

GROWTH AND FEED UTILIZATION CHARACTERISTICS OF TWO COMMON CARP GENOTYPES REARED ON ARTHROPODAL FEED SOURCES

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In our experiment, we aimed to compare the growth and feed utilization traits of two common carp (*Cyprinus carpio*) genotypes fed with living arthropods (*Daphnia magna* and mealworm) or – simulating changes in zooplankton availability in ponds under natural conditions – with artificial feed combined with *Daphnia*. Fries of two carp genotypes ('Szeged Mirror Carp' and a scaled landrace from Derekegyháza, Hungary) were housed indoors in tanks of 900 litres. The experimental combinations/treatments were: mirror carp (Tr1) and scaled carp (Tr2) on live feed – 40 individuals per genotype; mirror carp (Tr3) and scaled carp (Tr4) on artificial feed/*Daphnia* – 20 individuals per genotype. From week 2, the differences both in body weight and in body length were significant between the two genotypes. By the end of the experiment (day 49), the average body weight and body length of the individuals fed with live feed (Tr1-2: 32.8, 27.8 grams/86.5, 81.1 mm) were significantly different from each other and from those achieved with artificial feed (Tr3-4: 18.1, 17.0 grams/74.6, 71.8 mm). Both the Average Daily Gain and the Specific Growth Rate values were higher for the 'Szeged Mirror Carp'. The final Condition Factor, however, was slightly higher for the genotype from Derekegyháza. At a total feed consumption of 109.9 grams per individual in 49 days, the Feed Conversion Rates were significantly lower for the 'Szeged Mirror Carp' and for feeding with live feed (Tr1-4: 3.38, 4.00, 6.15, 6.57 g g⁻¹). Our results confirm that feeding with living arthropods results in faster growing carp fries of better feed utilization efficiency in both genotypes compared to the effect of artificial feed. The two carp genotypes have different growth dynamics, the 'Szeged Mirror Carp' exhibiting faster development and more efficient utilization of feed.

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