

## ABSTRACTS AND KEY WORDS

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### AGRONOMY

#### Naumova I.K., Subbotkina I.N. **PHYTOSTIMULATING EFFECT OF PLASMA-ACTIVATED WATER ON GRAIN CROPS**

*The article presents the results of various crops seeds treatment with plasma-activated water (PAW). To conduct experiments, tap water was treated with face discharge, which refers to plasma-solution systems of atmospheric pressure. The most common crops in agriculture, such as spring wheat, spring barley and spring rye, were selected as the objects of the research. During the experiments, attention was paid not only to the direct soaking of seeds before planting and further stages of germination, but also to their storage, resistance to spore bacteria, mold fungi, and yeast. The experimental results presented in the paper suggest that the seeds treatment of various cereals with plasma-activated water (PAW) not only accelerates their germination, increasing germination energy, laboratory and soil germination, but also has a beneficial effect on all stages of early plant development, such as tillering and exit into the tube, accelerates linear plant growth, increases the leaf surface area and develops the root system. As for storage, pathogenic microflora practically does not multiply on seeds treated with plasma-activated water (PAW), which contributes to longer storage of both the seed material, and, accordingly, to an increase in yield, and the crop itself for further processing. The method by which the seeds were processed can be attributed to resource-saving technologies that do not harm the environment, do not require the use of additional chemicals, growth stimulants and mordants.*

**Keywords:** plasma activated water, spring wheat, spring barley, spring rye, germination, pre-sowing seed.

#### Torikov V.E., Malysheva E.V. **INFLUENCE OF SEEDING RATES AND SEEDING DEPTH ON GRAIN YIELD OF CORN HYBRIDS OF DIFFERENT RIPENING**

*The influence of seeding rates and seeding depth of new generation corn hybrids on the change in grain yield is shown in the article. The field germination rate of hybrid seeds of NK Falcon - FAO 190, Delitop - FAO 210, DKS 3203 - FAO 210, ES Olympus - FAO 250, ES Congress - FAO 250, DKS 3717 - FAO 280, DKS 3912 - FAO 290, DKS 4014 - FAO 310 decreased from 2.4 to 5.0% with an increase in the seeding rate to 87 ths pcs/ha as compared to those with the seeding rate of 67 ths pcs/ha. For the soil and climatic conditions of the forest-steppe of the Central Chernozem region typical of the lands of some districts of the Kursk region, the beginning of the optimal corn sowing dates is considered the period when the average daily soil temperature at the seeding depth is 8-10°C. The highest grain yield of 7.35-7.15 t/ha was with the optimally early corn sowing dates in the period of May 5-10 on the experimental variants with the seeding rate of 67 ths pcs/ha and the seed depth of 6-8 cm. At a later date, May 15-20, the seeding depth should be of 8-10 cm. Both shallow and deep seeding depth of 4 cm and 12 cm, respectively, on experimental variants with the seeding rate of 67 ths pcs/ha resulted in the decrease in grain yield.*

**Keywords:** seeding rate, seeding depth, field germination rate, leaf area, grain yield.

### VETERINARY MEDICINE AND ZOOTECHNY

#### Abarykova O.L., Kicheeva T. G. **HEMATOLOGICAL PARAMETERS CHANGES IN DOGS WITH BABESIOSIS**

*On the territory of Russia, babesiosis of dogs is more often caused by the protozoa of Babesia canis species. Certain changes in climatic conditions in the Central region of the Russian Federation in recent years have led to an increase in the population of Ixod mites – carriers of piroplasmids. This, in turn, caused the deterioration of the epizootic state for hemosporidiosis, and babesiosis of dogs in particular. Since almost all systems of the body are affected by babesiosis in dogs, we can say that the blood and the reticuloendothelial system are most deeply involved in the pathological process. Thus, the level of parasitemia in severe, hyperacute and acute babesiosis ranges from 32 to 68 %; in mild cases - from 0.7 to 1.5-4.5 %. Change in the morphological composition of blood in dogs infected with babesia is characterized by a decrease in the number of red blood cells by 16-25%, hemoglobin by 14-20%,*

hematocrit by 10-20%, platelets by 50-80%. In addition, leukocytopenia was noted. The rate of erythrocyte sedimentation (ESR) was increased to an average of 18 mm/h (by 60%). The number of white blood cells was reduced by an average of 20%. The analysis of blood biochemical parameters revealed an increase in ALT by 2-3 times, AST by 2-4 times, total (3-5 times) and direct (3-10 times) bilirubin, alkaline phosphatase by 3-10 times, creatinine by 10-40 %, urea by 5-20%; a decrease in total protein by 5-15%, which indicates a violation of liver activity.

**Keywords:** babesiosis, blood parasites, parasitic diseases, dogs, hematological indicators

#### Arkhipova E.N. **MORPHOFUNCTIONAL CHANGES OF SPLEEN IN GIVING COLLOIDAL SILVER TO BROILER CHICKENS**

Immune system is one of the main systems of body, which largely determines the degree of animals and poultry health, as well as their adaptive capabilities and productivity. In this regard, research is of great interest, which is aimed at identifying morphofunctional connections of all systems of the chicken body, in particular, spleen as one of the organs of immune system that provides protection from viruses, bacteria and foreign cells. This article describes the results of histological studies of spleen when giving a solution of colloidal silver to broiler chickens of Ross-308 cross. 2 groups were formed for the experiment: control and experimental. The conditions of keeping and feeding broiler chickens were the same. The experimental group was given a silver-based drug according to a certain scheme. For histological examination, the selected autopsy material was compacted into paraffin after fixation in formalin, and then sections with a thickness of 7 microns were made on a rotary microtome. The preparations were stained with hematoxylin and eosin, studied under a Leica DM 1000 microscope. As a result of histological examination, minor changes in the structure of chickens' spleen at different stages of development were revealed. Thus, the chickens of the experimental group at the age of 14 days had larger, well-defined lymphatic follicles, there was no mucoid swelling, compared with the control group. No significant morphological differences were found in chickens of both groups up to 42 days of age. Thus, the use of colloidal silver does not have a negative effect on the bird's body and drinking it from the age of three days will increase the safety of young animals by stimulating lymphocytopoiesis.

**Keywords:** broiler chickens, colloidal silver, histological studies, immunity, spleen

#### Buyarov V.S., Buyarov A. V. **EFFICIENCY OF MODERN TECHNOLOGIES IN INDUSTRIAL POULTRY FARMING**

The realization of the task of increasing the efficiency of the production of eggs and poultry meat is possible only on the basis of modern technologies for the maintenance and feeding of meat and egg poultry promising crosses with high genetic potential. The purpose of the research was to develop and generalize a complex of modern resource-saving technologies that ensure an increase in the economic efficiency of industrial production of eggs and poultry meat. During the research, the following methods were used: monographic, abstract-logical, comparative analysis, zootechnical, zoohygienic, economic-statistical and others. As a result of the conducted research, recommendations have been developed to improve the efficiency of poultry meat production based on resource-saving technologies for broiler maintenance and the use of biologically active additives (probiotics, prebiotics, phytobiotics, synbiotics, antioxidants and other drugs). For the further development of the industry, special attention should be paid to the development of scientifically based adaptive resource-saving technologies for growing and keeping poultry of the new domestic meat cross "Smena 9", ensuring the maximum manifestation of the genetic potential of this highly productive cross. Potential points of growth in the development of poultry farming are: the creation and development of breeding and genetic centers; the introduction of new methods of poultry breeding; the creation of plants on the territory of the Russian Federation for the production of biologically active additives; the production of functional food products; development of the organic products market; ensuring the implementation of a traceability system for the production in order to guarantee quality, product safety and the possibility of export deliveries; increasing export potential; introduction of digital production management systems; drawing up comprehensive labor organization maps adapted for new technical and technological solutions when creating modern poultry meat crosses of domestic breeding, and optimized taking into account changes in the workflow and methods of work, load standards.

**Keywords:** poultry farming, broilers, resource-saving technologies, biologically active additives, organic products, efficiency.

Glukhova E. R., Kicheeva T. G., Lebedeva M. B. **TESTING OF BIOLOGICAL MATURITY OF PIGLET BONE TISSUE IN THE EARLY POSTNATAL PERIOD**

*The article presents the results of collagen content study in bone tissue of ribs, metaphyses and diaphyses of humerus and tibia of piglets, which changed during the period of 2-3 months of age, and increased to a maximum by the age of 4 months of piglets, which indicated the development of a network of collagen fibers and the rhythmicity of growth and differentiation of bone tissue in piglets in early postnatal ontogenesis. In the rib tissue (spongy bone), the collagen content is slightly higher than in the humerus and tibia, which consist of spongy and compact tissues. In the metaphyses of tubular bones, the maximum values of collagen are found in piglets at 3 months of age, and in the diaphyses-at 4 months. On the other hand, the amount of non-collagen proteins during this period decreased by almost 2 times, that is, in the period from 1 to 4 months of age of piglets, intensive maturation of bone tissue occurs, the proportion of mature collagen and the mineral phase increases. The more intensive maturation of the tubular bones of the hind limbs, which carry a large load, compared with the humerus and, especially, bone tissue of ribs, was confirmed by a 3-5-fold increase in the ratio of collagen and non-collagen proteins in the metaphysis and diaphysis of tibia. High values of oxyproline and hexosamine (OP:HA) ratio were found in piglets of 3-4 months of age, which increased almost 2 times, which indicates the intensification of the processes of collagen formation during these periods of animal growth and the possibility of using it as a test of biological maturity of bone tissue.*

**Keywords:** bone tissue, collagen formation, early postnatal period, piglets.

Davydov E. V., Usha B. V., Maryushina T. O., Kryukovskaya G. M., Nemtseva Y. S. **CHANGES IN BIOCHEMICAL AND HEMATOLOGICAL PARAMETERS OF DOGS' BLOOD IN ONCOLOGICAL DISEASES AFTER PHOTODYNAMIC THERAPY**

*Photodynamic therapy is a targeted method of treating tumors, in which healthy tissues are exposed to minimal impact. The method is based on the photodynamic effect that occurs when a tumor that has accumulated a photosensitizer drug is irradiated with laser radiation of a certain wavelength that excites the photosensitizer, as a result of which singlet oxygen and other active oxygen forms are formed in tumor tissue. This causes a cytotoxic effect, due to the oxidation of cellular structures. The aim of the research was to study the effect of photodynamic therapy with the Photoditazine photosensitizer on the biochemical and hematological blood parameters of dogs with malignant oncological diseases. The study was carried out on 31 dogs of 9 to 12 years, of different breeds and different sexes, with malignant tumors (breast cancer, basal cell skin cancer, squamous cell oral cancer, soft tissue sarcoma), at the I and II stages of the oncological process, without signs of metastasis. Blood sampling was carried out according to the standard procedure, on an empty stomach before photodynamic therapy, before the introduction of a photosensitizer, and two days after. Photodynamic therapy was performed according to the standard method, with a photosensitizer "Photoditazine" at a dose of 0.8-1 mg / kg, which was administered 3 hours before irradiation. It was found that photodynamic therapy, at I and II stages of the oncological process, does not significantly affect the hematological and biochemical parameters of the blood of dogs. This proves the safety of using this technique for the treatment of dogs with neoplasms.*

**Keywords:** dogs, tumor, photodynamic therapy, photosensitizer, Photoditazine, laser irradiation, biochemical, hematological parameters of blood.

Ivanova D.A. **INFLUENCE OF A SEASON ON MILK QUALITY INDICATORS IN THE FARMS OF THE TOTEMSKY, GRYAZOVETSKY AND VOLOGDA DISTRICTS OF THE VOLOGDA REGION**

*The article presents the results of studies of milk qualitative indicators: mass fraction of fat, mass fraction of protein, the number of somatic cells in the farms of the Totem, Gryazovets and Vologda districts of the Vologda region for 2020. On the basis of the data obtained, a research base was formed, a comparative characteristic of the quality indicators of milk, taking into account the season, was carried out. During the analyzed period of time, a total of 61360 samples were examined. Milk sampling was carried out in accordance with the monthly control cow milking schedule and tested on a Combi-Foss infrared spectrometer. The device of the FOSS company (Denmark), which was used to analyze the quality of milk, is the world leader in the production of analytical instruments. The main advantages of this milk analyzer include high measurement accuracy, obtaining several indicators at the same time. According to the results of the study for 2020, all analyzed farms in the Vologda Oblast have high quality milk indicators that meet the requirements of GOST. In autumn period, the highest indicators of milk quality are noted. The content of somatic cells complies with the Russian standard GOST R 52054-2003 "Natural cow's milk - raw material. Technical conditions". According to the results of the research for 2020, all the breeds under study showed high quality indicators of milk that meet the requirements of GOST throughout the year.*

**Keywords:** cows, mass fraction of fat, mass fraction of protein, somatic cells, season

Ponomarev V.A., Yakimenko N.N., Kletikova L.V., Mannova M.S., Kaminskaya A.A., Voronova K.A., Vysotskaya N.V. **FEATURES OF DIFFERENT FORAGE ADDITIVES INFLUENCE ON BIOCHEMICAL INDICATORS OF BLOOD IN CHICKENS**

*The article deals with the influence of energetically active biological additives on biochemical parameters of Moscow Black chickens blood. 14-day-old chickens of the 1st, 2nd and 3rd experimental groups were injected with water for 10 days, respectively, with flower pollen at a dose of 1 g/l, Yuberin 1 ml / l on the first day of the experiment, followed by a daily increase in the dose by 1 ml and Carnivit in a dose 0.25 ml / l, group 4 served as a control and received clean drinking water. The study of biochemical parameters was carried out using a semi-automatic biochemical analyzer Mindray BA-88A, followed by mathematical processing of the data based on the standard Microsoft Excel-2010 software package. As a result, concentration of globulins in chickens of the 1st group increased to 66.52%, total calcium to 3.30 mmol / l and magnesium to 0.76 mmol / l. An increase in the content of total protein and uric acid in chickens of the 2nd group was found to 61.18 g / l, 247.60  $\mu$ mol / l and enzymatic activity. In chickens of the 3rd group, an increase in the level of glucose and triglycerides up to 19.35 mmol / l and 2.68 mmol / l, the protein coefficient up to 0.85 was revealed. The data obtained allow us to conclude that the studied biochemical parameters of blood serum did not go beyond the reference values and corresponded to the age characteristics of the chickens. Pollen has a stimulating effect on nonspecific resistance, immune defense and mineral metabolism; Ueberin – for protein and phosphorus metabolism; Carnivite – for trophic functions and energy metabolism.*

**Keywords:** chickens, biologically active substances, specificity of influence, basic and mineral metabolism.

Selimyan M.O., Yakovleva O.O. **RATING ASSESSMENT OF FOREIGN AND DOMESTIC BREEDING BULLS USED WITHIN THE YAROSLAVL BREED LIVESTOCK BY REPRODUCTIVE CHARACTERISTICS OF DAUGHTERS**

*The article presents the results of rating assessment of foreign and domestic breeding bulls of Yaroslavl breed according to reproductive characteristics in the conditions of the northwestern zone of the Russian Federation. The aim of the study is to compare bulls of domestic and foreign selection, used on the breeding stock of the Yaroslavl breed, according to the reproductive characteristics of their daughters. The research was carried out on the basis of the rating developed in SZNIIMLPH. 415 daughters of seven domestic sires and five bulls of foreign selection were studied. Breeding bulls with at least five daughters were selected for the formed database. To carry out the study, the method of rating assessment of bulls was used according to the complex of daughters' reproduction signs. The method of rating assessment based on a set of features is to calculate the average rating of a bull for all the studied features. As a result of calculating the rating assessment of bulls according to the complex of daughters' reproduction signs. in the population of the*

*Yaroslavl breed, it was found that the bull of domestic selection Lornet 1026, which took the first position in the rating, has daughters with high early maturity, and its seed is quite active, as evidenced by the low index of insemination. At the same time, the daughters of this bull have the longest service period of 126 days. The daughters of a domestic breeding bull Nylon 1056 showed optimal performance for all the traits under study. The first place in the ranking of foreign bred bulls belongs to Rethyrement 11720463. His daughters have a high maturity - the age of the first fruitful insemination is 15.2 months; the age of first calving is 24 months, the optimal service period is 88.4 days, which is as close as possible to the norm of 90 days, insemination index was 1.4.*

**Keywords:** *a breeding bull, Yaroslavl breed, selection, reproduction.*

Shtytsko A.A., Volkov I.R., Malinovskaya E.E. **METHOD OF MAKING AN IMMOBILIZING EXTERNAL ORTHOSIS FOR FIXING THE WRIST JOINT IN A DOG**

*Injuries of the limbs of dogs remain an urgent problem today. Often, post-traumatic limb immobilization causes great discomfort, a decrease in the quality of life and difficulties in caring for an animal. The development of a method for making an orthosis for immobilizing a limb in a dog with ligament sprain was the goal of the work. Theoretical analysis was carried out at the Department of Obstetrics, Surgery and Non-infectious Animal Diseases of Ivanovo State Agricultural Academy, the experimental part was carried out on the basis of LLC Prosthetic Workshop. Accessible Environment "(Ivanovo). First, an impression was made using a plaster cast applied from the distal epiphysis of the radius and ulna to the proximal epiphysis of metacarpal bones. The impression was placed in a sand bath for fixation by inserting a metal pin with protruding ends into its center, after which the resulting shape was filled with plaster. After removing from the plaster mold, the cast was processed by grinding, repeating the shape of the animal's limb, and removing unnecessary elements. The prepared element was covered with a thick cotton fabric. For the orthosis, we used low-pressure polyethylene, which was heated to 160–180 °C, applied to the product and spread with a spatula, giving the shape of a workpiece, after which the edges were polished, and individually selected fixing and connecting elements were added. For the convenience of an animal, a pad of soft material was added. The finished product was used to fix the wrist bones without maintaining joint mobility. Two days later, the dog adapted to the device. When the external orthosis was wearing for 14 days, there were no adverse reactions from the animal.*

**Key words:** *dog, trauma, external immobilization, manufacturing method, orthosis, rehabilitation*

**ENGINEERING AGROINDUSTRIAL SCIENCE**

Sibirev A.V., Mosyakov M.A., Prikhodko I.A., Lazovsky S.V. **RESULTS OF CAMERAL STUDIES OF THE MODULE FOR ROOT CROPS AND BULBS SEPARATION**

*In machine technology of harvesting and post-harvest processing of root crops and onions, one of the most important quality indicators that determines the duration of root crops storage is the presence of soil and plant impurities in the pile of soil and plant impurities being put into storage. The lack of methods or their insufficient efficiency in solving the problem of separating mechanical impurities from marketable products of root crops and onions on the separating working bodies of harvesting machines, both in the first and second phases of harvesting and in technologies and technical means of post-harvest processing, leads to the widespread use of manual labor in post-harvest processing operations, which increases the cost of production. In order to increase the efficiency of separation of root crops and onions in the technological process of post-harvest processing and reduce manual labor in federal agro-engineering center VIM, a module was developed for separating a heap of root crops and bulbs. The article presents the results of cameral studies to determine the amount of preliminary separation, carried out on the basis of the «Machine-building plant of experimental designs». The graphical dependence of the intensity of soil sieving along the length and width of the bar feeder conveyor at  $Q_{Bp} = 30$  kg/s,  $v_{EL} = 1,6$  m/s,  $S_1 = 0,4$  m is presented.*

Using the obtained graphical dependence, the mass of sifted soil impurities through the slotted holes of feeder conveyor was determined when the feed was changed  $Q_{BP}$  of soil impurities with constant values of technological parameters  $v_{EL} = \text{const}$ ;  $S_1 = \text{const}$ ,  $\alpha = \text{const}$ . The largest value of the mass  $K_{PR}$  of the sifted soil was revealed, regardless of the value of the supply of soil impurities in the section of attenuation of the wavelength of the working branch of the feeder conveyor.

**Keywords:** separating module, soil impurities, roots and onions, working bodies.

#### Smirnov V.A., Volkhonov M.S. ANALYSIS OF OXYGEN OXIDIZING POTENTIAL VALUE IN THE COMPOSITION OF AN OZONE-AIR MIXTURE WHEN DISSOLVED IN WATER

Of the existing methods of deferrization water from underground water sources based on the oxidation of iron with further deposition of hydroxide on the surface of filter clarifiers, a method using an ozone-air mixture as an oxidizer has been developed. Ozone, due to the instability of the molecule, is produced right on the spot with the help of quiet corona discharge generators and ultraviolet emitters. In practice, when calculating water degreasing systems using an ozone-air mixture, only the oxidative potential of the available ozone is taken into account, and the oxidative potential of oxygen is not taken into account. The article provides evidence of a high value of the oxidative potential of oxygen in the composition of an ozone-air mixture when it is dissolved in water. As a result of calculations, it was found that when ozone is obtained by the method of quiet discharge, the oxidative potential of ozone in the composition of one cubic meter of ozone-air mixture dissolved in water is  $E_{o\ oz\ OVC} = 12.42\ V$ . Under the same conditions, the oxygen potential in the composition of the ozone-air mixture dissolved in water is  $E_{o\ O_2\ OVC} = 10.681\ V$ . When ozone is obtained due to ultraviolet irradiation, the oxidative potential of ozone in the composition of one cubic meter of ozone-air mixture dissolved in water is  $E_{o\ oz\ OVC} = 0.994\ V$ . Under the same conditions, the oxygen potential in the composition of the ozone-air mixture dissolved in water is  $E_{o\ O_2\ OVC} = 11.352\ V$ . The contribution of oxygen to iron oxidation ranges from 49 to 92% of the total oxidative potential of the ozone-air mixture, depending on the method of ozone generation, and should be taken into account when calculating and designing water de-ironing systems.

**Keywords:** oxidation potential, ozone, oxygen, ozone-air mixture, deferrization of water.

#### Terentiev V.V., Smirnov S.F., Maksimovsky Yu. M., Krasnov A. A. CALCULATION OF THE INITIAL RELIABILITY OF MACHINE PARTS ACCORDING TO THE METHOD OF TWO MOMENTS

The paper indicates that at the design stage of machine parts, it is necessary to take into account a number of important design and operational parameters. At the same time, it is noted that the geometric, strength parameters and load factors on machine parts are stochastic values that are not sufficiently taken into account by the safety coefficient when calculating the generally accepted deterministic method for permissible stresses, taking into account the nominal geometric dimensions of the part. The calculation by of permissible stresses does not allow us to obtain the probability of non-destruction of parts and accurately characterize the reliability of the parts. The paper describes a probabilistic method for calculating details – the method of two moments, which can be used in the case when the variable parameters obey the normal distribution law (Gauss distribution law). To take into account the stochastic nature of various factors affecting the reliability of the part, according to the probabilistic calculation method, the concept of the part operability function is introduced. The application of the proposed method is shown by the example of calculating reliability based on the strength of a keyway connection with a prismatic key. The calculation using the proposed method showed that the standard deviation of the yield strength of the steels from which the keyways elements are made makes a decisive contribution to the reliability of the connection. The analysis of the proposed solution using the probabilistic method showed that to increase the reliability of the connection, it is possible to increase the strength characteristics of the steels used or increase the safety coefficient of the steel. The result of the calculation according to the proposed method showed that with an increase in the safety coefficient of steel for the keyway connection from 1,25 to 1,5, the reliability of the key joint connection increases by 686 times.

**Keywords:** reliability, strength, permissible stress, yield strength, reliability index, coefficient safety



## **SOCIO-ECONOMIC SCIENCES AND HUMANITIES**

Gurkina L.V., Zhukova T.A., Shapovalova T.A. **"EXCELLENT SYNDROME" OF MODERN STUDENTS – MYTH OR REALITY?**

*The proposed work provides data on the change in the academic performance of students of the 1st-4th courses, the reasons of it, and also considers the problem of "excellent student syndrome" in first-year students. Issues such as interest and control by parents at different stages of education are investigated; the dependence of the attitude to study, both graduates of secondary schools and graduates of secondary vocational education organizations is traced. A technique widely used in psychological research was proposed. All surveys were carried out anonymously in order to obtain the most objective assessment. Differences in the concepts of "excellent student syndrome" and "perfectionism" are considered with students of different age categories. These concepts are often misunderstood by young people. The research results show a decrease in the control of parents/legal representatives with each course, changes in students' awareness of the need for education. Unfortunately, some students lose the importance of obtaining knowledge and diploma, considering the procedure of studying at a university as an "obligatory stage" after school or college. One of the motivational components of successful studies is financial incentives, in the form of an increased scholarship. The paper proposes a number of practical ways to solve the identified problems. The purpose of this work is to identify these problems among students in higher education institutions, students of different courses, as well as ways to resolve them. In the nearest future, it is planned to expand the "geography" of research with the involvement of students of both agricultural universities and universities located in the Ivanovo region.*

**Keywords:** study, perfectionism, success, motivation, analysis, school, college

Kolesnikova A.I., Emelyanov A.A. **THEORETICAL AND PRACTICAL ASPECTS OF DISTANCE TEACHING IN A NON-LINGUISTIC HIGHER SCHOOL (FROM THE EXPERIENCE OF TEACHING A "FOREIGN LANGUAGE" DISCIPLINE)**

*This article is devoted to the current problems of distance teaching in higher educational institutions of a non-language profile. In recent years, there has been increasing interest in distance teaching as an alternative to the usual form in obtaining higher education, advanced training, and professional retraining. Due to the unfavorable epidemiological situation in the world due to the 2019 pandemic, we are seeing a certain modernization of higher education, emphasizing the formation of a single global information and educational space using distance learning methods in a larger volume. For full use in the educational process of distance forms, teachers and university students must develop skills in the use of these technologies, combining them with traditional organizational forms of teaching a foreign language in a non-language university. A possible reason for the lack of motivation of university teachers to work in this direction is the high labor intensity associated with the creation of methodological materials for distance teaching, the lack of time to create new distance courses, the need in some cases to do double work, combining traditional forms of training with remote ones. The article discusses the possibility of using the MOODLE platform, for which a model of distance teaching has been developed and is currently being improved. The authors of the article give examples from the experience of remote teaching of a foreign language in a non-language university; special features of lectures, seminars, consultations, practical exercises in remote format are considered. The main difficulty of distance teaching is seen in the need for tighter control over the training process in order to prevent the possibility of falsification of training.*

**Keywords:** distance teaching, foreign language, non-language university, MOODLE

Komissarov V. V. **IVANOVO REGION AT THE ALL-UNION AGRICULTURAL EXHIBITION ON THE EVE OF THE GREAT PATRIOTIC WAR**

*The article is devoted to the participation of the Ivanovo region in the All-Union Agricultural and Economic Exhibition (VSHV), which was opened in the USSR in 1939. The history of agricultural exhibitions in Russia and the USSR is considered. It is noted that the tradition of conducting such events dates back to the middle of the XIX century. The author highlights the differences between the All-Union Agricultural Exhibition and earlier ones. It is emphasized that the leading tasks of the All-Union Exhibition of 1939 were propaganda and ideological work, demonstration of the advantages of socialist agriculture.*

*These goals were listed in the "Law of the USSR on the All-Union Agricultural Exhibition", in the speech of V. M. Molotov at the opening of the event, in printed publications. Before the opening of the VSHV, a propaganda campaign was held in the popular science press, in the magazines "Science and Life" and "Technology of Youth". The article analyzes the exposition of the Ivanovo region at the exhibition, which was located together with other regions of the central part of the RSFSR. Much attention was paid to the mechanization of agriculture and the activities of machine and tractor stations (MTS). In those years, the Ivanovo region specialized in technical crops: flax, hemp, and a new rubber-bearing crop-kok-sagyz, the cultivation of which was considered the most important task in those years. The names of the leading agricultural producers in the region were called in the exhibition: successful link workers, MTS machine operators, tractor drivers, combine harvesters and others. Horse breeders who specialized in breeding heavy-duty breeds Brabanson and Kleydesdal showed themselves very well at the exhibition. The article is illustrated. It can be useful for teachers, students, local historians, anyone interested in the history of domestic agriculture.*

**Keywords:** *Ivanovo region, agricultural exhibitions, All-Union Agricultural Exhibition, agricultural production*

Temirdasheva K.A., Gukezhev V.M. **EVALUATION OF THE COMPETITIVE STRUCTURE OF DRINKING MILK MARKET**

*The monitoring of milk assortment in the leading supermarkets and markets "Dubki", "Central" of the city of Nalchik was carried out. In the Kabardino-Balkar Republic, agricultural organizations account for 15% of the total volume or 69.4 thousand tons, the share of milk produced by farms was 15.2% or 70.6 thousand tons, households 69.8% and 323.5 thousand tons of milk respectively. The number of cows in December 2020 was 132.6 thousand; the largest number of them-94.4 thousand heads is concentrated in households. The productivity of cows increased by 13% and amounted to 5.8 thousand kg (in the same period of 2019 — 5.1 thousand kg). It was established that out of 10 names of milk on the day of registration in the shopping center "Vester-Hyper", the Republic was represented by one – milk "New village" 1 l., 2.5% - the manufacturer is LLC "NMK", KBR, Nalchik, in the shopping center "Gorny" out of 16 names – only three – pasteurized drinking milk "Shepherd" and "New village" - LLC "NMK", KBR, milk "Divo" - LLC "MK Svetlovodsky", KBR, Zolsky district, in the shopping center "Deya" from 15 names The Republic was represented by the same three names as in the shopping center "Gorny". In the Central market, there is one name - milk "Divo", and "Dubki" - "Divo", "New Village" and pasteurized milk of JSC "Karagachsky dairy", KBR, S. Karagach. To establish the specific weight of the commercial part of milk, in the former collective farms and state farms, 16% was taken away from the total production, which was spent on drinking calves (at the rate of 360 kg. per calf for 6 kg per drying) and on on-farm expenses (for feeding workers), the rest of 84% of gross production was considered commodity.*

**Keywords:** *milk, production, assortment, dairy cattle breeding, price, quality, efficiency.*