EFFICIENCY OF PROBIOTICS IN CARP (*CYPRINUS CARPIO*) GROWTH IN THE AQUACULTURE RECIRCULATION SYSTEM

V. Savin[1*], V. Cristea[2], E. Mocanu[1], Fl. Dima[1], M.D. Popa[1], N. Patriche[1]

[1]Institute of Research and Development for Aquatic Ecology, Fishing and Aquaculture, Galati, Romania
[2]"Dunărea de Jos" University of Galati, Faculty of Science and Environment, Galati, Romania
**e-mail: viosavin@yahoo.com*

Abstract

This study evaluated the effects of probiotics on feed intake, growth performance, and the biochemical composition of carp meat. For this purpose, 200 carp specimens with an average weight of 20 ± 0.03 g were randomly divided into 4 groups: 3 experimental and one control. The fish were fed twice a day with 0; 80; 160 and 200 mg probiotic / kg feed for 50 days. The probiotic used in this experiment consisted of a complex of bacteria (Bifidobacterium and Lactobacillus). The results indicated an improvement in growth factors (individual growth rate, feed conversion factor, specific growth rate, daily growth rate) in the case of probiotic administration, compared to the control (P <0.05). The highest body weight gained was obtained in variant V2 (26.12 g), 8% higher than in V1, 5% than in V3 and 30% higher than in the control variant. The content of crude protein, lipids, moisture and ash in fish meat had significant differences (P <0.05) at the end of the experiment, compared to the initial values. The proteins in the feed were much better recovered in the case of groups fed probiotic diets, the protein efficiency coefficient (PER) and the protein utilization efficiency (PUE) having higher values than in the control variant (P <0.05). Analyzing the results obtained, it can be stated that probiotics are an effective alternative to growth promoters used in many fish farms.

Key words: probiotics, growth performance, carp, body composition