

Abstracts of articles

AGRICULTURE

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PROTEIN AND ITS FRACTIONAL COMPOSITION IN GRAIN OF SPRING WHEAT DEPENDING ON TILLAGE SYSTEMS AND WEED INFESTATION OF CROPS

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Keywords: wheat, protein, fractional, system, subtype, spring.

The purpose of research is improvement of biochemical parameters of spring wheat grain quality. The studies were conducted in 2007-2010 in the conditions of forest-steppe of the Middle Volga Region. The object of the study was the released varieties of Kinel'skaya 59 spring soft wheat grain. The soil of experimental plot is typical chernozem medium loamy, medium. Spring wheat was placed in crop rotation and green manure with clean steam. In crop rotations the following fertilizer were used: no fertilizer application (control) and application $N_{22}P_{22}K_{22}$ before sowing (azofoska of 1.4 t/ha). Spring wheat crops in 2007 were treated in tillering stage with herbicide Difezan (0.2 l/ha); in 2008 – in the phase of tillering herbicide Logran (10 g/ha). In crop rotations in three different systems of primary tillage were studied. Found that in crop rotation with bare fallow total protein content was little more than link with green manure and steam amounted to an average of 12.7 percent. This was contributed to the increase in the protein fractions of wheat globulins by more than 5% of glutelins more than 9 percent. Thus, when plowing by 20-22 cm increased the accumulation fraction of that prolamins, and fertilizing ($N_{22}P_{22}K_{22}$) contributed more knock-tunately fractions albumins an average of more than 6% and globulins by 16%, which led to an increase in total protein more than 5% compared to zero tillage. Depending on the subtype of clogging of crops in crop rotation and green manure with clean steam fractional composition of grain increased in the variant without weeds. The fraction of albumin was higher on average by 13%, globulins 11%, glutelins 21%, and the fraction of Pro-laminam has changed slightly. Young and perennial subtypes clogging of the wheat crops reduced the protein content on average by 7-9% in comparison with the variant without weeds.

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THE ACCUMULATION OF HEAVY METALS BY SPRING WHEAT SEEDLINGS

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Keywords: soil, wheat, lead, copper, metals, spring.

The purpose of this study is to develop agrotechnological methods of establishing and controlling the content of heavy metals in plant products. For laboratory experiments we used the typical black soil. The results of lead and copper in soil and plants of spring wheat variety Kinelskaya 59, with different levels of pollution in the conditions of a pot experiment. It is established that with the increase of applied doses of salts of heavy metals increases their content in soil and spring wheat seedlings. The percentage of mobility in the soil of copper and lead in the soil increases with the pollution level 2.9 times and 9.2 times, respectively. With increasing doses of copper and lead increases the concentration of plant-available forms of nitrogen and phosphorus. For all variants of experience is typical acropetal distribution of heavy metals in plants – copper: the roots (46.59) > shoots (of 14.66); lead: the roots (47.0) > shoots (12.78). The value of I_a decreases with increasing dose of applied salt that is indicative of the culture of spring wheat variety Kinelskaya 59 barrier. High correlation observed between the content of copper in plant roots and gross values ($r = 0.98$) and mobile forms ($r = 0.94$) in the soil. The value of copper in the shoots of plants are weaker related to the content of the element in the soil ($r = 0.66$). Between the content of gross and mobile forms of lead in soil revealed a high correlation ($r = 1.00$), the same value when item is marked with the plant roots and shoots.

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TECHNOLOGY, MEANS OF MECHANIZATION AND POWER EQUIPMENT IN AGRICULTURE

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INFLUENCE OF VEGETABLE COMPONENTS FOR TRIBOLOGICAL PROPERTIES OF FUELS FOR AUTOTRACTOR DIESELS

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Keywords: fuel, component, vegetable, additive, properties, tribological.

The purpose of research is to estimate influence of vegetable oils (10%) by its use for quality of tribology properties of diesel fuel. The technique and results of basic researches of antiwear properties of mixed fuel with additive of vegetable oils (mustard, linseed and rape) are given. Researches were conducted by means of universal tribometer of the TU type with four-ball frictional unit. Concentration of vegetable oils in fuel are changed from 0 to 10% on volume with 2% step. Loading, frequency of spindle rotation and material of frictional unit details didn't change. For example researches showed that by of mustard oil of 2% concentration on volume the average diameter of a spot of wear decreased by 29% (with 0.258 when using diesel fuel without additives to 0.183 mm at addition of 2% of mustard oil). At concentration of mustard oil of 4% the average diameter of a spot of wear decreased by 35.4% of the initial. At further increase in concentration of mustard oil (6, 8 and 10% on volume) decrease in diameter of a spot of wear made respectively 37.3%, 40% and 43%. In case of use of linseed and rape oil similar regularities are observed. It is established that for substantial increase the tribology properties of diesel fuel is enough to enter into its structure 2-4% of vegetable oils on volume. The further increase in concentration of antiwear additive of considerable effect doesn't give, but use the mixed fuels with the content of vegetable oils to 30% on volume is rational from the point of view of economy of fuels of an oil origin.

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**FEATURES OF THE DIESEL RUNNING BY CAMELINA-MINERAL FUEL
IN THE MODE OF INDEPENDENT IDLING**

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Keywords: gasoline, diesel, mixed, camelina-mineral, fuel.

The mode of independent idling, characterized by an impaired process flow, unproductive fuel consumption and increased emissions of harmful substances into the atmosphere, is the most unfavorable mode of the diesel engine operation. Therefore, the aim of the research is to reveal the peculiarities of the tractor diesel engine operation by the camelina-mineral fuel in the mode of independent idling. Camelina-mineral fuel is a mixture of camelina oil and mineral diesel fuel in certain ratio of these components. To assess the possibility of using the camelina oil as biological component of diesel mixed fuel, an experimental study of the D-243 diesel engine in idling mode was carried out, and the degree of influence of the different ratio of the components of the mixed fuel on its parameters was determined. The researches were carried out with the diesel fuel on the L-0.2-62 mineral fuel and the camelina-mineral fuel with a ratio of the biological and mineral components: 25% RyzhM + 75% DT; 50% RyzhM + 50% DT; 75% RyzhM + 25% DT; 90% RyzhM + 10% DT and 90% RyzhM + 10% DT (US). For the parameters of the diesel, the excess air factor, the filling ratio of the diesel cylinder with fresh charge, the maximum cycle pressure, the hourly fuel consumption, smoke and carbon monoxide content in the exhaust gases are taken. It is established that when the diesel engine works on camelina-mineral fuel mode the minimum sustainable speed of the crankshaft idle speed 800 min⁻¹ the values of maximum cycle pressure (6.3 MPa) and the filling ratio of the cylinders of a diesel engine the fresh charge (0,87) remain unchanged. The coefficient of excess air, increasing in mixed fuel shares of camelina oil to 90%, reduced from 7.187 to 4.619, while fuel consumption increases of 1.1 kg/h 2 kg/h. The best environmental indicators are observed when working on red-and-mineral fuel 50% RyzhM + 50% DT. Handling mixed fuel with ultrasound reduces fuel consumption, smoke and content of carbon oxide in the exhaust gas relative to the mixed fuel not treated with ultrasound.

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THEORETICAL RESEARCH OF THE SCAFFOLDER AND SOIL INTERACTION

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Keywords: resistance, system, soil, strain gauge, deformer.

The purpose of research is to improve the dosing of mineral fertilizers sowing unit, depending on the physico-mechanical properties of the soil. In modern technologies of precision farming with differentiated application of mineral fertilizers, data from various sensors, results of analyzes of soil samples and aerial photography are mainly used, without taking into account factor such as the depth of the humus horizon, which largely determines the soil fertility. On the basis of the Samara State Agricultural Academy, studies are underway on the effect of the depth of the humus horizon on the fertility of the soil. Several machines have been developed for differentiating mineral fertilizers with spreader and cultivator. Currently, a system of differentiated application of mineral fertilizers is being developed for sowing agricultural crops and it is planned to produce a set of equipment for a standard seeder UCS-8 Vesta. A constructive scheme of the device for determining the traction resistance is presented, which is closely related to the depth of occurrence of the humus layer. The main working element of this device is a deformer in the form of a knife, with a dihedral grinding. The article presents theoretical studies of the effect of forces acting on a deformer. Based on the results of the theoretical justification of the technological process of the proposed scheme for determining the traction resistance, the load dependencies on the strain gauge link were derived depending on the drag resistance of the deformer, which is determined by its basic design and technological parameters and the

physical and mechanical properties of the soil. The obtained dependences of the traction resistance of the working organs of the tillage implement will theoretically determine the additional energy costs from the introduction of the deformer in the design stage at the design stage of the machine and outline the directions for their optimization.

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SUBSTANTIATION OF THE PARAMETERS OF TILLAGE RINK

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Keywords: roller, rolling, yield, particle, wave, zoom.

The purpose of research is improving the quality of surface tillage during sowing of winter crops and, as a result, crops yield increasing. Quality compacting soil tillage rinks affect its physical and mechanical properties, such as moisture content, structure, and density, optimum value of which is regulated agronomic requirements for cultivation of specific agricultural crops. These properties affect the quality of seeding and water-air regime of the soil. Therefore, when conducting experimental studies, moisture content, structure, and soil density was controlled to optimize parameters and modes of operation of the rink to bring the above soil properties in compliance with agrotechnical requirements. The quality of soil the proposed rink was assessed in comparison with existing rinks. The criterion of quality was the factor of conformity to the standard k_{cs} , which characterizes the compliance of the density and structure of the soil reference values established by the agrotechnical requirements. The result of the research revealed that the maximum value of $k_{cs} = 0.84$ is achieved at a speed of $v = 11$ km/h and the ballast mass $m = 78$ kg. After tillage rinks seeder the factor of conformity to the standard $k_{cs} = 0.68$; after soil tillage the existing rink

$k_{cs} = 0.71$; and after the processing of the proposed soil-cultivating rink the factor of conformity to the standard amounted to $k_{cs} = 0.84$, which is significantly higher than after soil tillage of existing rink. While the specific metal content of the proposed ice rink will not exceed 116 kg per 1 m of width, which is 2.4 times less than that of the rink 3CCH-6 (283.6 kg/m).

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INFLUENCE OF PLOUGH WORKING BODIES KEY PARAMETERS FOR THE QUALITY OF TIERED PLOWING

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Keywords: soil, processing, tiered, combined, options, plow, depth.

The purpose of the research is improvement of soil level processing quality by justification of key parameters of working bodies of the combined plow. The combined plow consisting of a frame and sections of working bodies is developed for realization of technological process of level processing of the soil with loosening of the subarable horizon. The working section supports the movements of the unit which are consistently established in the direction plow cases of the top tier with a ploughshare surface and the lower tier without ploughshare surface, containing a chisel and dump surface. For implementation of agrotechnical requirements to level processing of the soil the theoretical research on installation of depth of the course of cases of the top and lower tiers of the combined plow is conducted. The interrelation of bottom crests height of furrow from arrangement of working bodies in section and the angle of shift of the soil is investigated by chisel in the case of the lower tier. The distance between the case of the

top tier and the case of the lower tier of the combined plow in the longitudinal plane for ensuring the free movement of the soil and stubble is proved. The carried-out theoretical justification and settlement and graphic determination of constructive parameters of working section cases of the combined plow are shown that their rational values are equal: width of capture of cases of the top and lower tier – 0.45 m; chisel width – 0.07 m; an interval of arrangement of working bodies on a plow – 0.45 m; distance between the case of the top tier and the case of the lower tier of the combined level plow – 0.55 m; depth of the course of the case of the top tier – 0.06- 0.18 m; the layer height which is cut out by the case of the lower tier – 0.25-0.35 m; processing depth chisel – 0.06-0.08 m.

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USING OF ACCELERATION CHARACTERISTICS OF THE ENGINE AND THE TURBOCHARGER FOR SUPERCHARGING SYSTEM DIAGNOSING

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Keywords: turbocharger, engine, feature, system, diagnosis.

The purpose of the research is to identify the peculiarities of interconnection of dynamic characteristics of the turbocharger TKR 6.1 and the engine D-245-35 in the presence of a fault in the pressurization system. In the practice of fault finding in the system of supercharging of automotive engine widely used method of diagnosis, OS-nated steak subs on the measurement of the boost pressure in the nominal modes. In terms of the service companies due to the lack of brake stands to estimate the load mode is often not possible. For acceleration of the turbocharger and engine at the department of mobile power tools, national research of Mordovsky State University named after N. P. Ogarev created diagnostic complex consisting of forming unit of the source signals, the optical sensor shaft speed of the turbocharger, sensor of frequency of rotation of the motor shaft, the linear displacement transducer arm

balancing machines, analog-to-digital Converter, software and a personal computer. The tests were carried out on the engine MMZ D-245-35, with an installed turbocharger TKR-6.1, simulation of the working regimes was carried out on the roller-brake stand. The test results obtained a series of characteristics of the acceleration of the turbocharger engine D-245-35 and TKR-6.1 with a step input exposure. Analysis of the data showed that the presence of a malfunction of the boost «leak turbine inlet», «air filter clogged» leads to an increase in the transient time and reducing the frequency of rotation of the rotor TKR in all modes. Spaced-out characteristic obtained in idling mode in the fault conditions «loss of gases after the compressor» is accompanied by the growth of the amplitude value of the shaft speed TCR and the reduction of time of transition. This feature of the waveform of the acceleration allows us to identify faults of this kind in the diagnosis of the supercharging system.

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THE EFFECT OF MIXING DURATION AND THE PROPORTION OF SMALLER COMPONENT FOR THE PERFORMANCE OF THE PADDLE MIXER RUNNING WITH EXTRA BLADES

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Keywords: mixing, unevenness, mixer, blade, energy, duration.

The purpose of research is justification of area efficiency of the proposed mixer with vertical shaft and paddle stirrer, the edges of the blades which are fixed sinusoidal blades. Research has shown that, by virtue of the kinetics of mixing all the mixers in the early period mixing significantly improve the quality of the mixture, after which stabilization of the quality indicators, and in some cases starts and segregation of the mixture. The nature of the change of the uniformity of the mixture is kind of exponential time mixing. In this connection there is the task of identifying areas of efficiency and opportunities the application of paddle mixer proposed design for the preparation of dry feed mixtures. Important manufacturing concentrate mixtures (compaund feeds, feed concentrates or forage medicinal mixtures)

based on the purchase of BVD and your own forage. Purpose: the establishment of functional dependence between the technological parameters of the mixer (the proportion of the control component and the duration of mixing) and process performance (uneven mix and adjusted intensity of mixing taking into account the uniformity of the mixture); identifying rational values of technological parameters of the mixer, providing the desired quality mix and minimum energy intensity of mixing. It is provided the description and structural diagram mixer dry material batch. The technique is described and results of experimental studies of the mixer. It is presented the expressions describing the unevenness of the mix and the energy intensity of stirring, depending on the proportion of the control component and the duration of mixing; the required duration of mixing depending on the proportion of the control component. It is built two-dimensional section of the surface response in the studied parameters. Based on the analysis of the given graphs justifies the area efficiency of the mixer: the proportion of the control component is not less than 3%; when the portion of the control component 5% duration of mixing – 300 s, when the portion of the control component 10% the duration of the mixing – 200 s.

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VETERINARY MEDICINE AND ZOOTECHNICS

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THE EFFICIENCY OF DRUG TSIMAKTIN USING FOR THE PREVENTION OF COWS POSTPARTUM COMPLICATIONS

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Keywords: therapy, diagnosis, delivery, placenta, injection, dose, uterus, involution.

The purpose of researches is rising of efficiency of prophylaxis of cows patrimonial and puerperal pathologies. The current of cows labors and the puerperal period when using homeopathic medicine is studied Tsimaktin. It is established that drug Tsimaktin use reduces duration of cows current of labors in comparison with control by 1.87 hours. An involution of body and horns of experienced group uterus animals came to the end for 11.35 days earlier. Disturbances of involutinal processes of control group cows reproductive organs to whom use didn't administer the drug 20% more Tsimaktin than at animals of experienced group. It is taped that drug Tsimaktin raises the morpho-functional status of cows organism that is confirmed by hematological and biochemical indicators of blood. The hemoglobin content, erythrocytes in control group cows blood after calvin was reliable less, than indicators of animals of experienced group respectively on 15.09 g/l and on 1.94 10¹² l. The indicator of the general protein in blood serum of experienced group cows is 2.69 g/l more than at cows of control group. The quantity of β -globulins after the delivery are more for cows of control group in comparison with experienced for 7,33% that indicates existence of inflammatory process in an organism of animals. Control group cows for 4-5 day the atsidotichesk state was after the delivery observed what the smaller indicator of an alkaline reserve on 3.38 ob%CO₂ testifies to. Use of homeopathic medicine Tsimaktin in 25-30 days prior to labors allowed to raise cows fecundity and to reduce the number of days of sterility. Use of this drug is ecologically safe and allows to use milk without restrictions. On the basis of the conducted researches drug Tsimaktin can be recommended for prophylaxis of puerperal complications at cows.

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BIOLOGICAL PROPERTIES OF MICROORGANISMS ISOLATED FROM DOGS AND CATS WITH OTITIS

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Keywords: otitis, dog, cat, microbial, associations, Malassezia, Staphylococcus.

The purpose of research is improving the efficiency of differential diagnostics of dogs and cats surface otitis. The microbiocenosis of the external auditory canal of dogs and cats consisted mainly of fungi of the genus *Malassezia* and *Candida*, bacteria of the genus *Staphylococcus*, *Streptococcus*, *Micrococcus*, *Corynebacterium*, *Bacteroides*, *Escherichia*, *Proteus*, *Klebsiella*, *Enterococcus*, *Bacillus* and *Pseudomonas*. Representatives of *Malassezia pachydermatis* were identified from 52 (67.54%) dogs and 6 (33.34%) cats and cats. *M. obtusa* were isolated from 5 (6.49%) dogs and 2 (11.12%) cats and cats, *M. globosa* was isolated for 5 (6.49%) dogs and 2 (11.12%) cats and cats. *M. furfur* are allocated from 3 (3.90%) dogs and 3 (16.67%) cats and cats, *M. restricta* is allocated from 7 (9.09%) dogs and 2 (11.12%) cats and cats. Representatives of *Candida albicans* were identified from 3 (3.90%) dogs and 1 cat (5.56% of animals), *C. parapsilosis* was detected in 2 (2.60%) dogs and 2 (11.12%) cats. *M. pachydermatis* fungi are isolated in 22 dogs, 2 cats and cats with acute otitis media, and in 30 dogs and 4 cats and cats in chronic course. *M. restricta* is isolated from 3 dogs and 1 cat for acute otitis media, and 4 dogs and 1 cat for chronic disease. *M. furfur* are isolated from 3 dogs, 3 cats and cats, *M. globosa* – from 5 dogs, 2 cats and cats are isolated from acute otitis media. *M. obtusa* is isolated from 5 dogs, 2 cats and cats in chronic otitis media. Mushrooms *Candida albicans* are isolated from 3 dogs and 1 cat, *C. parapsilosis* – from 2 dogs and 2 cats with chronic otitis media. In the development of otitis from dogs and cats, the leading role is played by lipophilic yeast-like fungi *Malassezia*, *Candida* and bacteria of the genus *Staphylococcus*, which possess pathogenic properties and acquire persistence factors during the formation of fungal-bacterial and bacterial associations.

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THE WOOL PRODUCTIVITY OF YOUNG SHEEP OF AKZHAISK MEAT-WOOL BREED DEPENDING ON THE LINEAR SUPPLIES

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Key words: wool fiber, fineness, strength, index, line, quality, length, ewe.

The purpose of researches is to increase wool efficiency and quality of wool Akzhaisky meat-wool breed of sheep due to purposeful use of new lines. Material for researches served Akzhaisky meat-wool breed ewe of the BAK-4087 and ZKATU-7082 line. Both lines were created by method of difficult uniform and diverse selection of initial material that has allowed to receive animals of desirable type from which animals of the second generation from them by homogeneous and heterogeneous selection have been received selection for cultivation «in itself» has been made. Lines were created by taking into account wool efficiency and its quality indicators. In article comparative indicators of wool efficiency are considered it is bright the compared lines at 8-month age. By wool cutting in the original and free wool the ZKATU-7082 lines ewes are surpassed the contemporaries from the BAK-4087 line on 0.17 and 0.13 kg, respectively. From ewes BAK-4087 lines 64.0% of wool of the 56th quality and 16.0% – the 58th quality are received, and from it is bright the ZKATU-7082 lines 66.0% of wool of the 58th quality and 30.0% of wool – the 56th quality are received. Other wool by quality in the compared groups was the 50th quality. For indicators of natural and true length of wool and fortress of wool fibers the BAK-4087 lines authentically ewes are surpassed by ewes ZKATU-7082 lines. The obtained data can be the basis for improvement of wool efficiency of Akzhaisky meat-wool breed sheep.

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IMPROVEMENT OF IDENTIFICATION AND DIFFERENTIATION MEANS OF PATHOGENIC AND OPPORTUNISTIC ENTEROBAKTERIYA

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Keywords: nutrient, medium, enterobacteria, Enterobacter, modification.

The purpose of research is to increase the efficiency of the differential and diagnostic nutrient medium of lactoza agar of Drigalsky intended for allocation and differentiation of enterobacteria. The tasks is to modify compounding of commercial nutrient medium for allocation and differentiation of enterobacteria; to allocate from different types of animals and to identify isolates of enterobacteria; to study morphological, the tinctorialnykh, cultural, biochemical, serological properties of microorganisms; identification of factors of pathogenicity and persistence of microorganisms. Materials for research were 253 isolates of the bacteria allocated from an intestinal microbiotope of different types of animals. Biomaterial suspension for obtaining growth of cultures of bacteria was sowed by differential and diagnostic and selective and elective nutrient mediums. Definition of factors of pathogenicity of enterobacteria was carried out by the standard methods. Time necessary for allocation and accumulation of cultural bacterial mass of enterobacteria, with use of the modified commercial differential and diagnostic nutrient medium of a lactoza agar of Drigalsky makes at the intestinal isolates emitted from small pets (cats, dogs, polecats, chinchillas) 20.12 ± 0.78 h, from farm animals (a bird, cows, sheep, goats, pigs, horses) 20.34 ± 0.85 h, from wild and zoo animals (boars, foxes, elks, female camel, pony) 22.46 ± 0.63 h that is more effective in comparison with the operating commercial differential and diagnostic environments. All isolates of enterobacteria had morphological, tinctorialny, cultural, biochemical and serological properties, characteristic of them. The isolates of enterobakteriya emitted from wild animals differed in higher rates of a persistence. The modified option of the commercial differential and diagnostic environment of a lactoza agar of Drigalsky allows to reduce time necessary for allocation and differentiation of intestinal isolates of the enterobacteria allocated from different types of animals. Time necessary for identification of enterobacteria is as a result reduced during diagnosis of intestinal infections or when carrying out a sanitary and bacteriological research of various objects of the environment.

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THERAPEUTIC EFFICACY OF HOMEOPATHIC DRUGS FOR COWS ENDOMETRITIS

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Keywords: endometritis, struggles, attempts, lochia, involution of uterus, puerperal, diagnosis.

The purpose of research is to increase the efficiency of cows postpartum endometritis treatment with homeopathic medicine Mastometrin and Ovariovit. Materials for research were the cows of Black-Motley breed. The number of cows with acute postpartum endometritis were divided into three groups of 10 cows: 1 experienced 2 experienced 3 experienced. 1 animals of the experimental group was administered the drug Mastometrin intramuscularly at dose of 5 ml for 2 Animals of the experimental group was administered the drug Ovariovit intramuscularly at dose of 5 ml. for 3 Animals of the experimental group were administered drugs Mastometrin and Ovariovit. In result of the conducted researches it was established that 4-5-th day after 4-5 times of administration of drugs in accordance with the scheme change the nature of exudate in animals, 3 experimental group. By the 6-7-th day of treatment in most animals was observed discharges of Muco-purulent exudate. A noticeable change was observed on the 8th day of treatment for 3 animals of the experimental group. During the transrectal examination of the uterus of cows 3 experimental group on the 14th day after treatment, she was in the pelvic cavity, not fluctuonal, between horn furrow was well defined, the horns of the uterus elastic consistence, symmetric, painless, well reduced on palpation. The same signs were revealed on the 19th day of treatment for cows of the experimental group 1 and 2 for cows of the experimental group on 17-18 th day of treatment. Recovery period for cows 3 experimental group made up 14.20 ± 0.80 day, which is 4.4 days less than in animals of the experimental group 1 and 2.50 day less than cows of the 2 skilled group. In 1 experimental group, the involution of the uterus ended on of 39.63 ± 2.28 day, which is 2.51 day more than in the 2nd experimental group and 3.73 per day more than 3 in the experimental group. The proposed scheme of complex use of drugs helps in increasing treatment efficiency with the integrated use and to reduce the cost of drugs by reducing the frequency of administration.

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IMPROVEMENT OF MEASURES COMPLEX AGAINST ASCARIASIS IN CHICKENS FARMLANDS BY DISINFESTATION AS A NATURAL RESERVOIR FOR THE POULTRY

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Keywords: prevention ascariasis, laying hens, dezinvasiya, poultry.

The purpose of research is improving measures complex for combating helminth infections in industrial poultry farms by disinfestation. Conducted research in private household farms of the population, which was grown laying hens in the paddocks, which are natural reservoirs of infestation in rural districts, where the industrial poultry farm for the production of food chicken eggs in the Republic of Kazakhstan. Clinical examination was carried out in the autumn-winter period, all were under observation 14918 hens of different ages. The clinical examination of pay attention to temperament, appetite, product performance, physiological state of birds. The diagnosis is put taking into account parasitological data, season, clinical signs, detection of adult forms of *Ascaris* in the body of diseased poultry and data of pathoanatomical dissection. In vivo was conducted scatological study 10% of the total number of poultry method Full-labarna. In the early stages conducted diagnostic deworming suspected helminthiasis by disease of poultry. The clinical picture of ascariasis poultry were different and depended on the degree of ragonetti and nature of feeding. The *Ascaris* was struck by poultry of all ages. Most extensively (52.3-51.8%) ascariidiosis infestations have been identified in chickens 2-3 months of age. On average, the poultry was struck ascariidiosis invasion at 39-39.6% of the surveyed private personal in Dvorak. Found that ascariasis chickens can be found everywhere revealed in each surveyed in Dorie with some fluctuations in the percentage of extensiveness. With the aim of

improving range of measures against ascariasis chickens by disinfestation in farmlands in the experiment used 5% Dexid-200, which gave the best results for the total elimination of helminth infections of chickens in private household farms of the population and prevent further investirovanie ascariasis chickens at the industrial poultry farms.

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TRITICALE AS SUBSTITUTE FOR THE STRATEGIC GRAIN IN THE DIET OF LAYING HENS

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Keywords: strategic, cereals, triticale, safety, efficiency, egg production, palatability.

The purpose of research is a strategic substitute feed grains (corn, wheat, barley) in the diet of hens egg. The consumption share of cereal feed in the poultry industry is 60-70%. The consumption of grain in the world is increasing annually, and is also used for the processing of biofuel and other technical resources, shortage of these types of feed. A need for new types of feed, which could partially replace and to fill the shortage of energy, protein and mineral feed. Finding wide usage of local unconventional feed as a substitute for grain is one of the ways to increase the production of eggs and poultry meat. The ration for the experimental chickens produced by weight batching the ingredients and step-input in the mixer. In the control group, the grain part of the ration consists of corn, wheat and barley, and in the experimental groups, these crops are replaced, in accordance with the scheme of the experience, for grain triticale from 20 to 80%. The change in composition of feed had a negative impact on the health of poultry, the keeping of livestock is made 93.33-96.67%. The highest egg production during the period of research (142.7 PCs.) in chickens of the third group, which is higher compared to the control, by 1.04%. Analysis of the results showed that the content of most essential amino acids, triticale is on the same level with sorghum, and the number of them is superior to corn and other traditional crops. At the same time, effective provision of replacement of feed grains in the diet of laying hens local triticale are 20-40% by weight of dry matter of feed.

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OSTEOPOROSIS OF LAYING HENS IN THE POULTRY INDUSTRY

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Keywords: osteoporosis, laying-hens, calcium, phosphorus, imbalance, LikviFos Strong.

The purpose of research is improvement of laying hens osteoporosis, and use of various drugs with the justification of their effectiveness. As a result of poultry clinical inspection osteoporosis was found expressed violation of phosphoric-calcium metabolism, is one of the main causes of manifestation of what hens begin to «take legs», unable to move about in the cage, or eat food and drink water. By selecting and pulling the sick hens from the cage in the vast majority occurs fracture of the tubular bones of the hind legs and wings. When you need the slaughtering of laying hens in sanitary slaughterhouse after separation of the pen in the barrel and have chicken carcasses crashed all the cartilage, bones, and carcasses of chickens are rejected. For poultry, unlike others ones the high degree of intensity of mineral metabolism, including calcium and phosphorus. A test of different premixes Paltry mineral blend for laying hens, the company MIAVIT GmbH/Germany (by mixing with feed 500-1000 g per 1 ton of feed) with the purpose of implementation of prevention showed the lack of effectiveness. The use of the drug LiquiFos Strong by company Biochem Zusatzstoffe/Germany method of feeding in production environment experienced for poultry in the dose of 2 l per tonn of water per week contributed to the demise, and in the control group, on the contrary the extension of this pathology. LiquiFos Strong improves digestibility, absorption, and digestibility of nutrients in bones of laying hens. LiquiFos Strong applied to laying hens LLP agro-firma «AKAS» in West Kazakhstan region of the Republic of Kazakhstan to improve the status of birds at the sudden imbalance of calcium-phosphorus metabolism.

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