узгоджується з нашими результатами абсолютних та середньодобових приростів в дослідній групі курчат-бройлерів.

Висновки.Нині існуєгостра проблема розробки та використання нових лікувально-профілактичних препаратів для галузі птахівництва, яка інтенсивно розвивається та потребує ефективних та безпечних засобів. Використання пробіотичного препарату "ТІММ-П", який додавали до основного раціону птиці позитивно вплинуло на динаміку живої маси курчат-бройлерів. За використанні пробіотичного препарату виявлено вірогідне підвищення абсолютних та середньодобових приростів, а також сприяло збільшенню в м'ясі вмісту білків, про що свідчать проведені хімічні дослідження.

Список використаних джерел

1. Suryadi U, Nugraheni YR, Prasetyo AF, Awaludin A. (2019) Evaluation of effects of a novel probiotic feed supplement on the quality of broiler meat. *Vet World*, 12(11). P. 1775-1778. doi: 10.14202/vetworld.2019.1775-1778.
2. Poberezhets, J., Chudak, R., Kupchuk, I., Yaropud, V., Rutkevych, V. (2021). Effect of probiotic supplement on nutrient digestibility and production traits on broiler chickens. *Journal of Agricultural Science*, 32 (2), P. 296-302. doi: https://doi.org/10.15159/jas.21.28
3. Poberezhets, J. M.,Yaropud, V. M.,Kupchuk, I. M.,Rutkevych, V. S., Burlaka, S. A. (2023). The Use of Probiotic in Chicken-Broilers Feeding.*Scientific Messenger of LNU of Veterinary Medicine and Biotechnologies. Series: Agricultural Sciences*, 25(99). P.48-54. doi:10.32718/nvlvet-a9908
4. Nath, S. K., Hossain, T., Ferdous, M., Siddika, A., Hossain, A., Maruf, A. A., Chowdhory, A. T., Nath, T. C. (2023). Effects of antibiotic, acidifier, and probiotic supplementation on mortality rates, lipoprotein profile, and carcass traits of broiler chickens. *Veterinary and Animal Science*, 22, 100325. doi:10.1016/j.vas.2023.100325.

DETECTION OF MASTITIS IN NON-LACTATING COWS

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Actuality. Mastitis still remains a serious veterinary problem, causing significant economic damage to agriculture and cattle breeding [1, 4]. In connection with the relevance of the problem in foreign countries, national programs "Healthy udder" have been created, which are subsidized by the state [2]. The creation of such a program was also planned in Ukraine. But due to the crisis in agriculture, it was postponed indefinitely. One of the points of these national programs is the control of mastitis in dry cows. However, veterinary control of mastitis in dry cows is not carried out reliably due to the lack of simple and reliable methods of diagnosing mastitis. This is explained by the fact that previously there was no need for differential diagnosis of mastitis in dry cows. This was due to the fact that with the transition of the cow to dry period, there is no veterinary and zootechnical control over the non-functioning mammary gland. Having simple and accurate methods of diagnosing mastitis during the dry period, we have the opportunity to collect objective information about the spread, dynamics of mastitis, the course and consequences of the disease, to establish an etiological connection between mastitis in cows and diarrhea in newborn calves. At the moment, the procurement of modern livestock management technologies is underway abroad, including elements of anti-mastitis measures, in particular, the use of express mastitis

diagnostics (alpha-test, Profilakreagent, mastitodiagnost), the introduction of prolonged anti-mastitis drugs into all parts of the udder after the end of lactation. However, due to the high cost, these innovations do not take root in practice [3]. In addition, in order to control the mastitis situation, it is necessary to consistently and carefully implement all points of the program for improving the health of the cows` udder. The elements of the mastitis control program of non-lactating cows should be adapted to the technology and economic condition of the dairy industry [4].

The aim of our research was to improve the methods of diagnosing mastitis in dry cowsю.

Material and methods. The work was performed on the basis of the experimental agricultural enterprise "Dachne" of the Odesa region on cows of the red steppe breed and Holsteins of domestic and foreign selection of 3-4 lactations. Animals were housed in typical 2- and 4-row buildings. Keeping cows is tied. Cows are not divided into physiological groups. Dry cows are keeping with lactating cows. Diagnosis of subclinical mastitis in dry cows was carried out using the universal mastitis indicator "Dnipr-1".

We chose the universal indicator "Dnipr-1", we selected the appropriate degree of liquid dilution ("Progress M-22"), while the evaluation criteria were the percentage of matches with a direct count of leukocytes and the speed of completion of gel formation.

The mastitis indicator "Dnipr-1", " is made on the basis of the liquid detergent "Progress M-22", and depending on the concentration, it can be used for the diagnosis of subclinical mastitis by udder quartes, as well as for the detection of mastitis milk in the collective during lactation. The experimental diagnostic was tested on 50 cows. The base for comparison was 10% mastidine solution, alpha test. Examination of cows for subclinical mastitis was carried out before starting, clinical examination of the mammary gland 2 weeks after the stop of milking and 7-10 days before the expected calving. Diagnosis of mastitis in the middle of dry cows by the visual express method proposed by us (N.I. Polyantsev, L.G. Roman), based on the organoleptic differences of normal and pathologically changed udder secretion of dry cows. The organoleptic evaluation of the udder secretion of dry cows was carried out according to the following indicators: volume, color, consistency, stickiness, opalescence, uniformity. Luminescent-microscopic examination of the udder secretion of dry cows was performed using a Biolam-70 microscope with a luminescent attachment. Leukocytes were counted according to the Prescott-Bride method in 50 fields of view with a division into live (green color) and dead (orange and red color). Acridine orange was used as a phosphor.

Results. In the Dachne State Enterprise of the Odesa region, clinical mastitis during the lactation period is registered in 16.8-22.7% of cows, catarrhal and purulent-catarrhal mastitis predominates (25.1-48.7% of the number of cows), which indicates a galactogenic way penetration of mastitis pathogens into the udder.

During the dry period, we diagnosed clinical mastitis in 14.3-21.7% of cows. We registered 2 types of inflammation: catarrhal, purulent, catarrhal-purulent, i.e., those that flow in the udder system and are focal in nature, and spread initially in subacute and chronic form. That is, it is an exacerbation of the inflammatory process, which existed during the lactation period or the start-up period, and was not detected and cured.

According to the obtained data, the syndromics of clinically mastitis of dry cows differs from that of the lactation period. The smoothing of signs of inflammation (hyperemia, increased local temperature, swelling and tenderness) or their absence indicate the specificity of the mechanisms of local protection of the mammary gland against microorganisms. Therefore, the diagnosis is based only on the organoleptic signs of the secretion. We found that the volume of secretion in the inflamed part increases (compared to the lactation period) and correlates with the severity of the disease. In addition, 3-5 ml of secretion is extracted from a healthy part, then with clinically mastitis its volume reached 100-120 ml, that is, it increased

25-30 times. In the udder secretion of dry cows, casein as one of the components of the secret of the inflamed lobe was absent.

Diagnosis of subclinical mastitis during the dry period was carried out by the visual express method, which is based on the fact that in the quarters of the udder affected by subclinical mastitis, postlactational involution slows down for 2-3 weeks. The most contrasting differences were found on the 30th day of post-lactational changes. During this period, the udder secretion of healthy udders had a thick consistency, well-defined stickiness, and its color varied from straw-yellow to amber. These data confirm the end of the degenerative phase of the post-lactational involution of the mammary gland parenchyma.

With subclinical mastitis, the formation of secretion (sirka) in the affected parts of the udder was delayed, the destructive processes in the parenchyma were still ongoing, therefore, in the middle of dry period, it had a semi-liquid consistency, reduced stickiness, the volume was 4-5 ml, the color was gray, that is it corresponded to the udder secret obtained from healthy quarters of the udder on the 10th day of the dry period (in the stage of degenerative changes).

This confirms the delay of the second (proliferative) phase of mammary gland involution. However, the use of the visual method is limited to the first (degenerative) phase of post-lactational changes, so we focus on the cytological method, which is the main, easy to implement and quite informative on lactating cows. At the same time, the obtained data were confirmed by quantitative counting of leukocytes and their differentiation into live and dead cells. Based on the obtained data, it was established that the relative number of live leukocytes in the secretion of healthy udder lobes was on average 60.85%. With subclinical mastitis, it increased to 69.52%.

The absolute number of live leukocytes throughout the dry period exceeded this number in healthy quarters of the udder by 2.01-2.4 times. These data serve as an additional argument of the suitability of the cytological express method for the diagnosis of subclinical mastitis in the post-lactation period.

According to our data, in the normal udder secretion on the 30-th day (in the middle) dry leukocytes were on average $14.4 \cdot 10^8$ /ml. By the 50-th day of the dry period, it decreased to $9.34 \cdot 10^8$ /ml. In the samples from the affected parts of the udder with subclinical mastitis, the concentration of leukocytes in all periods of dry period was 1.87-2.23 times higher ($P<0.05$).

When choosing an express-diagnostic, we proceeded from availability, cost of raw materials, universatility, unpretentiousness to storage and terms.

Work was carried out to determine the degree of dilution of the "Progress M-22". At the same time, the degree of coincidence with the direct count of leukocytes and the speed of gel formation were taken into account. The most optimal dilution was 1:15. The target product was called mastitis indicator "Dnipr-1". Setting up the test reaction and evaluating the results are the same as for lactating cows. A 5% dimastine solution was used as a basic indicator.

On the basis of the obtained data, we established that the means of diagnosing subclinical mastitis of dry cows, based on the use of the "Progress" liquid at a dilution of 1:15 in 92% of cases coincides with the visual express method and in 99% - with a direct count of the number of leukocytes. In terms of sensitivity, it exceeds imported means of similar purpose - alpha-test and Profilac-reagent.

Conclusions. In dry cows, clinical mastitis manifests in the form of catarrhal, purulent-catarrhal, purulent; this confirms the galactogenic way of penetration of mastitis pathogens into the milk of the mammary gland.

In normal udder secretion during the dry period, live leukocytes prevail over dead ones (ratio 1.32-1.79 : 1.0). Subclinical mastitis is characterized by a doubling of the absolute number of live leukocytes in comparison with the secretion from healthy quarters of the udder.

Effective veterinary control during the dry period using the proposed diagnostic methods will prevent a decrease in milk productivity in the herd and the risk of postpartum mastitis, and preserve the health of the mammary gland and the life of the newborn offspring.

Referrences

1. Koshevy V.P. Mammological dispensation of cows using of information and diagnostic devices/ V. P. Koshevy, A. M. Pasternak//Veterinary medicine of Ukraine. 2013. No. 4.P. 29-32.
2. Ceniti, C., Britti, D., Santoro, A. M. L., Musareila, R., Ciambrone, L., Casaiinuovo, F., & Costanzo, N. (2017). Phenotypic Antimicrobial Resistance Profile of Isolates Causing Clinical Mastitis in Dairy Animals. Italian Journal of Food Safety, 6(2), 6612. doi: 10.408 l/ijfs.2017.6612.
3. Roman, L., Bogach, M., Dankevych, N., Bezaltychna, O., & Gurko, (2023). Morphological profile of the ovaries of high-yielding cows on day 0 of the induced sexual cycle. *Scientific Horizons*, 26(7), 9-18, doi: 10.48077/scihor7.2023.09.
4. Roman, L., Chornyi, V., Dankevych, N., Kitaeva, A., & Bezaltychna O. (2024). Dynamics of hypotrophic changes in the morphological formations of the ovaries of heifers of mating age on the 7-9th day of luteogenesis. *Scientific Horizons*, 27(1), 9-19. doi: 0.48077/scihor1.2024.09.

EFFECTIVENESS OF THERAPEUTIC MEASURES FOR CLINICAL MASTITIS IN COWS

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Actuality. Mastitis is still one of the most challenging veterinary problems. During the year, from 20 to 50% of cows can get sick with it [1, 2].

Economic losses caused by mastitis in dairy farming account for about 70% of total losses from diseases [3]. The source is: a decrease in milk yield by 10-12% in the herd as a whole; forced slaughter and death of animals; the deterioration of the herd's gene pool, in relation to mastitis, high-yielding animals are the most susceptible; death of newborn calves; veterinary costs, culling of genetically valuable animals [3,4].

When carrying out treatment measures for mastitis of cows, it is important to take into account that they are carried out with the simultaneous coverage of the entire milking herd and carrying out work directly in the places where the animals are kept or on the milking grounds. Thus, the proposed means should be simple, reliable, highly effective, with little cost, quickly performed, non-traumatic and meet hygiene requirements.

Materials and methods. The work was carried out on the basis of the laboratory for combating infertility and mastitis of cows of the Odesa DAU and EP "Dachne" of the Bilyaiv district of the Odesa region on cows of the red steppe breed. A total of 45 cows suffering from purulent catarrhal mastitis were selected. According to the principle of matched pairs, 2 experimental and 1 control groups of 15 heads each were formed. The distribution into groups was carried out taking into account the age of the animals and the course of the pathological process.

Cows of the first experimental group were treated with DS eyebrow ointment. The cows of the second experimental group were treated with the introduction of a 5% oil suspension of YVS (iodbismuth sulfamide, produced by the Kharkiv Biofactory). Cows of the control group