Opinion

Preventive treatment of pigeons - a myth that fanciers will avenge

Abstract

In today's world, high demands are placed on the performance and health of racing pigeons. A pleasing appearance and the ability to deliver top performance are the two most significant qualities that breeders strive to achieve in their stock. To ensure and time the pigeons' peak condition properly, the functionality of the musculoskeletal, cardiovascular, and immune systems is crucial, as well as preventing acquired diseases during the racing season. To enhance their racers' performance, breeders often use various supplements and veterinary medications. Many of them believe that to maintain form during the racing season, they must continually administer these medications to their pigeons, a practice known as "constant treatment." However, they do not realize that frequent administration of various drugs (especially antibiotics and corticosteroids) disrupts the immune system. This leads to immunodeficiency, where homeostasis and pH levels are disturbed, gut microflora deteriorates, and the risk of various diseases increases. It is important to remember that improper and reckless application of any supplements and medications can harm the entire stock.

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Introduction

The efforts to achieve optimal health and the desired traits are ensured by breeders through well-designed prophylactic programs, balanced feeding rations, a wide range of nutritional and veterinary supplements. Every breeder must realize that an organism stressed and strained by racing is much more susceptible to diseases, so constant hygiene of breeding facilities and regular check-ups of each pigeon before and after races are essential.[1] One of the most important measures for successful breeding and performance is prevention. Preventing diseases is more advantageous than treating them. Many breeders underestimate the importance of these preparations and do not give proper attention to prevention. It is often believed that the high-quality pigeons acquiring will bring success and that breeding will automatically be at high level. However, with such oversimplification, the expected results of breeding efforts usually do not materialize, and it can even lead to a rapid decline in flock quality and health.[2] A breeder should not forget that at the beginning of each race season, it is necessary to conduct a preventive examination of the pigeons' droppings (Fig. 1) to obtain an overview of the overall health status of the flock. Since it is difficult to recognize diseases in pigeons at an early stage because most diseases have very similar clinical signs.[3] When treating it is essential to understand the importance of a thorough medical history, including a detailed description of the course of the disease. The availability of laboratory tests that help identify the pathogen is extremely valuable and subsequently aids the selection of an effective and specific therapy (Figure 1).[4]

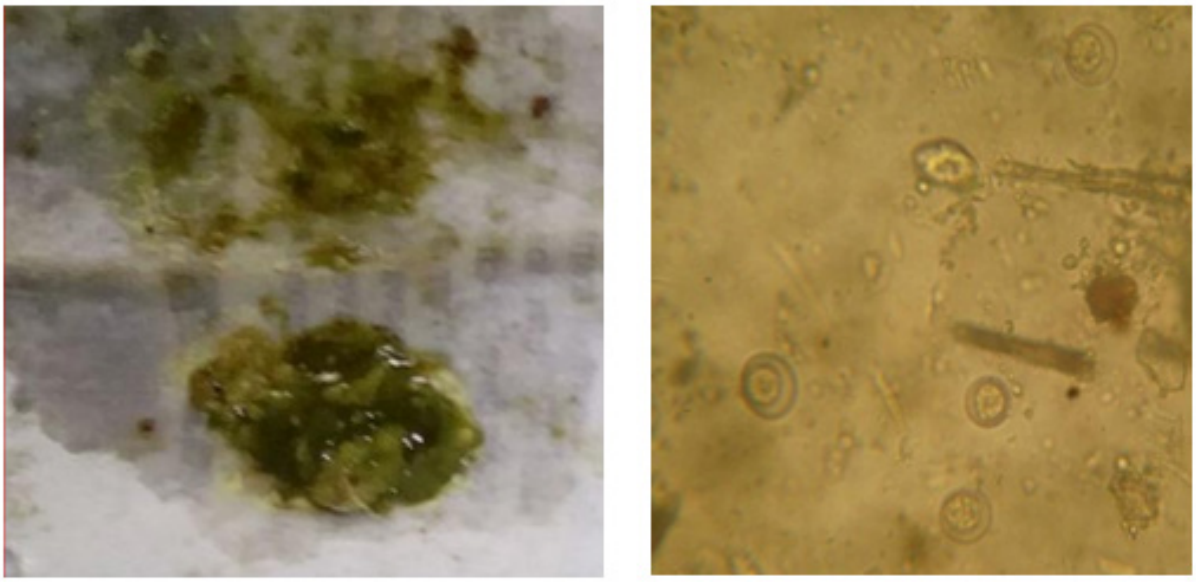

Figure 1 Coccidiosis in pigeon - changes in color of droppings with high concentration of oocyst.

If cases of sick individuals occur, they must be immediately isolated and treated to prevent the disease from spreading throughout the flock, which risks disqualification of the entire flock from races. When the disease is detected early, and the pigeons are isolated and treated individually with antibiotic preparations. It is not recommended to include treated pigeons in races for at least 12 to 14 days, as the organism needs some time to recover from the effects. Early isolation of sick individuals not only prevents the spread of the disease but also avoids unnecessary application of medications to the entire flock and reduces the risk of increased antibiotic resistance to the administered medications.[5]

Preventive treatment

To enhance the performance of their birds, breeders often use various supplements and veterinary medications. Many believe that to maintain form during the racing season, they must continually administer various medications to their pigeons so-called "constant treatment". However, they do not realize that frequent administration of different drugs (especially antibiotics and corticosteroids) disrupts the function of the immune system, increasing the risk of the occurrence of bacterial resistance to antibiotics.[2] The long-term use of antibiotics and corticosteroids reduces their effectiveness, leading to immunodeficiency, where homeostasis and pH balance are disturbed, gut microflora deteriorates, and the risk of various diseases increases. A sign of reduced immunity can also be the organism's decreased response to vaccinations, with an increased incidence of illnesses (especially in young pigeons), frequent deaths, particularly during periods of increased training and racing stress.[6,7]

In the past, pigeons were often kept in overcrowded and poorly situated lofts. When a breeder visited a veterinarian, and after examination and evaluation of the pigeons' health, medications were prescribed, the pigeons' health and ultimately their performance would improve immediately. However, if a health problem arose shortly thereafter, the breeder would bypass the veterinarian and, based on their judgment or recommendations from other breeders, would again administer antibiotics that were obtained second-hand. This performance enhancement approach became common even among pigeon fanciers with good zoohygienic conditions, who persistently use medications during the racing season to treat their pigeons (e.g., respiratory infections, diarrhea) to keep them under "constant protection" and maintain consistent performance.[2] The result of this constant treatment is unexplained losses of individual pigeons or, in the worst case, frequent replacement of the entire flock in a short period due to the rapid "wear and tear" of the racers. These pigeons are genuinely worn out, not due to racing, but due to the constant application of veterinary medications, which causes significant damage, to internal organs, particularly the liver. The pigeon's performance during flight depends on the ready metabolism of energy and the energy stored in reserves. In animals, this is glucose or glycogen in the muscles and liver. Glycogen is the only one that can be utilized both with oxygen (aerobic activity) and when oxygen is lacking (anaerobic activity).[8]

During flight, all energy sources are metabolized for muscle work and heat, resulting in the production of lactic acid. If the liver's function is impaired (due to frequent strain from repeated use of broad-spectrum antibiotics), lactic acid is not sufficiently metabolized, and the blood pH rapidly decreases. During very intense (anaerobic) flight activity and reduced liver function, lactic acid accumulates faster in the body, causing acidosis, leading to the hardening of the breast muscles and rapid onset of muscle fatigue, which can prevent the racer from reaching its loft and often makes it easy prey for predators when it lands exhausted. In the best case, it arrives home but with a significant delay. Such a pigeon has a significant problem with regeneration and repair as well as preparation for the next race due to the short time between basketings.[9,10] It is important to remember that improper and reckless application of any supplements and medications can do a flock more than good.

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Conflicts of interest

The authors declared that there are no conflicts of interest.

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