Abstracts of articles

VETERINARY MEDICINE AND ZOOTECHNICS

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INFLUENCE OF THE SERUM HYDROLYZED FOR GISTOMORPHOLOGICAL STRUCTURES OF PIGLETS DIGASTING SYSTEM

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Keywords: exchange, substance, biotic, components, lactic, streptococci, liver, intestines.

The object of research is increasing of productive qualities of pigs due to improvement the morphofunctional indicators of digestion system. According to objectives two groups of clinically healthy pigs right after depriving at the age of 35 days were created. Each group is consist of ten ones, selection was carried out by the principle of analogs. After completion of experience an average value of live mass of control group pigs was 26.1±1.2 kg, and in skilled group 32.3±0.8 kg, the difference was made 23% ($p<0.05$). It is established that size increasing of crypts and epithelium with a border in mucous membrane of lean gut of pigs in experimental group, testify to strengthening of body digestive activity. Emergence of light-cellular zones in liver and reduction of segments testifies to strengthening of regenerator ability and increase of detoxicity function. In lymph nodes emergence of follicles of the small size with the expressed light centers as well as in the analysis of liver, testifies to strengthening of potential regeneration and activity of immune function.

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DYNAMICS OF PROTEIN METABOLISM AND ACTIVITY OF AMINOTRANSFERASES OF DOGS BY ADDING DIHYDROQUERCETIN

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Keywords: dihydroquercetin, biochemical indicators, blood, albumin, protein.

The purpose of research is to improve business and operational capacity of the body through the use of dogs dihydroquercetin. The article presents the results of experiment by the effect of dihydroquercetin dynamics of biochemical indices of the dogs blood. Dihydroquercetin – it is an active antioxidant, natural scavenger of oxygen free radicals, hepatoprotector, having

anti-inflammatory action due to limitations of the formalin edema and histamine, and inhibits the formation of serous fluid, painkillers, immunocorrelation properties. Due to the high complexing properties it displays the body of heavy metals, including radionuclides, helps to restore the blood vessels tone, normalizing the lipid levels and slows the progression of atherosclerotic plaques. Investigations were carried out in zonal center of the dog expert service GU MVD of Russia in Samara region with clinically healthy dogs, German shepherd breed, age 2-4 years with an average body weight of 30 kg in the background conditions and feeding, adopted by the enterprise. The dogs of the experimental group received dose dihydroquercetin 0.001 g/kg for body weight once a day during meals. When added to the basic diet, dihydroquercetined dogs of the experimental group shown the increase in indicators such as: total protein – by 11.5% ($p<0.01$), albumin – to 12.8% ($p<0.01$), AST 13/6% ($p <0.001$), ALT – by 11% ($p<0.05$), alkaline phosphatase in the – 12% ($p<0.01$) relative to the control group. Based on the results, obtained during the experiment, we can conclude that the use of dietary supplements in the diet of dogs, dihydroquercetin allows biocorrection level of protein and enzymatic metabolism in the body, which improves service and working dogs potential.

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CHINCHILLA MICROBIOCENOSIS AT NONINFECTIOUS PATHOLOGY OF THE GASTROINTESTINAL TRACT IN THE CONDITIONS OF SAMARA

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Keywords: microbiocenosis, chinchilla, enterobacteria, enterococci, bacteroides.

The purpose of research is the resistance increasing of the chinchillas organism to the representatives of pathogenic and conditionally-pathogenic microbes with non-infectious pathology for the gastrointestinal tract. Based on the purpose of the study, were as follows – extruding and identification chinchillas contained family transient and resident representatives microbiocenosis; by morphological, tincrial, cultural, biochemical and serological properties of these microbes. The experimental group, chinchillas with non-communicable disorders of the gastrointestinal tract (gastroenteritis and colitis) in fecals resident microorganisms Enterococcus faecalis – KOE 2.85h104±0.23, Peptococcus niger – 3.64h105±0.33, Peptostreptococcus anaerobius – 3.74h104±0/52, Lactobacillus delbrueckii – 2.84h102±0.53, Bifidobacterium bifidum – 3.16h102±0.46, Es-cherichia coli – 2.67h105±0.53, Serratia marcescens – 2.95h104±0.13, Bacteroides fragilis – 2.57h103±0.12, Prevotella bivia – 4.21h103±0.24 were identified. Among the transient microorganisms were identified Staphylococcus epidermidis and S. saprophiticus, Streptococcus rattus and S. cricetus, Enterobacter cloacae, Klebsiella oxytoca, Citrobacter diversus, Salmonella enteritidis, and Yersinia enterocolitica, Proteus vulgaris, Bacillus cereus, B. subtillis, Clostridium sporogenes, C . ramosum, C. difficile, Helicobacter pylori, Campylobacter coli. In conclusion: Microbiocenosis healthy chinchillas includes automicroflora occupying a certain ecological area in the animal organism. With the development of non-contagious disease of the gastrointestinal tract in chinchillas reduces the number of automicroflora and its situation replaces transient and opportunistic pathogenic microorganisms, penetrating into the body of animal alimentary and fecal-oral. It is important to use the effective probiotics for chinchillas gastrointestinal tract.

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THE FEATURES OF GUINEA PIGS INTESTINAL MICROBIOCENOSIS

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Keywords: clostridium, bacillus, enterobacteria, guinea pigs.

The purpose of research is increasing the resistance of Guinea pigs to the action of pathogenic and conditionally-pathogenic microorganisms causing gastroenteritis. Based on the objectives of the problems were pointed– isolation and identification of guinea pigs transient and resident representatives microbiocenosis; study of morphological, tinctorial, cultural, biochemical and serological properties of these microorganisms. In the study, samples of facals and chimus of guinea pigs with the pathology of the gastrointestinal tract (gastroenteritis) have been isolated and identified resident microorganisms: Enterococcus faecalis – KOE 3.08h103±0.06, Peptostreptococcus anaerobius – 4.14h104±0.17, Lactobacillus delbrueckii – 4.36h103±0.04, Bifidobacterium bifidum – 3.85h103±0.06, Escherichia coli – 3.27h104±0.05, Serratia marcescens – 3.78h104±0.04, Bac-teroides fragilis – 3.88h105±0.14. Among the transient microorganisms were isolated Staphylo-coccus saprophiticus, Streptococcus entericus, S. gallolyticus, Enterobacter cloacae, Citrobacter diversus, Salmonella enteritidis, Yersinia enterocolitica, Bacillus subtillis, B. cereus, B. mycoides, B. lichieni-formis, Clostridium sporogenes, C. haemolyticum, C. histolyticum, Helicobacter pylori and Campylobacter coli. In conclusion: the main etiological factor for gastroenteritis tested guinea pigs are bacilli and clostridia, which in association with salmonella, jersiniya, helicobacter and campylobacter lead to growing intoxication and bacteriamia of animals. Against this background, the reduction in the concentration of resident microbial cultures that occupy an ecological area in the gastrointestinal tract.

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PATHOLOGICAL CHANGES IN THE COURSE OF ASSOCIATIVE EIMERIA AND SALMONELLAS OF NUTRIA

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Keywords: nutria, bacteriological, examination, pathological, changes, salmonellosis, eimeriosis.

The aim of the research is justification of causal relationship patterns of Salmonella and Eimeria, and their role in the pathology of the disease. The authors analyzed the incidence of salmonellosis nutria and eimeriosis depending on the way of the content. 82 the corpses of nutria was conducted post-mortem autopsy and bacteriological examination. For bacteriological examination were selected the heart, lungs, liver with gallbladder, spleen, kidney, brain, mesenteric lymph nodes, bone from fresh corpses. It is established that in conditions of the same economy under the cellular content of the disease were not recorded, and if outdoor, how and when the content of the deep litter, and on the concrete floor had equally widespread. In the study of pathologic material derived from carcasses of dead nutria, have the following distribution of serovars: S. dublin – 22.8%, S. typhimurium – 40.3%, S. choleraesuis – is 36.9%. For bacteriological tests crops held at IBA, with marked diffuse haze. On Endo agar grew transparent slightly bluish or pinkish colonies 2-4 mm in diameter, on the environment Ploskirev – turbid, more dense, Levin – transparent with slight purple tint on the Wilson-Blair – black with a metallic luster. The culture obtained were studied by optical microscopy, detecting single spaced, do not form spores and capsules with a length of 1-4 μm, with a diameter of 0.5-0.8 μm, sticks. For associative flow of Salmonella and Eimeria nutria characteristic of chronic catarrhal gastritis, acute catarrhal-gemorragicescom-necrotic enterocolitis, congestive redness of the serous membranes of the small and large intestine, mesentery, granular and adipose dystrophy of liver, granular dystrophy of kidneys, myocardium, gemorragicescom-necrotic splenic, acute serous lymphadenitis, congestive hyperemia and edema of the lungs, brain and other organs, hemorrhagic diathesis.

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MORPHOLOGICAL AND BIOCHEMICAL COMPOSITION OF KAZAKH WHITE BREED HEIFERS BLOOD WITH USE OF THE FEED ADDITIVE BIODARIN

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Key words: haematological indices, chicks, feed, additive, BioDarin.

The research objective is improvement of the productive qualities of Kazakh white breed heifers by introducing in addition to the basic diet of different doses of feed additives BioDarin. Currently raising meats-term productivity of livestock through a full feeding is promising direction. One way of addressing this issue is the use in the diet of animals. One of the promising supplements is BioDarin. Scientific and economic experiment was carried out on the basis of JSC AIC «Alga+» Tuimazinsk district of the Republic of Bashkortostan. For the experiment there were formed 4 groups of heifers of Kazakh white breed: group I – control; group II heifers in addition to the basic diet received a feed additive in a dose of 0.5 kg per 100 kg of grain mixture, the animals of group III received 1 kg of the feed additive per 100 kg of grain mixture, peers IV groups received 1.5 kg of a grain mixture. Among the studied groups, heifers of the III experienced group receiving feed additive at a dose of 1.0 kg per 100 kg of grain mixture, had better hematological indices. In the course of the research established that the highest levels of productivity and better metabolism differed heifers, which were included in the diet a food additive BioDarin.

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GROWTH AND DEVELOPMENT OF KAZAKH WHITE BREED HEIFERS AT DIET USE OF FEED ADDITIVES BIODARIN

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Keywords: growth, heifers, breed, feed, additive.

The research object is improvement of the productive qualities of heifers of Kazakh white breed by introducing additional to the basic diet of different doses of feed additives BioDarin. Protein-vitamin-mineral supplement BioDarin in its composition contains nutrients, micro- and macroelements, which are the source of energy, stimulate digestive processes, metabolism, growth and improve immunity, positive effect on animal performance. Currently of great practical and scientific importance is the use of the additive BioDarin for the correction of diet feeding. Scientific and economic experiment was carried out on the basis of JSC AIC «Alga+» Tuimazinsk district of the Republic of Bashkortostan. For the experiment there were formed 4 groups of heifers of Kazakh white-headed breed: group I – control; group II heifers in addition to the basic diet received a feed additive in a dose of 0.5 kg per 100 kg of grain mixture, the animals of group III received 1 kg of the feed additive per 100 kg of grain mixture, peers IV groups received 1.5 kg of a grain mixture. It is established that heifers of the III experienced group receiving feed additive BioDarin in the dose of 1.0 kg per 100 kg of grain mixture, had the best body weight, and average day growth.

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HEIFERS POSTSLAUGHTER MEAT PRODUCTIVITY EVALUATION AT DIET USE OF FEED ADDITIVES BIODARIN

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Keywords: slaughter, calves, morphological, composition, carcasses, feed, additive.

The purpose of research focused on post-slaughter evaluation of meat productivity and meat quality the Kazakh White-headed breed when introduced into the diet of feed additives BioDarin. Presents the results of the control slaughter heifers 18 months old as well as the results of studies of morphological and chemical compositions of the carcass. The research was conducted post-slaughter evaluation of meat productivity and meat quality of heifers of Kazakh White-headed breed when introduced into the diet of feed additives BioDarin. Scientific and economic experiment was carried out on the basis of JSC AIC «Alga+» Tuimazinsk district of the Republic of Bashkortostan. For the experiment there were formed 4 groups of heifers of Kazakh white-headed breed: group I – control; group II heifers in addition to the basic diet received a feed additive in a dose of 0.5 kg per 100 kg of grain mixture, the animals of group III received 1 kg of the feed additive per 100 kg of grain mixture, peers IV groups received 1.5 kg of a grain mixture. Among the studied groups, heifers of the III experienced group receiving feed additive at a dose of 1.0 kg per 100 kg of grain mixture, had a high level of meat productivity. It was found that meat products of the best quality was got also from animals of group III.

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THE APPLICATION OF BEER DRY PELLET IN YOUNG GOAT FODDER

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Keywords: animal husbandry, feeding, beer, dry, pellet (BDP), goats.

The purpose of research is to give an assessment to profitability of the beer dry pellet use in compound feeds for young goat stock. Scientific economic experiment has been made on young goats of Zaanen breed. Animals were divided into three groups, 6 heads in each. Compound feed of control group didn't contain beer dry pellet (BDP), and the second experiment group feed contained 5.0% BDP (by weight), instead of oats and linen cake part parts, and the composition of compound feed for 3d group included 10.0% of BDP (by weight). During experiments it has been established that at experiment groups exchange processes proceeded more intensively. In blood serum of nanny-goats of experiment groups the content of the general protein exceeded control for 1.9-7.9%, the protein index (A\G coefficient), of animals 3d group was above control for 10.1%. Activity of ALT and AST aminotransfer which indicators were higher in experiment groups by comparison with the control also testifies to intensity of protein exchange. Fluctuations of biochemical indicators of blood were in limits of physiological norm, and, so introduction to a diet of these quantities of beer dry pellet had no negative impact for animals health. Feeding of the compound feed containing BDP reduces prime cost of 1 kg of gain in comparison with control by 2.6% in the 2nd experiment group and for 5.7% in the 3d experiment group. In 2nd and 3d groups, the level of profitability was 3.0-6.4 abs% higher than that in control respectively. Compound feeds cost for 2nd and 3d experiment groups was lower than the cost of compound feed of control group for 1.83% and 4.42% respectively. The experiments conducted give a chance to conclude that the use of BDP in compound feeds for young goat stocks has found to be profitable.

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SELECTION OF BLACK-AND-WHITE MOTLEY BREED OF CATTLE USING DIFFERENT METHODS OF BREEDING SELECTION

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Keywords: inbreeding, outbreeding, selection, line, selection, genealogy, black and white, motley, bred.

The purpose of research is improving the efficiency of the breeding process with the planned inbreeding. Based on the works of Russian and foreign authors it is necessary to more closely approach the implementation of this method in practice. Many farms in the breeding of cattle meets application-related selection, often this phenomenon is spontaneous mean mass selection without studying the ancestry of individual animals or the proper documentation for the selection of the herd, and sometimes livestock-breeders deliberately form a related pair, despite the fact that in the literature there is still no clear conventional wisdom about the dangers of inbreeding or positive development. To properly assess the effectiveness of inbreeding it should be primarily studied the results of the use of inbred animals. The studies were conducted in a herd of Black-Motley breed cattle AIC «LUCH» Vavozhsky District of Udmurt Republic. The material for the study were pedigree card form 2-MOL, the data records, zootechnical and breeding records. Among outbreed animals were selected animals obtained by using the in-line selection and cross- line one. Inbreed individuals were classified depending on the degree and type of inbreeding. Cows resulting from the use of inbreeding, outbreeding outperform their half relative by yield of milk at 187.1 kg (3.5%). Between the calving, the longest period was detected in the group of cows resulting moderate inbreeding - 421.2 ($R \geq 0.95$) of the day, which is above the average for the group of outbreed and inbreed animals by 22.6 and 11.1 days, respectively.

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EVALUATION OF GENETIC PARAMETERS IN HENS USING MICROSATELLITE MARKERS

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Keywords: microsatellite, markers, alleles, breed, chicken, genetic, diversity.

The purpose of the study is improvement of pedigree accessory of identification process of poultry with use of microsatellite markers. The analysis was performed with 9 breeds of chickens (n=268) for 16 markers. The studies were performed with the chicken breeds, such as: the Black and White Australorp (BWAus), Black Australorp (BAus), Kulangi (Kul), Czech Gold (CzG), Blue Andalusian (BAnd), Naked Neck (NN), Silver Campine (Breukel) (SC), Black Bearded Russian (BBRus), and Minorca (Min). There were 29 to 30 poultry in each experimental group. The researches were carried out at the Molecular Genetics Laboratory, Ernst All-Russia Research Institute of Animal Husbandry. Separation and detection of amplification products were performed on an Applied Biosystems ABI3130xl Genetic Analyzer (USA). Statistical data processing was performed using GenAlEx software version 6.4. The work examined genetic diversity of chickens (average number of alleles, number of effective alleles, the level of homo - and heterozygosity, etc.), using microsatellite loci. It should be noted that the average number of alleles in the study ranged from 6.06±0.050 in the BAnd bantams to 7.81±0.73 in the NN chickens, while the number of informative alleles ranged from 3.63±0.30 in the BAnd bantams to 5.44±0.34 in the SC chickens. High informativeness of 16 selected loci performance was noted during the research; the number of alleles ranged from 8 (locus MCW0037) to 25 alleles (locus MCW0183), depending on the locus. The conducted research allowed us to identify the presence of private alleles in the studied breeds of chickens, which were discovered in poultry within 7 of 9 breeds with frequencies of 1.7 to 67.7%. The expected and observed

levels of heterozygosity were calculated to assess the variation of the investigated species more accurately; their mean values reached 66.9 and 37.1%, respectively. Breeds of chickens affiliated to their populations were identified based on analysis of 16 microsatellite markers; the estimates varied from 79.3% to 100.0%. Therefore, the use of microsatellite loci in chicken breeding can give more opportunities to create pedigree poultry flocks within the genetic pool of breeds.

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DIGESTIVE PARAMETERS OF PUREBREED SHEEP AND THEIR HYBRIDS WITH ARGALI

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Keywords: ruminant, hybrid, ruminal, digestive, fermentative, processes.

The aim of researches is to develop physiological bases of sheep productivity through improved adaptive capacity of the organism. In comparative aspect the peculiarities of the digestive processes in sheep of different genotypes: the domestic sheep and their hybrids with argali. The experiments were carried out in L. K. Ernst Institute of Animal Husbandry in tree groups of sheep of different origins (n=3) with a rumen fistula. Animals of group I – sheep-valukh the Romanov breed II – the hybrids of the second generation ewes of the Romanov breed with argali (25% of kinship) and III – hybrids of the third generation of Edilbaj breed (50% of kinship), of the Romanov breed (37.5% of kinship) and argali (12.5% of kinship). Higher feed intake was observed in hybrid animals. So, consumption of dry matter in the second group it was higher by 14.6%, the third with 15.4%, compared to the control, obviously, was determined breed differences in the intensity of the digestive processes. Set that the origin of the animals affects the orientation of enzymatic processes. In the proventriculus hybrid animals it was more intense compared with the number purebred. This is evidenced by a statistically significant increase in hybrid animals of the concentration of volatile fatty acids (12-21.6% to nursing and 8.7-12% after nursing), a significant increase of amylolytic activity of the rumen fluid (1.5-2.04 E/ml), some reduction in the ammonia concentration. Had higher content of total quantity of microbial mass in the hybrids of the Romanov sheep and argali compared to purebred sheep-valukh (227.1-258.0 mg/100 ml). Of further interest is the comparative study of digestive and metabolic processes at hybrid animals for the op for determining the optimal type and structure of diets.

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THE DEVELOPMENT AND APPLICATION OF DAIRY COWS FEEDING STANDARDS BASED ON THE FACTORIAL METHOD

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Keywords: feeding, advanced, norms, factorial, method.

The aim of the study is to justify the improvement of dairy cows feeding standards with productivity 8000 kg of milk per year and live weight of 600 kg for the periods of lactation. In developing the standards it was used a new approach to determine the need for energy and nutrients through a combination of scientific and economic experiments with factorial method, which takes into account the physiological needs of the animals, to identify the relationship of the standards feeding with productivity. The scheme of the energy balance in the body of cows that when calculating the standards requirements of the metabolic energy can further take into account the factors of changes in body weight and activity. Developed regression equations and model calculation needs highly productive cows in the exchange of energy and essential nutrients using factorial method, which includes factors need to maintain life, milk production, pregnancy, gain (loss) in body weight and activity of the animals. The effect of feeding for improved standards on nutrient digestibility and utilization of nitrogen, calcium and phosphorus, as well as indicators of rumen metabolism and biochemical status of cows blood with a yield of 8,000 kg of milk per year in the period calved. As a result, feeding cows for improved rate of growth in milk production for 305 days of lactation was 6.0%, with a significant increase in yield of milk fat and protein, and the cost of feed per 1 kg of milk fat standard expressed in the exchange energy were lower than controls at 3.6% in obtaining additional revenue from the sale of dairy products.

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GENERAL AGRICULTURE, PLANT SCIENCE AGRONOMICS AND PROTECTION OF PLANTS

UDK 633.16+633.1:632

THE INFLUENCE OF HERBICIDES WITH VARIOUS RANGE OF EFFECTS FOR STRESS RESISTANCE AND YIELD OF WINTER WHEAT SEEDS

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Keywords: winter, wheat, seeds, herbicide, graminicide.

The aim of the research is to substantiate the scheme of plant protection of winter wheat against perennial and annual weeds, including monocotyledonous weed species. This scheme provides high grain yield and quality standardized seeds output. To achieve this goal the production experiment was conducted. The experiment was repeated three times, the location of the plots was systematic. The predecessor was peas. The main weeds of winter wheat were representatives of the classes: *Asteraceae* (field sowthistle, Canada thistle, chamomile odorless), ranging from 15% to 24%, Cabbage – *Brassicaceae* Burnett (field pennycress) – 7-14%, Goosefoot family – *Chenopodiaceae* (pigweed white) – 1-6%, Vonkova – *Convolvulaceae* (convolvulus arvensis) – 10-8% and *Poaceae* (PPE foxtail, millet, chicken, wild oat common) – from 24 to 42%. The species composition of the weed is suppressed almost completely when using the tank mixture of graminicide together with the broad-spectrum herbicide (Lastik Top 0.5 l/ga + Balerina 0.4 l/ga). In average, per years of research the biological efficiency of this variant was 96%. The plants of winter wheat under treatment of crops with protection means against weeds receive stress, which is manifested in a sharp decrease of chlorophyll concentration in the leaves. The inhibition of plants is manifested regardless of the application of graminicide, herbicide or tank mixtures. Under favorable weather conditions for plant growth and development the chlorophyll concentration in leaves restores after 8 days of applying plant protection means up to normal. The highest yield of winter wheat, maximum yield of quality standardized seeds and the propagation coefficient factor of varieties is formed when using a tank mix Lastik Top (0.5 l/ga) + Balerina (0.4 l/ga), regardless of variety and year of growing. The use of graminicide Lastik Top (0.5 l/ga) in tank mix with herbicide Balerina (0.4 l/ga) suppresses the development of monocotyledonous species of weeds of the same Botanical group that includes winter wheat. The second component tank mix herbicide Balerina suppresses the entire spectrum of dicotyledonous weeds. This results in the improvement of conditions for the growth and development of plants, providing higher grain yield, quality standardized seeds output and the rate of reproduction of varieties.

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CEPHUS PYGMAEUS INFLUENCE FOR SOFT WINTER WHEAT ELEMENTS YIELD IN THE FOREST SAMARA REGION

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Keywords: winter, wheat, plain, stem, pygmaes, elements, yield.

The purpose of the study is to reduce yield loss of winter wheat crops infested with stem borer. The studies were conducted in the forest of the Samara region in the vicinity of st. Ust-Kinelsky in 2011, 2012 and 2014. in the fields of the Povolzsje Science Research Institute of selection and seeds production of P. N. Konstantinov with the meso form of the relief at the landscape profile length of about 8 m to 4 varieties of soft winter wheat: Povolgskaya 86, Kinelskay 8, Kinelskay 4 and Konstantinovskaya (Erythrospermum). The damage of productive stalks of wheat sawfly larvae was 0.5-1.2%, peaking at an average of weather conditions in 2012, the minimum – in a relatively arid 2014 and depended on the plant population, sawflies favored more sparse crops with a correlation coefficient In 2011, 2012 –0.472…–0.480, –0.734 – in 2014. Under the influence of the sawfly larvae damaged ear stem length was reduced by no more than 5.2, the number of grains per ear – 14.4, the weight of grain in the ear – 14.4, weight of 1000 seeds – 15.2%. The largest decrease in the length of the spike observed in average weather conditions for 2012, the number and grains weight per ear – in a wet 2011, the mass of 1000 grains – in the dry 2014 from wet to dry years, the harmfulness of the sawfly increased from an average to the bottom of the slope. The smallest decrease in all indicators of productivity observed in the upper part of the slope. The number of adults cephus pygmaeus in all parts of the slopes were almost equally low (0.2-0.4 ind./100 net sweeps). The cephus pygmaeus loss of of wheat grain productivity were minor and were 3-35 kg/h.

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INFLUENCE OF CROPS WEED WEEDINESS FOR PRODUCTIVITY INDICATORS OF WHEAT IN FOREST-STEPPE OF THE SAMARA REGION

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Keywords: weeds, vegetation, winter, spring, wheat, harvest, weediness.

Research objective is improving the grain yield of wheat by reducing of winter and spring wheat cropsweedines. The studies were carried out on experimental fields of the Povolzsje Science Research Institute of selection and seeds production of P. N. Konstantinov. Volga region Scientifical-research Institute of Selection and Seed growing named after P. N. Konstantinov in 2012-2014. The main purpose of researches was to study influence of weeds for grain yield components in winter and spring wheat. The evaluation of the abundance of weeds was performed by the method of Drude. Under the influence of weed,

productivity of land winter wheat decreased by 3-26%, spring wheat decreased by 17-33%. The most harmful for winter wheat turned out creeping-rooted weeds: *Cirsium arvense*, *Convolvulus arvensis*, of young weeds dominated *Cánnabis ruderális*, and wintering weed: *Lactuca serriola*, *Thlaspi arvense*. In the spring wheat was dominated weeds of creeping-rooted form: *Convolvulus arvensis, Cirsium arvense, Sónchus arvénsis* and *Euphorbia virgata.* Winter wheat is less exposed to weeds than spring wheat. Yield depression was mainly due to decrease the number of productive stems and dry wheat mass. Also on the harmfulness of weeds is influenced by the weather conditions of the year. For winter wheat during the wet and warm autumn dominated wintering weed: *Thlaspi arvense*, *Lactuca serriola*. In years with dry weather conditions creeping-rooted weeds prevail For spring wheat during the wet spring it is dominated the spring weeds in dry years the most harmful creeping-rooted weeds. For the harmfulness of weeds the density of the crop also affect. When sparse crops of weeds more harmful than at the optimum plant density. Infestation weeds adversely for the yield of both winter wheat and spring wheat.

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CEPHUS PYGMAEUS INFLUENCE FOR WINTER WHEAT GRAIN DAMAGED BY *HAPLOTHRIPS TRITICI* AND *EURYGASTER INTEGRICEPS,* DEPENDING ON YEAR CLIMATE, VARIETY AND SURFACE MEZOFORMS IN THE SAMARA REGION FORESTS

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Keywords: winter, wheat, plain, pygmaeus, cephus eurygaster, thrips, integricepsur.

The purpose of research is the reduction of wheat grain damage and bugs. Investigations were carried out by mezoform of the relief at the surfase profile length of about 8 km in soft winter wheat crops four grades: without a trace – Volga 86, Kinelsky 8, spinous – Kinel 4 and Konstantinovskaya. The damage of the grain of wheat thrips and chinch in the ears of the sawfly larvae from damaged and undamaged stems established under a microscope MBS-10 as described in V. I. Tanskiy. According to the degree of deformation grooves grain wheat thrips larvae distinguished three degrees of damage: mild, moderate and severe. From one field for the analysis was taken 200 grains damaged and non-damaged shoots. Grain damage thrips larvae and integricepsur chinch were led away from dry to wet years. In the wet 2011 damage of wheat thrips ears on stalks, damaged and undamaged sawfly did not differ significantly, but on average in 2012 and moistened arid 2014 it increased 11-31%. The damage of wheat grain chinch shoots with damaged sawfly in 2011 and 2012. It was significantly higher than with intact in arid 2014 it was lower. Grain damage thrips decreased by 42-47% on top of the slope to 26-30% - on the bottom. The smallest grain damage thrips was in grade Povolzskay 86. All varieties of the number of damaged grain pests was higher in the ear on the sawfly larvae intact stems.

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SPRING WHEAT CLOGGING BY *CONVOLVULUS ARVENSIS* INFLUENCE FOR PRODUCTIVITY INDICATORS IN FOREST-STEPPE OF SAMARA REGION

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Keywords: arvensis, convolvulus, spring, wheat, elements, efficiency, losses.

The obgect of research is the wheat grain yield improving by reducing the infestation of spring wheat. The research was carried out in 2013-2014 in the experimental fields of the Volga PRSISSP of P. N. Konstantinov in crops of spring wheat varieties Kinelskaya 59. Assessment of the abundance of field bindweed was carried out according to the method of Drude. Then the selected sheaves are dried and dealt into crop and weed components. In harmfulness field bindweed affects weather conditions of the growing season. Under the influence of field bindweed yield of spring wheat in arid 2013 decreased by 20% and more humid in 2014 by 44%. Dry weight stalks field bindweed in 2013 was 1.1 g, and in 2014 – 2.8 g, which determined its harmfulness higher in 2014. The loss of productivity of wheat grain under the influence of bindweed field in droughty 2013 happened, first of all, due to reduction of above-ground mass of wheat. This reduces the functioning of the photosynthetic apparatus and the mass of heads. In more favorable to the development of culture and the weeds 2014, the biological yield of wheat decreased, primarily due to the decrease of productive tillering, the number of productive stems and grain weight per ear. Correlation between dry mass of field bindweed and the elements of productivity were authentic. The dispersive analysis showed reliability of the provided data.

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