



THE ROLE, ORIGIN, CLASSIFICATION, AND PRACTICAL APPLICATION OF PROBIOTICS IN VETERINARY MEDICINE

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Abstract

This article provides information about the history, types, proper use, dosage, and storage conditions of probiotics.

Keywords: Pro bios, bacteria, Inoprobit, BioLack, VetLact, Protexin, Lactobacillus

Introduction

In many livestock farms in our country, including rabbit farms, various types of probiotics are widely used. Probiotics are living microorganisms that, when consumed in adequate amounts, provide health benefits to the host. Simply put, probiotics are beneficial bacteria that help maintain intestinal microflora — that is, the balance between good and harmful bacteria in the gut. They help stabilize digestion, reduce the risk of diarrhea, and assist animals during stress periods (transportation, relocation, nursing).

History and Origin

The word “probiotic” comes from the Greek “pro bios”, meaning “for life.” Ancient times: Fermented foods such as yogurt, kefir, and fermented vegetables naturally contained probiotic bacteria. 1907: The scientific basis was established by Russian microbiologist Ilya I. Mechnikov (Nobel laureate), who proposed that “yogurt bacteria” reduce intestinal putrefaction and prolong life. He studied *Lactobacillus bulgaricus*. 1930–1950s: Types of probiotic bacteria (e.g., *Lactobacillus acidophilus*, *Bifidobacterium*) were isolated, and probiotic medicines began to be

developed.1970–1990s: The term “probiotic” became widely used and studied as an alternative to antibiotics.21st century: Probiotics are extensively applied in animal husbandry (rabbits, poultry, cattle, fish) as natural alternatives to antibacterial agents.Their development began with Ilya Mechnikov’s work (1907). Today they are used not only in medicine but also in livestock farming as a natural substitute for antibiotics. In rabbits, probiotics play a vital role in growth, immunity, and maintaining a healthy intestinal system.

Main Types of Probiotics

Lactobacilli (Lactobacillus): *L. acidophilus*, *L. casei*, *L. plantarum* — produce lactic acid, suppress harmful intestinal microbes.Bifidobacteria (Bifidobacterium): *B. bifidum*, *B. longum* — stimulate the immune system and improve digestion.Bacillus species (spore-forming): *Bacillus subtilis*, *Bacillus licheniformis* — heat-resistant and suitable for inclusion in animal feed.Enterococci (Enterococcus): *E. faecium* — support intestinal flora.In Uzbekistan and Central Asia, the most common probiotic brands are Inoprobit, BioLact, VetLact, and Protexin.

Lactobacillus — the most popular type, found in dairy products such as yogurt and kefir.

Bifidobacterium — mainly resides in the large intestine, improving digestion.

Saccharomyces boulardii — a beneficial yeast that helps reduce diarrhea.

Methods of Application

Feed powder: Mix the probiotic powder evenly with feed or sprinkle it on top.Drinking water: If the product is water-soluble, mix it in clean water (always prepare a fresh solution).Oral/syringe method: For small or sick rabbits, prepare a liquid mixture and administer it orally using a syringe.

Dosage and Duration

Probiotics are used in rabbits to reduce diarrhea (enteritis, coccidiosis), relieve stress (transportation, vaccination, weaning), and accelerate weight gain. Animal group | Dosage | Duration and use Large breeds | 1 g per head/day | 5–7 days for prevention Young (2–3 weeks old) | 0.2–0.3 g per head/day | Mix with milk or



water Fattening rabbits (over 3 months) | 0.5 g per head/day | Add to feed or water for 5–10 days during stress or illness; once a month for prevention.

Prophylaxis

Preventive use: Usually 0.2–0.5 g of probiotic per 1 kg of feed (or according to product instructions). For some brands, 0.3 g per 1 kg feed is recommended. Therapeutic use (during diarrhea or stress): Slightly increase the preventive dose or follow the “treatment” dosage on the product label for 3–7 days. Use carefully in young or lactating animals, but most probiotic brands recommend enhanced application in such cases. Dosages should always follow manufacturer instructions. Probiotics can be adapted for both purebred and local breeds.

Important Recommendations

1. Do not administer probiotics simultaneously with antibiotics (allow at least 2–3 hours between them).
2. Always use freshly prepared mixtures — do not store in water or feed for more than 12 hours.
3. Dosages vary depending on probiotic type (CFU count — number of live bacteria).
4. Follow local climate and manufacturer guidelines.
5. Avoid simultaneous use with antibiotics, as antibiotics can destroy probiotic bacteria. Keep a 2–3 hour interval.
6. If the rabbit has severe illness, fever, or dehydration — consult a veterinarian first.

Storage

Store probiotics in a dry place, protected from moisture and high temperature. Always follow storage conditions indicated on the product label.

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