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Veterinary And Sanitary Examination Of Poultry Meat For Salmonellosis.

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ABSTRACT

According to WHO experts, poultry is one of the main salmonella reservoirs in the external environment, and poultry products occupy the first place among the sources of food toxic infections of Salmonella etiology.

Keywords: poultry farming, salmonellosis, toxic infection, products, prevention

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INTRODUCTION

Requirements for the quality and safety of certain types of food products govern the fundamental national and international standards, technical conditions and standards of organizations, sets of rules. The global standardization of food safety and quality is made up of several technical regulation systems and standards - the Russian and European systems, and international standards. The problem of ensuring the safety and quality of food products in the Russian Federation is solved on the basis of technical regulations and technical regulations and standards created for each product, improving sanitary and epidemiological systems and veterinary well-being, compliance control and certification in the field of food production and processing. The principal position of the Russian system is the full compliance of the regulatory documents with the technical regulations, which serves as a guarantee of product safety, and compliance with the standard is a guarantee of its quality.

Poultry meat is a dietary, easily digestible product, with a large number of biologically active regulatory substances, an affordable, cheap source of well-balanced amino acids. It has a lot of tryptophan, lysine, arginine, stimulating growth. Also useful is chicken meat in the diet of older people who slow down tissue repair, besides, the amount of fat in it does not exceed 10%, and in terms of the minimum cholesterol content, "white meat" is second only to fish. However, overeating protein, including animal, creates a significant burden on the kidneys, liver, and contributes to metabolic disorders. Meat in large quantities, especially fried, is contraindicated in gout, liver and kidney diseases, cardiovascular and nervous system, provokes obesity and cholesterol deposition.

It is known that with a moderate decrease in the metabolic rate of a bird, life expectancy increases, health and the immune system are strengthened, which contributes to improving the quality of its products. The enzyme and hormonal systems of a chicken are already fully functioning by the age of three months. Its health is significantly improved, so the proportion of drugs used for vaccination is reduced, and specific extractive beneficial substances accumulate in meat, by which we will always distinguish the "domestic" chicken from the industrial broiler.

American scientists conducted a study on the effect of the genotype and growing systems on the quality of slow-growing broiler meat (MRB) contained in free-range, in comparison with traditional broilers. The experiment included an assessment by consumers of meat from the breasts and legs of the MRB. No significant differences in most parameters were found; however, the meat of the breasts and legs of regular broilers was more salty than the meat of the LAB ($P < 0.05$). Indian scientists believe that lower-quality meat is inherent in fast-growing poultry meat. Similar studies were carried out in Germany, where poultry are also used in industrial poultry farming with a growing period of no more than 35 days on average. The content of the MRB is governed by EU rules 1 538/1 991 and 1 804/1 999. Environmental organizations in Germany ("Bioland" and "Naturland") require the use of only the lines of MRB and compliance with their growing times, planting density, and the presence not less than 65% of grain.

The best solution to the problem of obtaining an ecological product is feeding egg males. Their meat is the most complete, with an optimal fat content (9%). The broth from it turns out transparent and fragrant which cannot be prepared from broilers or old egg hens.

The aim of our research was to improve the veterinary and sanitary examination and assess the quality of poultry meat in salmonellosis in the Priyuntensky district of the Republic of Kalmykia.

RESULTS AND DISCUSSION

Poultry farming in the Republic of Kalmykia is at a low level. In 2015, it was decided to build a poultry factory and a feed mill. Kalmykia has long felt the need for its poultry production, and there is a need for the production of modern animal feed. At the moment, the Republic buys poultry meat and animal feed in other regions and even outside Russia. Own production of mixed feed will entail the further development of the agro-industrial complex of Kalmykia. After all, for such production will need crops that are grown in the country. The population of Kalmykia today is about 290 thousand people, and the need for poultry meat is about 5 thousand tons. The commissioning of the poultry complex will cover this need completely and will be able to provide a number of neighboring regions with its products. At the same time, the republic's need for

compound feed will be closed by 45%. However, poultry diseases in the private sector bring heavy losses, especially from bird flu and salmonellosis.

Foodborne toxic infections and toxins of microbial origin form an extensive group of human diseases that can be detected by Salmonella bacteria and their toxins, so-called conditionally pathogenic bacteria, coccal microflora, and botulinum bacteria. By toxicoinfections of microbial origin are understood such diseases, in the pathogenesis of which live pathogens and their toxins are involved. Toxicoses of microbial origin - bacteriotoxicosis can occur as a result of the action of only toxins without the participation of living pathogens forming them.

Salmonella toxicoinfections are most common among other foodborne diseases of microbial origin and are registered in all countries. The causative agents of Salmonella toxicoinfections get into the meat more often during the life of the animal and less often after death as an exogenous factor of insemination of meat during processing and storage. Lifetime contamination of meat by these bacteria occurs: in the primary disease of animals with salmonellosis; in various diseases (enteritis, metritis, swine fever and others) animals with secondary complications of salmonellosis; during slaughter and cutting up for meat of healthy animals containing Salmonella microbes in the intestine (bacteriocarrier).

In poultry, salmonellosis of chickens, dysentery of chickens, and sometimes salmonellosis of young ducks and geese are observed. Chick salmonellosis is caused by Salmonella gallinarum bacteria, chicken dysentery - S.pullorum. Among the young waterfowl, the pathogen is S. Typhimurium.

Postmortal contamination of meat with pathogens of toxic infections often occurs through bacteria carriers (rodents, people) and less often when cutting carcasses (contamination with intestinal contents). When postmortem seeding on the surface of the carcass isolated bacteria and slowly penetrate deep into the meat. If the muscle tissue is propagated or turned into minced meat, the bacteria multiply faster. This is explained by the fact that cellular plasma is released in minced meat, which, at a temperature of 15-38 ° C, is a very favorable medium for the intensive reproduction of bacteria. The pathogens of toxic infections in the chopped meat obtained from animals with salmonellosis multiply especially intensively.

Pathological changes in birds with salmonellosis caused by S. Typhimurium show a mass of yellowish-gray nodules on the pleura, in the lung parenchyma in the pneumatic sacs and on the serosa of the intestines. The nodules are dense, unstratified, the bronchioles and alveoli are filled with bloody infiltration and leukocytes. The liver is enlarged, sometimes contains necrotic foci in size from poppy to millet grain. On the epicardial point hemorrhages. Diphtheritic inflammation of the intestine and mucous necrosis are observed.

The presence of Salmonella pathogens in meat in suspicious cases should be permitted by bacteriological examination.

Laboratory diagnosis. Material for research: fresh corpses entirely, in the extreme case - the liver with the gallbladder, spleen, ligated in vessels of the heart in 30% glycerol, tubular bone; unabsorbed chickens yolk; from adult chickens - affected ovarian follicles, blood of the heart, sealed in a pipette, or thick blood smears on slides.

Research order: autopsy of corpses; crops on nutrient media from the blood of the heart, spleen, liver, unresolved yolk, bone marrow (in stale carcasses); from corpses of an adult bird - crops from several follicles of an ovary and a gallbladder; It is recommended that the ovary be fully immersed in liver broth with brilliantgrune (up to 1: 50,000); production of pathogen cultures; serological examination (agglutination reaction).

Serological properties. Agglutination reaction. Selected cultures can be tested with O- and H-monoreceptor agglutinating sera.

Virulent properties. Pathogen cultures of pathogens for guinea pigs, white mice, rabbits, sparrows, pheasants, pigeons. Guinea pigs die when the culture is subcutaneously in 24-48 hours. The death of white mice and rabbits occurs in 1-7 days with a subcutaneous or intraperitoneal infection.

The diagnosis is made on the basis of bacteriological examination of the corpses of chickens and adult poultry, taking into account clinical, pathological and anatomical and epizootological data. The study period is up to five days.

CONCLUSION

A special role is given to the meat direction. However, it must be remembered that in the conditions of aggravated competition, further expansion of the production of these products is not possible without the widespread introduction of resource-saving technologies and equipment that most effectively realize the genetic potential of bird productivity and reduce the cost of broiler meat. In addition to these organoleptic indicators, water quality must comply with chemical and bacteriological standards.

To ensure high bird productivity and preservation, it is necessary to create comfortable conditions for keeping, quality of feed, watering and feeding regimes. Violation of these factors adversely affects the absorption of basic nutrients, including vitamins and mineral elements, which leads to a decrease in the increase in live weight of broilers, a decrease in the productivity of chickens and the quality of eggs.

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