplicity of administration of 4.6 times at intervals of 48 hours-effectiveness and less costly than the regimen used in the household. It was found that the experimental cows 2d group, which after treatment Metrolek-O injected hormone Follimag had the highest fertility in comparison with the experimental animals 1st group. Thus, as a result of studies wasfound that use of the drug Metrolek-O for the treatment of acute postpartum endometritis shortens the recovery of animals and the use of hormonal therapy after drug. Follimag stimulates sexual hunt animals and improves recovery Shuffle enable predictive function cows.

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PHYSIOLOGOBIOCHEMICAL STATUS OF PREGNANT COWS CORRECTION BY HOWL SUPPLEMENTS VODNIT MINERAL FORAGE APPOINTMENT

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Keywords: cow, blood, protein, globulin, calcium.

The purpose of research is to increase the protective and adaptive reactions of the body-mechanism of pregnant cows by application of natural mineral Vodnit. Zeolites possess adsorption, ion exchange, catalytic, detaxation and other biologically active properties. These properties of zeolitic tuffs allow you to use them with high efficiency to many biological questions, in particular the intractable question, the question of animal reproduction contained in the industrial, high-technological conditions. In race of experimental group cows 30 days prior to calving and postpartum period were included mineral feed additive Vodnit in a dose of 3% by weight concentrated feed. Biogenic effect of mineral Vodnit for the body experienced the stomach was reflected in the increased number of red blood cells by 12.0% ($p<0.05$), leukocyte – 10.0% ($p<0.01$), concentrations of total protein at 8.75% ($p<0.05$), albumin – 10.1% ($p<0.01$), decrease in the concentration of β-globulin by 6.6%, γ-globulin – by 15.21% compared to the same parameters of the control group. Vodnit, as enterosorbent, helps to remove from the body of cows experienced group of exogenous and endogenous pathogenic factors formed during digestion of feed nutrients and removal of the heavy metals salts and other organic and mineral substances from the external environment. On this basis was increased morphophysiological status of the pregnant cows organism, accompanied by more complete absorption of feed nutrients.

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MORPHOLOGICAL PARAMETERS OF COWS BLOOD WITH NORMAL AND PATHOLOGICAL POSTNATAL PERIOD

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Keywords: endometritis, postpartum, cattle, hematology, subinvolution.

The purpose of research is improving the efficiency of cows diagnosis postnatal pathology. Studies conducted in the postpartum period for 30 heads of cattle black and white breed at the age of 3-6 years old, weighing 390-440 kg with an average dairy yield of 3100 kg. According to the results of retrospective analysis, all of the animals were divided into three groups according to the nature of the current post-partum period. Group 1 (control) – with normal postpartum – 10 animals; 2 experimental group – with subinvolution uterus – 10 animals, 3 experimental group – with postpartum endometritis – 10 animals. As a result of the study, we have identified the following changes in the morphological composition of the blood: installed eritropeniya and eosinophilia are common to all groups. In animals with persistent postpartum endometritis marked leucocytosis due to the increase of band neutrophils and monocytes. In the study of animals hematological parameters of blood observed decrease in the number of red blood cells. Rectal examination involution of the genital organs of the first group animals would be in conformity with the physiological norm. The animals of the second group showed the decrease uterine tone. Rectal examination at 7-12 days after birth, it has been found that uterus increased, stretched and lowered into the peritoneal cavity. The wall of loose, slightly reduced fluctuates horn of fetus repository. There were ovaries corpus luteum. The general condition of the animals did not change.

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THE INFLUENCE OF MICROBIAL FACTOR FOR THE EMERGENCE OF THE COWS HIDDEN ENDOMETRIA

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Keywords: hidden, endometritis, microorganisms, etiology, susceptibility, pathogenicity, cows.

The purpose of research is detection in the early stages of the cows hidden endometritis using microbial factor. Studies were carried out at JSC «Demetra» in Kamensky district of Rostov region in the period from 2012 to 2014, thre were conducted daily observations of cows with multiple unsuccessful inseminations. For animals bacteriological studies, mucus samples were taken during the estrous of the cervix by the method Mikhailova-Lucko. In addition, measured microbial count, species identification of bacteria carried out, determined their pathogenic properties. To determine the number of microbial cells per 1 mL of the uterine fluid, MPA dispensed into sterile petri. Then dried in the thermostat at temperature of 40 degrees, then pipetted into 0.06 ml from dilution of 1:70 and of 1: 4900 on the surface of the agar plates in two parallel petri and calculated the average values of microbial numbers. To study the resulting cultures, colonies were selected, which were different by cultural and morphological characteristics, were screened by a loop on the beveled surface the culture medium and examined their biochemical properties on mediums Hiss, milk, nitrate broth (NB), vitelline-salt agar (VSA). Prepared and stained smears by Gram method. Hemolytic properties of isolated cultures was studied by blood agar. To prepare blood agar in MPA was added 5% sheep red blood cells (2.5% slurrys), which were washed by physiological solution. Hydrogen sulfide was determined using the sample with the filter paper dampened lead acetate, indole-sample with nitrous acid, nitrite, and zinc sample with starch-iodine in an acidic environment. The pathogenicity of the isolated cultures of microorganisms was determined by bioassay by 3 white mice, weighing 14-16 g, which were infected intraperitoneal by suspension of agar cultures in physiological solution, which was extracted from exudate of the uterus at a dose of 500 million microbial cells (bacterial concentration was set by bacterial turbidity standard 10 M.E.). Culture was recognized the pathogenic when death of one or more of the mice was within two days after infection. Hidden in cows endometritis in JSC «Demetra» Kamensky district of Rostov region has microbial etiology. The total number of microorganisms in 1 mL of the uterine fluid of cow with the hidden endometritis exceeds those in healthy animals, respectively, 1.5 times. The species composition of microflora was represented by some strains of the genera Staphilococcus, Streptococcus, Escherichia, Proteus, Enterobacter, Bacillus, and Pseudomonas.

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THE EFFECT OF THYMOZIN-Á1 FORN OF TRASAMINATION ENZYMES DINAMICS IN THE BLOOD OF PIGS IN WARM AND COLD SEASONS

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Keywords: aspartaminotranspherase, alaninaminotranspherase, alkaline, phosphatase, thymus, thymozine-á1, pig.

The purpose of researches is to improve humoral status of pigs in conditions of adaptation to climatic and microclimatic parameters in the area of the Middle Volga region by applying immunocorrector thymozin-á1. In the article, the results of research of the enzymes aspartataminotranspherase, alaninaminotranspherase and alkaline phosphatase dynamics in the blood of pigs in the correction of the immunestimulator thymozin-á1. Experimental animals were injected intramuscularly thymozin-á1 dose of 0.16 mg per pig daily up to 30 days age of 2 times per week; with a 31 – to 90-day age – 0.8 mg on the head once a week; with 91-210-day age – 1.6 mg on the head once a week. In accordance with the methodology of the Federal service for Hydrometeorology and environmental monitoring the length of the year time was divided into two periods: 1 warm – season, 2 − the cold season. Thus, the activity of AsAT in the blood serum of piglets during the warm period of the year was in the range of 0.41±0.02 mmol/ml/h, in the cold of 0.35±0.02 mmol/ml/h or lower by 14% ($p<0.05$); pigs for fattening in the warm period is 0.65±0.02 mmol/ml/h, in the cold of 0.58±0.02 mmol/ml/h, which is lower by 12% ($p<0.05$) as compared to the warm period. Alkaline phosphatase in the blood serum of piglets warm period was 303.5±by 5.87 u/l, in the cold – 286.1±4.75 u/l or lower by 6% ($p<0.05$); pigs for fattening in warm – 50.09±0.81 u/l, in the cold – 46.84±0.72 E/l or 7% lower ($p<0.01$) than in warm. Immunocorrector thymozin-á1 systematic use helps to maintain the activity of transamination enzymes in animals at a higher level relative to similar data in the control groups, which positively affects the rate of growth and development of pigs in warm and cold period of the year.

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MINERAL FEED SUPPLEMENT VODNIT IN THE LARGE WHITE PIGS DIET

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Keywords: Vodnit, pig, blood, element, protein, age, weight.

The purpose of the research is the increase in the growth of the pigs during the fattening period due to the use of mineral feed additives Vodnit. In modern conditions the production of environmentally safe biologically complete products of animal origin requires very high degree of work organization in maintaining the health and productivity of animals ,through the use of local antitoxic natural minerals, exceeding the digestibility of feed nutrients, factors of natural resistance and productivity of animals, in response to exposure to endogenous and exogenous pathological factors. One of this natural mineral is Vodnit Vodinsk IU-field of Krasnoyarsk district of Samara region. Mineral Vodnit is environmentally safe, rich in macro- and microelements, has endocarbocyanin ability of pathogenic factors of the applicant with food and air from the external environment and toxic gases the image-relating to animals. Feed additive Vodnit – mineral sedimentary type, is situated in Epizooties prosperous areas on infections diseases of animals and humans, consists of gypsum (Ca(SO4) • 2H2O), calcite (SaMg(CO3)), CaO and calcium oxides of magnesium and calcium. In Vodnit of heavy metal minerals salts are mg/kg of copper – 0.44, zinc – 0.33, cadmium – 0.07, Lead – 8.1 mg/kg, that is within the acceptable concentration for animals and man in Vodnit no-mercury and arsenic. Vodni t as a mineral feed additive in the diet of pigs has not only antitoxic function, but also allows you to fill the belly diet- minerals. It is established that animals reared on the Vednit diet in the blood increases the number of red blood from 4.10 to 9.44%, the concentrate of hemoglobin – 1.60%, total protein – 2.46, albumin – 11.23 globulin decreased by 2.22%, i.e morphological blood counts indicate increased to physiologobiochemical status of the animals.

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THE EFFECTIVENESS OF FENASAL NEW DOSAGE FORM BASED ON SUPRAMOLECULAR SYSTEMS DRUG DELIVERY AT SHEEP MONITHES

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Keywords: monithes, fenacal, supramolecular, system.

The study purpose is efficiency of new fenasal pharmaceutical formimprovement based on supramolecular nanoscale delivery systems for treatment at monitise sheep. Subjects lambs were asked niclosamide with arabinogalactan in the conduct of 1:10 (the first group) and 1:5 (the second group) at a dose of 10 mg/kg, and basic drug niclosamide in the dosage of 100 mg/kg (the third group). The effectiveness of supramolecular complexes was similar to the efficiency of the basic drug in K ratio significance extensiveness of invasion p=0.85 and p=0.41 to compare results before and after treatment in the first and second groups, respectively. Reducing the extensiveness of invasion in the first, second and third groups was 60, 71 and 83%, respectively. The experiment showed that the supramolecular complexes were effective in 10-fold lower dose compared with the reference drug. At higher dosages up to 30 mg/kg according to the current matter, the reduction in intensity of infection after use of the drug in the first group was 74%, the second 100%. The extensiveness of invasion in the first and second groups decreased by 80% and 100%, respectively. Weighting reduce the extensiveness of invasion in the first group amounted to p=0.81, the second p=0.47, which also indicates significant differences between the results before and after treatment. According to the results of statistical processing of most similar in action with the base compound was supramolecular complex niclosamide in a dilution of 1:10. Thus, subjects doses

are not interchangeable, as evidenced by the significance level of p=0.65, when comparing the results for the respective groups. The effectiveness of the supramolecular complex niclosamide with arabinogalactan in a dilution of 1:5 at the dosage of 30 mg/kg) current substance was 100% when monithes sheep at a dose of 3.3 times lower compared with the reference drug.

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REPRODUCTIVE SYSTEM OF RAT REACTIVE CHANGES ON THE BACKGROUND OF LOAD POTASSIUM HUMATE

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Keywords: rats, reproductive, system, pre-implantation, death, embryo.

The purpose of research – is assessment of the rats reproductive system condition to identify the possible biological effect of potassium humate. The article deals with reactive changes of the rats reproductive system on the background load of potassium humate. The experiment involved 80 females and 32 males one month of birth, weighing 190-210 g, were divided equally into 8 groups, and according to group affiliation received potassium humate as a solution. The solution was prepared in distilled water and administered to animals on a daily basis in accordance with the group membership and timing intragastrically at a dose of 10 mg/100 g body weight, 1 ml. Control animals received distilled water - 1 ml. The animals were monitored daily. Depending on the duration of potassium humate receipt in rats was assessed fetal (pre- and post-implantation) death of the fetuses; underdevelopment, exhibits a decrease in body weight and cranio-caudal sizes of new born, as well as the state of the reproductive system of males and females. The experiment revealed that the additional load solution of potassium humate has honadotrophic action manifested in the increase in the male testes mass coefficient; reduction of pathological forms of sperm; in females ovaries decrease in atretic bodies and increase in the number of mature follicles. Depending on the duration of receipt of potassium humate in the body an increase of corpora lutea and implantation sites per female. Introduction humate before fertilization and during early pregnancy increases the number of corpora lutea, implantation sites, and, therefore, increases the effectiveness of fertilization, is quantitative increase in offspring, cranio-caudal fruit size, the average weight of the placenta and fetal survival.

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POTASSIUM HUMATE INFLUENCE FOR THE BROILER CHICKENS ENZYMATIC PROFILE

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Keywords: potassium, broiler chickens, liver, enzymes.

The purpose of research is increase activity of liver enzymes by the use of potassium humate. It was performed the enzyme profile of hepatocytes of broiler chickens with additional load solution of potassium humate. The following indicators: the activity of catalase, super-oksiddismutazy, glutathione peroxidase, alkaline phosphatase, alanine aminotransferase and aspartate aminotransferase, and the number of malondialdehyde were examined. It was established that the enzyme activity increases with age in the control and experimental groups. Thus there is an increase in the experimental activity aspartataninaminotransferaze 35 to 45 days. On 45 day it was reached 16.80 % (P <0.05) in relation to indicators of intact animals. Changes in the activity of alanine aminotransferase, during the experiment was not significant and was 14.21% compared to control the experimental group showed an increase in superoxide dismutase activity in the age range 25-45 days to 11.43% (P <0,05) with respect to intact animals. Activity glutationpirocside a group of poultry, geting potassium humate, above the reference value at 28.74% (P <0.05). Alkaline phosphate activity was increased in the course of the experiment in chickens at the age of 5-30 days, and then observed its decline. Value efficiency AP 45 hours in the experimental group below the control values at 12.82% (P <0.05). The activity of catalase to 13.22% (P <0.05) relative to the control group was decreased. Fluctuations in the on-indicators in the experimental group at the age of 5-45 days slightly was shown. Malone dialdehyde concentration below the control valuetion to 11.40% (P <0.05), this is due to high relative to the control group, the activity of the glutathione peroxidase. Thus, when administered in the diet of experimental, the poultry potassium humate of 45 days there was increased activity of the liver enzymes such as alanine aminotransferase, aspartate aminotransferase, superoxide dismutase, glutathione peroxidase, and reducing the activity of alkaline phosphatase and catalase.

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MATURATION RATE STUDY OF RAT SENSORY-MOTOR REFLEX ON THE BACKGROUND LOAD SCHROTH SESAME SEEDS

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Keywords: sunflower, sesame, rats, nervous, system, reflex, field.

The purpose of the research is increasing of rats sensory-motor reflexes maturation due to load meal sesame seeds. The results of developmental changes study in the nervous system of rats on the background load schroth sesame seeds were presented. The intensity of the sensory-motor reflexes maturation is one of the factors that directly affect to the development of the organism in ontogeny, affecting all levels of homeostasis of cellular metabolism integration with cardiovascular and respiratory systems to activate the formation of the skeleton, and therefore has a direct impact for the survival of the young. The study was carried out with white mongrel rats, which were kept in vivarium under standard conditions. The experiment involved 142 rats aged 0 to 45 days of life. Rats were obtained from 10 female and 6 male albino rats weighing 190-210 g, divided equally into control and experimental groups. Females in the test group during the 30 days prior to pregnancy and new borns as additional load intragastrically administered sesame meal suspension at a dose of 10 mg/100 g body weight, 1 ml. A solution was prepared in distilled water. Females in the control group was administered distilled water for the same time period, 1 ml. Condition of rats was assessed by the rate of sensory-motor reflexes maturation during feeding classical methods and the method of «open field». According to the results, load schroth sesame seeds affects the dynamics of sensory-motor reflexes maturation. The following conclusions: the introduction of the diet meal sesame seeds affects the pyramidal-striatal level of organization of movements, mostly lipolysis, the development of reflexes in rats in the experimental group. The level of substantive action or parietal-premotor associated with fine motor skills and emotional sphere, by contrast, is stimulated in young rats in the experimental group compared with the control. Thus, the main positive impact sesame meal due to the formation of sensorimotor connections.

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COMPARATIVE ASPECTS OF THE HISTOSTRUCTURAL ORGANIZATION OF SOME MAMMALS UTERUS BODY AND NECK DIFFERENT TYPES

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Keywords: cervix, uteri, rat, rabbit, cat, endometrium, myometrium.

The purpose of the research is improving the efficiency of diagnosis and treatment of reproductive system anomalies by identifying features of the histogenesis and definitive structure of the uterus caudal division tissue components in mammals. By light microscopy rat, rabbit and cat uterus histostructural organization was verified at its caudal part. It was found that in the rat and rabbit uterus wall of the right and left horn coalesce, forming a double body and a neck whose cavities are separated by a thin wall and opens into the vagina two separate holes. Thus, these types of rodents, there is a double type of structure of the uterus. The cat has uterus horn, double body containing the median septum that extends to the beginning of the general neck formation of. The wall of the uterus regardless of the department consists of three main shells: endometrium, myometrium and perimeter. In the same type of the uterus, such as rat and rabbit, it was detected at a histological level, differences in the structure of the cervix. For rats, cervix, unlike that of rabbits, by attaching the outer portion of the throat joint between two morphologically different histogenetic and epithelia, similar structure of the zone in the cervix cat. Myometrium of the uterus is not dependent on the type of the uterus, consists of three layers – the inner (submucosal) formed by cycle oriented myocytes; medium (vascular) with a small amount by coso oriented smooth muscle; outdoor (upper) cells coso direction. Plot merger medial wall is characterized by the union of the perimeter and the outer layer of the myometrium, with all representatives. Vascular layer plays an important role in the fusion of the medial caudal parts of the uterus walls. In the distal part of the cervix maximum development inner layer gets to form a circular sphincter.

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MICROORGANISMS COMPLICATING CATS PANLEUCOPENIA IN SAMARA REGION

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Keywords: panleucopenia, cat, leukocytes, clostridium, helicobacter, enterobacteria, leptospira.

The purpose of research is scientific justification for increasing the resistance of orga-nism cats and prevention of viral and bacterial infections. Based on the purpose of the study, were as follows – Isolation and identification of cats living at home, accompanying and complicating the course of pan-leucopenia opportunistic pathogenic bacteria and micro-fungi; study of sea-fologicheskih, tinctorial, cultural, serological, biochemical properties of the isolated microorganisms. The study included a cat and cats sick panleukopenia. Cats and cats showed a reduction in the total number of leukocytes in the blood that is-is a key indicator of panleukopenia. At a rate of 5.5-18.5x10^9/ l, in the IP-to-follow animal white blood cell count was within 2.34-2.56x10^9/ l. The analysis of the microflora isolated from the teeth, gums, with the oral mucosa and of vomitus, revealed the presence of transient bacteria Staphylococcus aureus, Clostridium sporogenes and Clostridium difficile, Campylobacter coli and Leptospira biflexa. The study of the microorganisms isolated from the feces of cats and cats, all animals identified representatives automikroflory oral cavity and intestines. Concentration of bacteria Enterococcus faecalis, Lactobacillus delbrueckii and Bifidobacterium bifidum decreased in comparison with the norm. At the same time increased the concentration of opportunistic Escherichia, Proteus, Helicobacter pylori, and enteropathogenic Salmonella, Yersinia and Campylobacter. Our results allow us to conclude that the development of acute feline panleukopenia in cats leads to a sharp decrease in the concentration of representatives of the normal flora of the gastrointestinal tract and the replacement of its pathogen-governmental and opportunistic microbes.

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COWS BLOOD INDICES WITH HYPOFUNCTION OF OVARIES AND CHRONIC ENDOMETRITIS

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Keywords: hypofunction, ovaries, endometritis, hematology.

The purpose of research is developing of the preventive maintenance veterinary and zootechnical measures of the cows simultaneous manifestation of the ovaries hypofunction and chronic endometritis. The goal achieving was based on the study of the biochemical, hematologic and immunological indices of the cows blood in the case of the connecting manifestation of the hypofunction of ovaries and chronic endometritis, in the comparison with clinically healthy animals. According to the principle of analogs they formed experimental and control group room of 6 heads in each. The results of studies were testified about the disturbance in the cows of all groups of protein, mineral, fatty and vitamin exchanges of substances. Animals with the simultaneous combination of the ovaries hypofunction and chronic endometritis had reliably lower level of glucose, total protein, calcium, triglycerides and phosphorus in the blood. On the background the disturbances were given in all investigated animal groups and the reduction of the hemoglobin in the erythrocytes and the average volume of erythrocytes was noted. During the connecting manifestation of the ovaries hypofunction and chronic endometritis is reduced the portion of the stabnuclear forms of neutrophiles, it is recorded monotsitopeniya. In spite of higher phagocytic activity in sick cows is lowered the phagocytic number, which indicate the lowered capability for the valuable phagocytosis of microbial body.

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COWS ECEPTIVITY TO MASTITISES AND CONCENTRATION OF MILK BIOACTIVE SUBSTANCES IN DEPENDENCE ON BREED

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Keywords: mastitis, somatic, cell, milk, serumal, protein.

The purpose of research is improving the efficiency of dairy cattle using cows of different breeds. From cows of three breeds: Holsteinphrise, Monbelyard and Simmental 30 tests of milk were collected and analysed. Experiment was made during the winter period. It was applied silage consatrate type of cows feeding. The hygienic condition of milk was estimated for number of somatic cells by means of the Somacount-150 (Bentley) device. In milk the content of fat, protein, casein, urea and lactose were determined by the automated infrared MilkoScan FT-120 analyzer (Foss Electric). The amount of serumal proteins and concentration of the conjugated linoleic acid in milk were determined by hromatographical method. Thus the best indicators of quality of milk were noted at cows of Holsteinphris breed. Milk from cows of Holsteinphris breed is characterized by lower contents β-lactoglobulin and α-lactoal'bumin and higher concentration of a lactoferrin and lizotsim, than milk of cows of other breeds. Results showed that the greatest the quantity of somatic cells was in cows milk of Holsteinphrise breed. The greatest concentration of casein and the conjugated linoleic acid was observed in cows milk of Monbelyard breed while milk the Simmental of cows was characterized by the highest level of phospholipids. The susceptibility of cows to mastitis depends on cattle breed. High yielding cows of Holsteinphris breed are most subject to mastitis. It is established that cows with a low susceptibility to mastitis and high genetic potential can bring the greatest financial benefits expected from sale of crude milk.

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THE CHANGE IN TEMPERATURE, PULSE AND RESPIRATION WITH INTRAMUSCULAR INJECTION OF ROMETAR TO THE EDILBAEVSKOY BREED SHEEP

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Keywords: sheep, Rometar, temperature, pulse, respiration.

The purpose of research is improvement of surgical treatment by use of the drug Rometer. The study was conducted in Ilek Zootechnical College, department of », FSBEI HVE Orenburg state agrarian University. The object of the study were 15 Edilbaevsk breed sheep with body weight ranging from 22.5 to 51.5 kg of Experimental studies were conducted in clinically healthy animals with pre-starvation diet. Three groups of animals were formed: animals of the first group Rometer was injected intramuscularly at a dose of 0.05 ml; second 0.1 ml; the third of 0.15 ml per 10 kg. It was established that the investigated dose Rometar had not a significant effect for the temperature, pulse and respiration. The analyzed indicators throughout experience was within the physiological norm. High stability among the studied physiological parameters were observed body temperature, the value of which ranged from 0.06 to 1.2%, the most volatile was breathing rate, which ranged from 21.1 to 44.3% in both animals within a group and between groups, heart rate was in the range of from 9.5 to 20.8%. The data obtained allow us to recommend the introduction

of Rometar Edibaevsk breed sheep at a dose of 0.15 ml per 10 kg body weight, because at this dose, the drug has no side effects on physiological parameters: temperature, pulse and respiration.

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MICROMORPHOLOGY OF HENS THYMUS IN ONTOGENESIS

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Keywords: hens, ontogenesis, thymus, micromorphology

The purpose of research – to identify micromorphological features of chickens thymus in ontogenesis. Micromorphology of thymus hens in diurnal, 3-day, 1.5-month-old and 8 months of age was studied by the histological methods. Results of research showed that in the process from the day age and up to 8 months of age, the thymus structure undergoes the following changes: is changed the size and shape of the of lobules - begin to predominate the large and medium-sized lobules, subcapsular layer thickness increases. Division into the cortex and medulla is unequally in the daily and three-day of age and is well expressed in 1.5 and 8-months of age. Quantitative and qualitative characteristics and location of the Hassall cells Is changed – at day long in some lobules they are just beginning to be formed, in large lobules a few of them, to 8-months of age they increase in size, count of large Hassall's cells decreases, count of small Hassall's cells increases. Guantitative and qualitative characteristics of the endocrine cells Is changed – at day-long, they are detected in medulla in a small amount and they small in size, to 8-months of age, count of endocrine cells becomes much more and they increase in size. During this period in their cytoplasm is clearly expressed granularity. In the thymus with age decreases the count of lymphoid cells and the count of cells with mitotic figures. From 1.5-months of age in both cortical and medulla appears in a small number of apoptotic cells. At 8-months of age, cavities without lymphocytes appear in the medulla. Epithelial cells with light vesicular nuclei and foamy vacuolated cytoplasm are forming vast areas. The count of reticular epithelial cells and degenerating cells increases. Thymic stroma predominantly consists of collagen fibers, between which a lot of amorphous substance, and they are thicken with age.

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THE EFFECT OF NATURAL COMPLEX ADDITIVES FOR THE FACTORS OF PIGLETS NONSPECIFIC RESISTANCE

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Keywords: resistance, Silimix, tricalcium phosphate, rickets.

The purpose of research is improving the efficiency of preventive and therapeutic measures in disorders of calcium and phosphorus piglets metabolism. We studied the influence of complex aluminosilicate drug Silimix and drug Silimix with the addition of tricalcium phosphate for the factors of nonspecific resistance of piglets. Silimix is a complex natural mineral additive, containing montmorillonite, zeolite, glauconite, phosphorite in its composition, and vital for the body silicon, aluminum, potassium, calcium, phosphorus, sodium, magnesium, sulfur, iron. Tricalcium phosphate is a common mineral product obtained from Apatite and phosphorite, which has a high degree of digestibility of calcium and phosphorus. The task was to conduct a comparative assessment of the impact of drug Silimix in pure form, as well as adding tricalcium phosphate for the indicators characterizing factors of nonspecific resistance of piglets. The work was carried out into three groups of piglets, formed on the principle of the 7analogies. The first group received the drug Silimix, the second mixture Silimix with tricalcium phosphate (3:1), the third was control. It was found that the bactericidal activity of blood serum in the group use a mixture of products was higher than the background values by 7.92%, and the control values were below background values at 27.33%. Lysozyme activity of the control group decreased relative to the background at 10.42%, and the difference between the control and two experimental groups was 5.5% and 12.5% in favor of the 1-St and 2-nd experimental groups, respectively. Beta-lytic activity of the last holdout was below background at 6.58%, and below the 1-St and 2-nd experimental groups at 7.25% and 10.75%.

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BIOTECHNOLOGY AND ANIMALS ECOLOGY

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GROWTH AND DEVELOPMENT OF HOLSTEIN AND AYRSHIR BREEDS BLOOD HEIFERS AT INDIVIDUAL LODGES BREEDING

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Keywords: breeding, heifers, breed, weight, individual, lodges.

The purpose of researches was increase as efficiency of blood dairy breeds heifers growth delivered from Finland in the conditions of strong continantal climate of Central Volga area. Features of growth and development of Holstein and Ayrshir breeds heifers during the dairy period which are given rise during different seasons of year at cultivation on open air in individual plastic lodges according to the intensive production technology of milk in modern industrial livestock complexes are studied. It is established that the most strict observance of the requirements provided by technology of calves breeding in individual lodges allows to grow up, despite climatic features of different seasons, young growth in compliance with the standard of breed. Animals of Holstein breed, at the expense of higher growth rate during the dairy period, reach necessary live weight earlier, than their contemporaries of Ayrshirsk breed. The Holstein breed heifers, born in winter months, were inseminated at the age of 15.2 months, given rise in the spring – in 15.4 months, in the summer – in 16.3 months, in the fall – in 15.1 months, Ayrshirsk breed heifers, respectively in 16.3; 16.5; 17.3; 15.9 months. At all experimental good reproductive abilities heifers were noted. After the first insemination it was impregnated in group of animals of Holstein breed of 60.0% born in the winter, in the spring – 53.3, in the summer – 53.3, in the fall – 60.0%, in group of Ayrshirsk breed, respectively 73.3; 60.0; 53.3; 66.7%.

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GROWTH AND DEVELOPMENT OF MANDOLONG BREED YOUNG CATTLE

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Keywords: breed, bull-calves, castrater, heifers, intensity.

The purpose of researches is increase of mandolong breed cattle use efficiency for production beef in climatic conditions of Central Volga area. Researches carried out to JSC SHP Neprik of Borsky Region in Samara region in the conditions of test station according to software producers to quality of posterity at intensive technology breeding. Results of researches showed that Mandolong breed will well acclimatize in the conditions of Central Volga area zone. The young growth well uses pastures and at creation of optimum conditions of feeding quickly grows and develops. Bull-calves and castreters are capable to gain the live weight more than 450 kg that conforms to requirements of state standard specification for young growth of the class «perfect» at the age of 12 months. In the presence of good pastures, for the purpose of receiving heavy hulks and heavy rawhide, it is recommended to carry out young growth to 18-and 21-month age that reduces prime cost of beef and increases efficiency of its production. At good conditions of keeping and feedings Mandolong breed bull-calves and castraters are capable to keep rather high intensity of growth to 24-month age. Besides, in comparison with the majority of meat breeds cattle, at Mandolong breed increase in share of fatty tissue in gain of live weight is observed only after 15-month age. It, in turn, allows to receive from bull-calves and castraters at the age of 18 and 21 months heavy hulks with the low content of fat that fully conforms to requirements of the modern market.

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FATTENING BULLS DIGESTION PROCESSES AND DIGESTIBILITY OF NUTRIENTS WHEN USING SYNTHETIC NITROGEN COMPOUNDS WITH ZEOLITE

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Keywords: rumen, digestibility, ruminants, nitrogenous, zeolites.

The series of studies was conducted by the method of group – periods for the Black and White cattle fattening bulls (n=3) aged 10-12 months with rumen fistulae by Basov in vivarium of All-Russian Research institute of animal husbandry named after academy member L. K. Ernst. . We studied the effect of rumen digestion processes, nutrient digestibility of diets inclusion in diets of young cattle fattening using synthetic nitrogen compounds (SNC) separately and in combination with the zeolite. The studies found that the inclusion of various synthetic nitrogen compounds in combination with the zeolite in the composition of the rations optimizes processes rumen digestion in bulls fattening and creates more favorable conditions for the activities of the microflora.

This manifests itself in lowering the concentration of ammonia in rumen fluid steers fed SNC in conjunction with zeolites, as compared with animals fed a diet consisting only the SNC, as well as increasing their total number of microbial mass. When feeding in the composition of the fattening bulls diets with different SNC in combination with zeolite has increased compared with the control digestibility of organic matter by 0.7%, protein – 2.7-3.7%, fat – 4.2%, fiber – 3.9-4.4%. After experiments, we suggest a deficiency of protein in the diet to use urea (40 g per head / day) in combination with zeolites (100 g per head per day), ammonium sulfate (87 g per head / day) in combination with zeolites (100 g per head per day) and diammonium phosphate (85 g per head / day) in combination with zeolites (100 g per head per day) in the period of intensive growth of young cattle in order to replace part of the protein in the diet.

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MUTSINOL PROBIOTICS USE IN PIGSBREEDING

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Keywords: probiotic, feeding, pigs, weight, gain.

The purpose of researches is improving piglets growth and safety through the use of probiotic Mutsinol. Scientific and economic experiment was carried out on 2 groups of pigs from day old. The first group of animals – control, received a basal diet (RR), the second group – also received probiotic Mutsinol from 1 to 5 days of life with a syringe 5ml dosing head. The experiment established that live weight of pigs in the experimental group at 21 days of age was higher than the control at 7.4%. At 2 months of age this difference was already 14.1%. The average weight gain during the period of 0-2 months in the first group was 228.3 g, the second – 263.3 g that more benchmark of 15.3%. Early feeding of probiotic preparation increased the safety of pigs by 11.8%. Analysis of biochemical studies showed that both groups were healthy. The second group was less spent feed per 1 kg of live weight gain of 11.5%, compared with the first group. The use of probiotics led to some rise in the cost of feed intake in the second group by 14.4%, but gross weight gain in the experimental groups was higher, due to which lower production costs. At each grown head in the second group were received 447 rub. additional profit. Based on these results, we recommend the use of probiotics Mutsinol in growing pigs.

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DAIRY EFFICIENCY INDICATORS AND NATURAL RESISTANCE OF ANIMALS ORGANISM CORRELATION

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Keywords: yield of milk, breed, blood, resistance, correlation, coefficient.

The main objective of work is to increase selection efficiency of parental couples during the selection and breeding work for improvement of dairy efficiency and adaptation abilities of dairy cattle breeds . Having analysed the indicators of blood with indicators of dairy efficiency and quality of milk, it was established that between them there is a correlation dependence of different force and the direction which allows to strengthen action of merits at selection and selection of parental couples, weakening the undesirable. On the basis of the received results it is established that between the studied indicators of blood and dairy efficiency prevails low (r=0.1-0.3) and average (r=0.4-0.6) degree of interrelation. Thus rectilinear positive connection of cows yield of milk is established only with the content in blood of erythrocytes, hemoglobin and neutrophils. Rectilinear negative correlation of yield with the maintenance of leukocytes at cows oBbestuzhev and Black and Motley breeds, yield with the content in blood of lymphocytes at Black and Motley and Holstein breeds. It is established, as the cellular and humoral factors characterizing natural resistance of an organism are very labile both between breeds, and in each studied breed. They can decrease or increase as in parallel, and compensating each other. Practical value of correlation between signs is that they allow selection of parental couples not only to strengthen action of merits, weakening undesirable, but also, in the presence of positive correlation, to conduct selection for smaller number of signs that is much simpler and more effective. In this case rates of genetic improvement of herds are considerably accelerated.

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HOLSTEIN COWS ETHOLOGICAL FEATURES OF BESTUZHEVSKAY BREED DEPENDING ON THE YEAR SEASON

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Keywords: ethology, breed, crossing, timing, season, year.

In this researches the main objective is improving of Bestuzhevsky breed cows breeding technology with a different share of Holstein blood in the conditions of industrial complex. In experience local cows of Bestuzhevsky breed were used by the different methods of crossing removed with Holstein and local bulls from blood shares from 25 to 93.8%. Researches were conducted on the OPH «Krasnogorsk» modern dairy complex in Samara region. Ethological reactivity of cows in groups was investigated by method of time supervision in two adjacent days according to V. I. Velikzhanin's recommendations. Food activity of animals during the winter period, in comparison with summer, was higher in 10.6-12.4 times in days, in the summer – 10.2-11.9 times approached fodder table in winter months. Less of all approaches to a fodder table was at hybrids in group from returnable crossing, most of all – from absorbing crossing. Thus on average for one approach in winter time of hybrid from introduction crossing spent for consumption of a forage 40.0-37.7 min., from the returnable – 35.8-37.7 min., reproductive 37.3-38.5 min., absorbing – 39.4 min.; in summertime, respectively 34.6-35.8; 34.3-34.5; 35.5-36.3; 36.2 min. Thus, during the summer period animals of all without exception of genotypes approached a fodder table less often and spent time for eating of a forage, than during the winter period less. Supervision showed that animals after consumption of a forage some time move on section, as if choosing the most convenient vacation spot, stop, are motionless then the cud begins. The cud at cows in most cases begins in a standing position, and comes to an end in a prone position.

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INFLUENCE OF THE GALEGA EAST HAY WITH DIFFERENT SHARE FOR MILK TECHNOLOGICAL PROPERTIES

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Keywords: milk, haylage, kozlyatnik, grass mixture, cheese.

In this researches the main objective studying is influence of different share of galega east hay in structure for chemical composition and technological properties of dairy breeds milk and its suitability for production of firm grades of cheese. The haylage prepared from galega east with addition of galega bezosty grass mix from 30 to 60% on the mass of seeds. Researches were conducted in the conditions of dairy complex on full-age cows of Simmentalsky breed in SPK «Youzhny» of Orenburg region. On the basis of the received results it is possible to draw a conclusion that hay from pure culture of galega east without use, badly of hay – it is fattened, owing to certain properties, when feeding to milk cows leads to decrease in milk the content of casein, calcium and phosphorus which, forming a caseinate-calcium conglomerate, promote at influence of abomasal enzyme to formation of dense elastic clot. The cheese weight of which form cheeses, turns out thus friable and crashly. As a result cheeses on quality don't correspond to the premium. Use for a grass mix haying from galega east and to-stretsa bezosty improves its preserving properties and increases technological qualities of milk that allows to develop from it firm grades quality cheese. The best results are received when grass mix using in a ratio, respectively 50:50 and 40:60.

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FEATURES INTERRELATION USE FOR DEFENITION OF THE COMPLEX SELECTION MAIN DIRECTIONS AT KAZAKH WHITE-HEADED BREEDING

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Keywords: meat, measurements, exterior, correlation, regression.

The purpose of researches is definition of the complex selection maindefinition for productive qualities improvement and constitution at selection of the Kazakh white-headed breed. Results of the researches conducted at complex assessment of cows and young growth of the Kazakh white-headed breed are given in this article. During researches exterior features of this herd, coefficients of correlation and regression between various definition are established, height measurement priority in sacrum at selection of animals as the regression coefficient between height in sacrum and the live mass of cows made 8.1 is established. It means that improvement of height measurement in sacrum on 1 cm will increase live weight by 8.1 kg. While changes of breast grasp on 1 cm towards increases live weight on 4.9 kg. The correlation coefficient between height in sacrum and live weight made r=0.56, and between grasp of breast and live mass of r=0.74.The regression coefficient between the live weight and height in sacrum at two-year-old heifers makes 7.3 kg, and one-year-old heifers have 6.5 kg. Animals of this herd have high live weight. The average live mass of cows heifers surpasses the standard of breed for 3.7%, at two-year-old heifers for 12.8%, and at one-year-old heifers for 12.5%.

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FEED BELKOFF-M ADDITIVES EFFICIENCY IN HIGH-YIELDING COWS DIETS

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Keywords: high, yielding, cows, heifers, Belkoff-M, milk, productivity, efficiency.

The purpose of research is substantiating the effectiveness of using a high-protein supplements Belkoff-M in rations of Black-Motley breed dairy cows during start lactation. The objectives of the research included: to Identify the impact studied additive on dairy production of heifers and mature cows; to explore the influence of the feed additive Belkoff-M on the intake, rations balance, palatability, and use and nutrients digesting; to Identify the economic effciency and profitability of the use of high-proteine additive Belkoff-M in the diets of lactating cows. With Holsteined cows of Black-motley breed the feasibility of using the feed additive Belkoff-M has been determined in two series of studies. Conducted against the background of the scientific and economic experience physiological studies have shown that the inclusion in the diet of fresh cows/heifrs (the first series of studies) and mature cows (the second series of studies) the high-protein content feed additive Belkoff-M the tendency of nutrients digesting increase has been obvious in experimental cow groups in comparison with the control.group. In the first series of studies for cows, heifers it has been found that the test feed additive diet enrichment in an amount of 1.5 kg per head per day provides the animals of the experimental group milk production 13.0% increase (in terms of milk 4% fat); a second series of experiments on mature cows milk production increase in the 2nd experimental group was 13.6%. Heifers and cows protected protein rations enrichment during start milking provided the increase in feed ration nutrients digestibility. So the dry matter digesting within the cows of the second experimental group has been 0.6-1.1 abs.% ,organic matter –1.3-1.4abs.%,wet protein – 2,3-3,1 abs.% higher than the cows of control group both in the first and in the second series of studies. The level of profitability in dairy production both in the first and in the second series of experiments in experimental cow groups has been higher compared to control groups, respectively 12,8-11,2 abs.%.

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COMPARATIVE ASSESSMENT OF UTERINE CATTLE REPRODUCTIVE QUALITIES OF KAZAKH WHITE-HEADED AND HEREFORD BREEDS

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Keywords: breed, reproduction, maturing, breeding, deliver, insemination.

The purpose of research is reproductive qualities increasing of uterine cattle of the Kazakh White-headed and Hereford breeds in the conditions of Tukushev country (farmer) economy of Michurinsk Region of West Kazakhstan region of the Kazakhstan Republic was the purpose of our researches. Work was carried out to two stages. In the first stage object of research were heifers of the Kazakh White-headed and Hereford breeds. In the second stage cows of the Kazakh White-headed and Hereford breeds were object of researches. Animals of experimental groups throughout experience were in identical conditions of feeding and the contents. During researches it is established that at animal experimental groups distinction had age of manifestation of the first sexual cycles. It is established that the beginning of puberty at Hereford heifers breed steps on 11.9 days (5.6%, P <0.05) earlier, than at analogs of the Kazakh white-headed breed. Puberty duration at girls of Hereford breed made 63.1 days that for 9.4 days (14.9%, P<0.01) is shorter, than at Kazakh White-headed breed heifers. Owing to late puberty of the Kazakh White-headed breed heifers, Hereford breed the first time were inseminated at the age of 454.8 days that for 12.6 days earlier, than at the compared contemporaries. The age of fruitful insemination of Hereford breed made 477.2 days that is 29.2 days less (5.8%, P<0,05), than Kazakh White-headed breed heifers. The age of the first Hereford breed heifers deliver consists of 756.2 days, and at contemporaries of the Kazakh White-headed breed of 782.1 days, that is duration of the heifers unproductive period of the first group for 25.9 days is less (3,3%, P<0,05) in comparison with the corresponding indicator of contemporaries. The issue exit at the Kazakh Wite-headed breed made 96.3% that is 7.4% higher in comparison with Herefords and as a result of KVS at Herefords is 0.04 less than at analogs.

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BIOLOGICAL VALUE AND PORK QUALITY WITH SPIRULINA PLATENSIS BIOLOGICALLY ACTIVE COMPLEX FEEDING

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Keywords: microalga, meat, quality, value, pigs, diet.

The purpose of research is increasing of biological value and quality of pigs meat products with microalgae Spirulina platensis feeding. The object of research is young pigs of Large White breed during rearing and fattening. To conduct research on method of vapor-analogues four groups of piglets at the age of 60 days for 5 animals in each group were formed. In the main period of scientific and business experience animals in the control group received the basic diet, and three from the experimental group in addition to the basic ration received microalga in the following doses: 1 test – 100 ml suspension of spirulina, 2 experienced – 150 ml and 3 experienced group of 200 ml suspension spirulina per animal per day. The duration of the experiment amounted to 153 days. Research was conducted to study the biological value and quality indicators average pork samples, chemical analysis of the longest muscle in the established techniques. It was found that the chemical composition, energy value, digestibility and palatability of meat directly depend on the ratio of it muscle, fat and connective tissue in their natural ratio and on the qualitative and quantitative composition of the meat of these substances. Feeding by the microalgae spirulina as feed additive to gilts in group rearing and fattening contributed to increased biological value and meat quality in all experimental groups, contributed to the enrichment of meat protein, reduced fat content, moisture. In addition, the use of microalgae has not had negative impact on the main quality characteristics of the meat that makes significant contribution to the practice of pig production development.

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THE USE OF DUROC BREED FRENCH BOARS AND CANADIAN ORIGIN IN REGIONAL SYSTEM OF PORK PRODUCTION

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Keywords: crossbreeding, duroc, different, origin, hybrid, productivity.

The aim of the research was to improve the productive qualities of pigs using boars of Duroc breed of different origin in regional breeding system, in terms of the Middle Volga region. Scientific and industrial research was carried out on the basis of «Kulikovskoe» Volsky district of Saratov region. Studied the reproductive quality of sows during three breed industrial breeding, fattening and meat quality of crossbred calves. Found that the best development of the reproductive qualities were seen in the combination of hybrid sows to boars of Duroc breed of French origin. A comprehensive indicator of the reproductive qualities of sows in this group was the highest, and the advantage compared with the other groups ranged from 6.6 to 15.5 points or from 5.0 to 12.5%. The best fattening qualities and parameters of the meat productivity had crossbred calves obtained from a combination of hybrid sows to boars of Duroc breed of canadian origin. Having the highest average daily gain (820 g), they 13.4 days or 7.6% before (the best index) reached a live weight of 100 kg, than dwukrotnie hybrid. While the cost of feed per 1 kg gain were lower to 6.1%) than in comparison groups. Crossbred carcasses of young canadian origin had the lowest thickness of back fat (with the advantage to 11%), longer carcasses (up 2.3%) and heavy hams (to 13.8%). The morphological composition of the young canadian origin possessed maximum output of the muscle tissue (62.12%) and the lowest fat (26.76%). Indexes «moznosti» and «main feature» showed the advantage of three breed cross-breed of young canadian origin on the compared groups of 2.2 -10.2% - 3.5% and 12.6%, respectively. This demonstrates the feasibility of using boars French and canadian origin in the system of three breed industrial breeding pigs to increase the effect of heterosis on the main economically useful traits in the production of pork in terms of the Middle Volga region.

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REPRODUCTIVE QUALITIES OF LARGE WHITE BREED SOWS AT VARIOUS MANAGEMENT SYSTEMS

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Keywords: individual, group, system, sow, reproductive, qualities.

The aim of the research was to improve the reproductive characteristics of sows of large white breed method of improving the system of their content. Scientific and industrial research was carried out on the basis of LLC «Time-91» Engels district, Saratov region, in the period from 2013 to 2014. Studied the reproductive quality of sows of large white breed with individual and group systems content. Found that when group housing systems replacement gilts, their fertility was higher than in the individual content of 8.0 abs. %. 4 goals gilts, with individual content was observed proboost, and for group – only 2 goals. All this contributed to the increase in the number of sows at farrowing (9.5%) and multiple pregnancy (7.8%). A comprehensive indicator of the reproductive qualities gilts differed between groups by 7.4 points or 8.4% in favor of the animals contained prior to mating and during gestation group. However, sows in this group for all indicators reproductive qualities meet the class of the elite, while peers in the individual contents – 1 class. After weaning of piglets, sows, translated into the group machines, came to the sexual hunt 4.8 days earlier; the term fruitful mating and farrowing interval between decreased by 5.2 days, and fertilization increased by 10 abs. percent., increasing the duration and quality of productive use of sows. Set that to increase the reproductive characteristics of sows of large white breed recommended for industrial technologies of production of pig apply group content of replacement gilts, verifiable, and sows after insemination, the establishment of gestation and throughout the growth cycle (except for farrowing and content with piglets up to weaning).

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MEAT EFFICIENCY OF BULL-CALVES AT THE INTENSIVE REARING USING GROWTH PROMOTERS NUKLEOPEPTID

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Keywords: weight, nukleopeptid, young, meat, productivity

Currently, in order to obtain sufficient food of high quality attach great importance to the use of biologically active substances. With their participation being implemented enormous biological potential of a living organism that is embedded in its genotype, the regulation of growth and development, homeostasis and animal productivity, thus increasing the energy and strength of growth, resistance to the adverse effects of stress, biological damage to various pathogens. Therefore presented work addresses the problem of increasing the production of high-quality and environmentally friendly beef through the use of new bio-stimulator Nukleopeptid. Scientific and economic experiment was carried out in the SEC-farm «Hero» Chekmagushevsky District of the Republic of Bashkortostan. To carry out scientific and economic experience were formed 4 groups of calves black-motley breed aged 6 months to 10 goals each. Groups were formed on the basis of groups of peers. Group II animals were administered the experimental drug Nukleopeptid subcutaneously at a dose of 20 ml, III Experimental group – 25 ml and experimental group IV – 30 ml. Gobies Group I is the control and the drug is not administered them. It was found that the gobies experimental groups were superior to the control group peers on live weight at the age of 9-mesyachnom on 19-35.5 kg ($P<0.05$), 18-mesyachnom age at 5.9-27.9 kg ($P<0.001$). Controlling slaughter showed that gobies experimental groups paired by weight of carcasses surpasses analogues in the control group by 3.2; 21.7 and 6.2 kg ($P<0.05$) and at slaughter yield of 0.9, 2.1 and 1.7% respectively. It is proved that the introduction of a new drug Nukleopeptid promotes meat productivity, improves quality of slaughter steers.

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HEMATOLOGICAL PARAMETERS OF BLACK AND WHITE BREED BULLS IN THE BIOSTIMULYATORS NUKLEOPEPTID APPLICATION

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Keywords: hematology, transaminases, nukleopeptid, young.

The article presents the results of studies evaluating the effectiveness of the use of the drug Nuklepeptid in growing steers black-and-white breed. For the experiment were formed into four groups of calves aged 6 months to 10 animals each. The picture changes morphological composition of the blood showed that they are influenced by the season and the dosage of the drug Nukleopeptid. Group II was different from the control group in the winter on the content of erythrocytes and gemoglabina 0.19×10^{12}/L (2.7%) and 2.8 g/l (2,03%), III group by 0.58×10^{12}/l (8.3%) and 6.98 g/l (5,6%), IV group 0.5×10^{12}/L (7.2%) and 6.67 g/L (5.36%) summer group II 0.27×10^{12}/L (3.5%) and 5.14 g/l (3,8%), III group by 0.73×10^{12}/L (9.6%) and 12 4 g/l (6,1%), IV group 0.62 x 10^{12}/L (18.1%) and 11.6×10^{12}/L (8.5%), respectively. The content of leukocytes in the blood, had the opposite dynamics of these two indicators. The study drug was ambiguous effect on the biochemical composition of the blood test calves. The total protein content in the blood of experimental steers was different and different years and seasons. Because of the difference in the control group experienced in winter was 4.14-8.56 g/l (5.5-11.4%), summer 4.62-8.31 g/l (5.9-10.7%). Change in the ratio of individual protein fractions in the blood often provide more meaningful information than just the total protein. On the content of albumin in all seasons of the year, the highest rate was in the experimental group III, his superiority over the group I was in the winter of 5.47 g/l (15.6%), in the summer of 7.2 g/l (19.2%), of group II – winter 2.43 g/l (6.5%), in the summer of 4.35 g/l (10.8%) over the group IV – winter 1.24 g/l (0.6%) and summer 1.66 g/l (3.9%). According to another whey protein content – globulin no significant changes were found. Aminotransferase activity was at a high level and within the physiological range.

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QUALITY MEAT PRODUCTIVITY INDICATORS WHEN YOUNG FED FEED ADDITIVES

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Keywords: growth, development, Vitartil, meat productivity.

The results of scientific and economic evidence suggests that the inclusion of the diet in intensive breeding and fattening feed additive Vitartil promotes rising both quantitative and qualitative indicators of calves meat productivity .The largest value of the absolute mass of pulp characterized Group IV, received dose Vitartil 0.50 g / kg body weight. Young animals of group II which were given the absolute mass of pulp by 7.6 kg (7.9%), gobies Group III – 5.5 kg (5.6%), bulls group V – 3.9 kg (3.9 %). Minimum level index myasnost characterized I (control) bulls group. They conceded peers largest group II studied indicator 0.11 kg (2.8%), III group – 0.16 kg (4.0%), IV group – 0.28 kg (7.0%), V group – 0.21 kg (5.3%). Meat products obtained at slaughter of young experimental groups differed best varietal composition, resulting in its advantage in meat yield higher and I varieties. In this case, bulls I (control) group were inferior peers experimental groups in absolute mass of flesh premium on 1.3-3.7 kg (8.02-22.93%; P<0.05), with respect to its output – to 0.3-1.4%, and the weight of meat I grade – on 3.4-9.0 kg (8.04-21.27%; P<0.01) and 0.9-2.7%. It was found that the bulls group I concede dry matter content in longissimus dorsi peers for group II 0.24%, III – on 1.54%, IV – on 1.92%, V – 1.70%. Higher protein quality indicator longissimus dorsi was observed in the experimental groups of calves. So young group I, group II peers inferior to 0.25 (4.64%), III – for 0.92 (17.07%), IV – 1.28 (23.75%) and V – 1.07 (19.85%). The largest consumption of crude protein differed bulls I group. So, their superiority over their peers experimental groups was 35.8-91.4 g (2.74-7.30%). A similar pattern was observed for the consumption per 1 kg of live weight gain of energy. Better ability to transform nutrients in meat products were characterized by bulls experimental groups treated as part of the diet supplement Vitartil. And the maximum effect was observed when using supplements at a dose of 0.50 g/kg body weight.

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ECONOMIC-BIOLOGICAL QUALITY OF BESTUZHEVSKAY BREED BULLS AND ITS TWO-THREE-PEDIGREE HYBRIDS

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Keywords: bestuzhevsk, holstein, hereford, limousin.

Promising direction is to increase the production of beef cattle crossbreeding of two three-pedigree Bestuzhevsk breed bulls Holstein, Limousin and Hereford breeds. At intensive cultivation Bestuzhevsk breed bulls in 18 months reached 511.1 kg live weight, two-breed Holstein crosses 521.8 kg, three-pedigree limousin breed hybrids 545.0 kg, three-pedigree Hereford crosses 532.2 kg with an average daily weight gain 891 g, respectively, 909, 954 and 930 crossing helped to improve meat production. So, at slaughter weight at 18 months the pair carcasses in bulls Bestuzhevsk breed was 273.5 kg, two-breed Holstein crossbreds 278.4 kg, three-pedigree hybrids limousin 291.3 kg, three-pedigree hybrids Hereford 288.8 kg at the output of pulp, respectively 78,7%, 78.1, 80.3 and 80.2%. Mascara three-pedigree hybrids differed high yield cuts 1st grade and output pulp premium. Preferred for complex traits that characterize the quality, it was meat three-pedigree hybrids. Therefore, to increase beef production in the southern Urals in commercial animal husbandry appropriate to use industrial crossing Bestuzhevsk and Holstein cows with bulls Limousin and Hereford breeds.

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EVALUATION OF MIXED RATION STRUCTURE FOR HIGH-YIELDING HOLSTEIN CATTLE

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Keywords: dairy cattle, rations, particles, size of feed.

The purpose of the research is to investigate mixed ration structure for different phases of dairy cattle lactation. Structure of ruminants' rations mainly determined digestion processes in forestomaches as well as feedstuff intake. Feed particles size is a crucial physical index. It is well known that wet fiber play key role in structural component of cows' ration. One kilo of raw fiber result into 3 hours of chewing activity. Evaluation was performed according to the method developed by scientists of the Pennsylvania State University, USA. Evaluation of feed rations structure is utilized in the USA and EC countries as a quick analysis of the feedstuff value for the dairy cows. Research was performed on two groups of animals being at first and second phases of lactation in 2012 and 2013 at a modern mega farm in Krasnodar Region. Amount of feed particles (size more than 19mm) left on the first layer of separator was 8.1-23.3% while recommended residue quantity should be 6-10% after separation of the feedstuff. Middle layer residues (size 8-19 mm) fluctuated between 27.7-47.8% while recommended ones are 30-50%. Particles less than 8 mm amounted to 39.5-64.8% at the rate of 40-60%. It was stated that feedstuff structure has significant fluctuations during year which affects ration eating and ruminate time of cows.

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TETRALACTOBACTERIN USE IN POULTRY BREEDING

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Keywords: geese, broilers, probiotic, metabolism.

The aim of the research is to improve the efficiency of influence of microbial drug Tetralactobacteril for meat production and meat quality. The studies were performed for broiler chickens cross «Change 7» and the Rhine geese breed using probiotic tetralactobacterin, consisting of four strains of lactobacilli in the ratio 1: 1: 1: 1, *Lactobacillus casei LBR 1/90, Lactobacillus paracasei LBR 5/90, Lactobacillus rhamnosus LBR 33/90, Lactobacillus rhamnosus LBR 44/90.* Inclusion in the diet of agricultural Petittzu microbiological substances in a dose of 1 g/kg of feed to increase the safety of livestock of broiler chickens by 7.5%, geese – by 12%; increase in body weight of chickens by 6.8%, geese – by 14%. Weight gutted carcass of broiler chickens increased by 8.4%, geese – by 15.1%, the weight of the edible part of – 5.3 and 15% in broilers and geese, respectively. Based on the research results tetralactobacterin introduction to the feed at a dose of 1 g/kg diet has a positive effect on the growth rate of poultry, thereby reducing production costs and improve the profitability of poultry, improving technological characteristics and nutritional properties of meat.

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THE EFFECT OF HEREFORD YOUNGER GENERATION SLAUGHTER AGE FOR THE QUANTITATIVE AND QUALITATIVE OF THE MEAT PRODUCTS

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Keywords: hereford, breeding, weaning, slaughter, morphological.

The main goal of the research was to determine the influence of slaughter Hereford age for quantitative and qualitative composition of meat products with resource-saving technologies for their content. The research resulted in found that the carcasses of all groups of animals obtained at slaughter steers given genotype were characterized by good meat characteristics and included: group I (slaughter age of 16 months.) – In the category of «Extra», in II (20 months) and III (24 months) groups – «Super». Our studies have shown that the yield of fresh, bone and connective tissues content with age tends tslight decrease and fat to steady increase. At the same time the coefficient of meat content, depending on the age of of slaughter no significant differences between the groups not revealed us. In general, similar data were obtained for the output the natural anatomical parts. The results indicate that the yield of the most valuable parts, such as low back and pelvis and hips is increased at slaughter at the age of 20 months. Thus, analyzing the results it can be concluded. Extension of the term cultivation steers Hereford with resource-saving technology of their content and of slaughter at the age of at least 20 months provides carcasses category «Super». The relatively high cost price of reproduction calves caused by the costs of keeping cows whose share in the cost structure of growth is 40-50%, fully-compensated a through the implementation of high quality meat products. At the same time the calves received from subsequent of calving from these cows reach the age of 8-12 months and thus total growth in body weight is increased by 1.5 times compared with the realization a 16-months of age by one conditional head brood stock.

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THE GROWTH AND DEVELOPMENT OF PIGS DEPENDING ON APPROPRIATE CONDITIONS

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Keywords: productivity, pig, development, mass.

The objective of the research was the improvement of production technology, appropriate conditions of gilts by the effective functioning of the systems of the regulated microclimate in buildings. Comparative evaluation of fattening and meat quality of pigs depending on appropriate conditions were conducted in Meleuz (group I), Belebey (group II) and Ilievsk (group III) pig farms LLC «Bashkir bacon». To conduct research in these enterprises on the principle of analogues with regard to the origin, age and body weight were formed the experimental group piglets at weaning, large white breed of 25 goals. The studies were conducted under the same feed background, complete compound feeds produced by OJSC «SCORM», JSC «Bogdanovich feed mill» in

strict accordance with the age and growing. In all groups was used feed one and the same batch of manufacture. Feed consumption was determined according to the group based on the actual amount of feed consumed during the period of rearing and fattening. The following evidence suggests that the most receptive to appropriate conditions of detention were the piglets weaning when they are growing compared to the period of fattening. Relatively less favourable conditions of piglets III groups during rearing from 2 to 4 months of age. In the buildings which housed the pigs in this group were detected above a relative humidity of 6.0%, CO_2 – 7.4% and ammonia by 8.9%. As a consequence, the intensity of growth and preservation of piglets in this group was lower compared with their peers in groups I and II respectively by 7.0-3.6% and 4.16-3.68%.

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INFLUENCE OF DIFFERENT PIGS SELECTION FOR THE VALUE OF THEIR OFFSPRING MEAT QUALITY

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Keywords: pig muscle, tissue, mating, offspring, selection.

The purpose of the study was to improve the meat quality of pigs of Large White breed, with various forms of selection of their parents thickness of bacon. To study the meat quality of young obtained by mating of parents with different thickness of bacon, were formed 4 experimental groups. Carcasses of pigs received from parents with less thick bacon, distinguished by great content of meat the size of large «eye muscle» thinner bacon and less fat compared with the carcasses of pigs received from boars and sows with greater thickness of bacon. Gilts 3rd and 4th groups received on the basis of heterogeneous selection, in terms of meat quality occupied an intermediate position in relation to the 1st and 2nd groups. However, animals derived from «fat» queens and «meat» boars (group 3), whose performance was pretty close to the group 1 and only slightly inferior to them. It was found that the pairing of parents with different thickness of bacon affect the variability of meat quality of offspring within 31-48%. A significant proportion of the variability in meat quality occupy unaccounted factors. This can be explained, obviously, the individual reaction to approximately the same conditions of feeding and maintenance, the influence of his grandfather, great-grandfather, grandmother, great-grandmother and others. Of great interest is the fact that the influence of fathers on the meat quality of offspring was predominant in comparison with the influence of mothers. Share of his father's influence on all indicators was 26-34%, whereas the influence of the mother only 4.9-14.4%.

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PRODUCTIVITY OF YOUNG AT VARIOUS TECHNOLOGIES MANAGEMENT

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Keywords: simmental, black-and-white, accomplished, feedlot, castrati.

To compare the basic economic-useful qualities of calves and neuter Black and Simmental breeds at various technologies of breeding was carried out scientific and economic experience. For the experiment was formed six groups of animals: I and II – bulls Black-and-white and Simmental breeds, III and V castrati black pied, IV and VI – castrati Simmental breeds. In the period from 6 to 12 months castrati were kept in a feedlot. At the age of 12 months, all castrati were converted to pasture. In terms of feeding castrati IV and VI groups in the age period from 12 to 18 months received consentrates. During feeding on pastures among castrati greater intensity of growth had animals treated with fertilizer. Upon reaching the age of 18 months all young guinea fattened on the site for 3 months. The apparent superiority of Simmental and Black-motley steers over castrati found after feeding them to pasture at the age of 18 months. Bulls in group I compared with castrati groups III and V had an advantage of 29 kg (6.9%) and 73.4 kg (19.6%). Young animals contained in feedlots and steers grown on pasture with dressing concentrates have better qualities killer. At the age of 21 months bulls group I and group III castrati carcass weight exceeded peers contained in the conditions of feeding on pasture without fertilization by 58.4 and 32.8 kg (10.3 and 15.3%), and slaughter yield – 3 and 4%. Simmental bulls and castrati group IV for these indicators were better than peer group VI, respectively, 62.3 and 34.7 kg (25.2 and 14.0%), 3.4 and 2.8%. The most effective method of preparation of castrati for slaughter is fattening on pasture with dressing concentrates in conjunction with the final fattening on the site within 3 months. Black-and-White and Simmental breeds bulls should be grown in feedlots to 21 months.

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PARENT STOCK GEESE FEEDING GIVEN THE LEVEL PRODUCTIVITY

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Keywords: geese, breed, feeding, qualities.

The purpose of research is productive and reproductive qualities improving of geese breeder by identifying rational volumes of content-variable energy and crude protein in their diet by feeding phases during productive efficiency. Investigations were carried out for geese breeder Italian is generated. In the productive period of feeding geese produced in phases depending on the physiological state and the level of productivity: the first phase – from beginning to peak egg production; the second phase – from a peak of lay to off-peak egg production up to 30%; the third phase – with a period of decline in egg production until the end of lay. According to the research it was found that the best productive and reproductive characteristics differed geese in the diet in the first phase, contain metabolizable energy was 270 kcal, crude protein – 17%, in the second phase – 275 kcal and 17.5% in third phase – 270 kcal and 17%, respectively. During the period of the pro-productivity preservation of geese in this group increased by 5.0%, egg production – by 8.9%, the mass of eggs – 1%, the cost of feed per 10 pieces eggs decreased by 8.1%, compared with the control. High fertility rates (91.4%) and geese (76.9%) also differed geese three experimental groups, that 2.93% and 6.5%, respectively, higher compared with the control. According to the results of production test revealed that the cost of daily gosling in the new position was lower compared to the baseline, 7.8%, the profitability of production increased by 10.6%.

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CHLORELLA INFLUENCE FOR PRODUCTIVE AND REPRODUCTIVE GEESE QUALITIES

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Keywords: geese, breed, suspension, chlorella, productivity, reproductive, qualities.

The purpose of research is improving productive and reproductive qualities of geese breeder by including in their diet Chlorella suspension. Investigations were carried out on the Kuban geese breeder breed. Integrated Assessment of productive and reproductive qualities of geese used suspension of Chlorella Vulgaris strain. According to the research found that the best productive and reproductive qualities differed geese flocks treated in addition to the basic diet suspension of Chlorella in the amount of 60 and 70 ml per 1 head per day. Preservation geese data groups was 98.61%, which is above 2.78%, as compared with the control, loss in body weight was lower by 1.6% than the peer is not received chlorella. Inclusion in the diet improved the suspension of Chlorella and quality of sperm goose: at the age of 48 weeks of treatment groups were superior to the control group in terms of volume of ejaculate on 1.6-11.3%, the concentration of sperm – on 3.4-10.2%, the activity of sperm – on 2,4-7.3%, respectively. Indicators of fertilized eggs from geese receiving chlorella for 60 and 70 ml per head in one day were higher than the control at 1.8 and 1.9%, geese O – 3.8 and 4.1%, hatchability – 2.0 and 2.2%, respectively. Based on the results of the studies found that the inclusion in the diet of geese breeder suspension of Chlorella in the amount of 60 and 70 ml per 1 head per day improves productive and reproductive qualities of birds and to improve the profitability of production at 16.0-16.6%.

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EFFICIENCY OF BULLS PHASE FEEDING AT THE WHOLE-YEAR USE OF THE CANNED FORAGE

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Keywords: bulls, phase, feeding, fullration, mixture.

The purpose of researches is to raise efficiency of the beef production technology by use of bulls phase feeding in the year-round feeding of canned forages conditions. Practical execution of the phase feeding consists in the periodic change of food value of bull's rations from 80 to 120% from a norm. The theoretical point of view this method is based on the use of biological mechanism of animals compensate height, basis of which is ability of cells intensively divided at the limited providing with nutritives and intensively to grow – at their surplus. A large value the use of this conformity to law has in the conditions of the intensive growing of bulls, when the purpose is using of maximal amount of voluminous forage, especially if during throughout the year bulls using the canned forage. Expediency efficiency using of bulls phase feeding at the whole-year use of the canned forage for the increase of level productive use by the bulls of fullration mixture, and also increases of cattle intensity height and indexes beef production technology is well-proven. Change of food value of rations through each 10 days were most effective. In this case, at whole-year feeding of the canned forage, by comparison to their traditional use without the periodic change of ration's food value, it was succeeded to decrease expenses on 1 kg of increase of living mass of cattle: dry matter of forage – on 1.5 kg (14.9%), and to exchange energy – on 16.9 МДж (15.5%). At the same time, living mass of bulls in 18 months for certain increased on 26.4 kg (5.7%), slaughter-weight – on 19.7 kg (75%), mass of pulp in carcasses – on 20.3 kg (10.6%). As a result was the coefficient of bio power efficiency of beef production increased on 0.21%, and level of profitability of technological process – on 17.6 %.

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BETULIN EXTRACT USE IN THE BROILER CHICKENS GROWING

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Keywords: broilers, cross «Iza», Betulin, safety, productivity.

The purpose of research is improving productivity and identifying exterior features of broiler chickens when the Betulin extract in the diet. Studies were conducted on broiler chickens cross «Iza» with the use of dietary supplements of natural origin Betulin extracted from birch bark and has antioxidant, immunomodulatable properties. Inclusion in the diet of broiler chickens extract Betulin in the amount of 0.25% by weight of feed to increase the safety of livestock at 2.8% of live weight – 3.27%, yield whole poultry without giblets – at 4.88%, and reduce costs to feed 1 kg of weight gain – 4.0%, compared with the control group. Thus the digestibility of protein amounted 80.56%, 79.21% fat and 8.54% fiber that exceeds the rate of the control group to 2.55; 1.72 and 9.74%, respectively, using nitrogen increased by 2.41%. Based on our production audit it was found that the inclusion of the drug Betulin in growing broiler chickens in the amount of 0.25% by weight of feed will reduce the cost of 1 kg of meat from 72.08 to 70.85 rubles. and raise the level of profitability of 1.56%. Based on the results of the studies found that broilers treated as part of feed extract Betulin in the amount of 0.25% by weight of the feed have better preservation of livestock, live weight, high meat characteristics, and relatively low cost of feed per unit of production.

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BLACK-AND-WHITE CATTLE PRODUCTIVITY GROWING BY MEANS OF INBREEDING

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Keywords: inbreeding, outbreeding, breeding, selection, black-and-white cattle.

The purpose of research – improving the efficiency of the selection process using routine inbreeding. Recent huge experience of using inbreeding in brood work allowed to approach the problem of inbreeding evaluation in a more exhaustive and objective way as well as to define its place in the system of modern industrialized animal husbandry brood work. In order to precisely evaluate efficiency of using inbreeding all the results of using inbred animals should be considered. The object of research was the herd of black-and-white cattle in AIC «Rodina» (Grakhov District, UR). Brood cards (form 2 – MOL) and data of livestock and brood recording were used as the material of the research. Among outbred animals those bred using interlinear and crosslinear selection. Inbred animals were classified in accordance with the degree and type of inbreeding. Cows bred in result of inbreeding exceed their outbred herd mates and half-sisters in the level of milk yield by 647.2 kg or 11.9% (P> 0.999) and by 142.3 kg or 2.6% correspondingly. With the inbreeding coefficient equal to 0.19-0.39% cows exceed the average milk yield level by 197.2 kg or 3.7%; further increasing with the 0.58-0.97% increase of inbreeding coefficient or 1.17-1.95% increase will give a negative result and the milk yield level will be below an average rate by 3.1% and 5.1% correspondingly.

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THE PROCESSES OF SHEEP DIGESTION AND DIGESTIBILITY OF NUTRIENTS USING MINERAL SHUNGITE AS ERGOTROPIC SUBSTANCES SOURCE

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Keyword: ergotropic substances, mineral shungite, rumen digestion, digestibility.

The purpose of research is to optimize digestion and creation in the rumen of ruminants most favorable conditions for the development of microflora and, consequently, improving the efficiency of nutrient utilisation of feed rations and production of animals.Optimization of digestion and creation in the rumen of ruminants the most favorable conditions for the development of the microflora, as well as improving the efficiency of nutrient utilisation of feed rations and productivity of animals is an important task of modern physiological science. This problem is solved by a variety of biologically active ergotropic substances that increase biological and nutritional value of diets. The experiment was held by the method of group-periods of 4 sheep groups (n=3) with rumen fistula on Basov. Animals of control group received the basic diet (OR), experimental groups – the mineral shungite in doses of 0.3% (1 test group), and 0.9% (2 test group) and 1.5% (3 test group) from the mass of diet. Biological properties of complex ergotropic substances in the composition of the mineral shungite manifested at the level of the scar digestion, increase education of microbial mass on 0.16-1.35 г/100 мл and metabolic products (the increase in the concentration of volatile fatty acids 3.6-26.3%, reducing the concentration of ammonia) while creating the most favorable conditions for the activity of the microflora, increased the digestibility of nutrients of diets and more efficient use of nitrogenous substances, which is the basis of growth of productivity in ruminants.

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INDEXES OF BULL'S BLOOD AT THE DIFFERENT RHYTHMS OF THE INTENSIVE PHASE FEEDING

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The purpose of researches is to increase intensity of bull's height at conservation in normal physiological state by use of phase feeding. Scientifically-economic experience, in which Simmental bulls were intensively grown with use of the phase feeding method, based on the periodic change of ration's food value with 80 to 120% from norm for activation of the biological phenomenon of cattle height indemnification is conducted. It is thus possible to increase the level of the productive use the sapling of voluminous forage. In this case there was a question about the physiological state of animals, which haematological indexes was testified. It was well-proven that feeding of bulls by phase principle does not cause the substantial changes of morphological composition of blood and its biochemical indexes. During experience they were within the limits of physiological norms. It is certain that the most effective is diminishing and increase of bull's rations food value by phase principle on 20% from norm through each 10 days. Thus maintenance of red corpuscles and haemoglobin in blood of bulls increases on 11.3-11.4% and 10.3-14.8% (P>0.95), maintenance of general albumen – on 6.4-7.2%, and albumens – on 4.8-7.8%. It is testified to the increase of tension of the ORP processes in the organism of bulls, that accompanies the increase of intensity cattle height on a 15-16%. Increase of rhythm of the bull's phase feeding from 10 to 15 and 20 days accompanied by the decline of albumens maintenance in their blood on 6.4 and 5.4% in age 13 months, and on 4.8 and 7.8% – in 16 months. Accordingly, value of A/G coefficient was to most in bull's blood, in feeding of which used phase method with a rhythm 10 days (0.77-0.83).

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