

ÚNKP SESSION

REARING OF CARP (*CYPRINUS CARPIO* L.) ON ARTHROPOD FOOD SOURCES IN INDOOR SYSTEMS

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In our experiment performed under the supervision from both the Csányi Foundation's and the University of Szeged Faculty of Agriculture's side, we aimed the modelling of natural feeding conditions by feeding fish with live arthropods. The result is a more natural and feasible way of raising fish in an artificial environment.

The cultures of large water flea (*Daphnia magna*), the algae complex for feeding those, as well as the culture of mealworms (*Tenebrio molitor*) fed for larger fish were established over the previous years. In the current experiment, carp ('Szeged Mirror Carp') fries were housed indoors in rainwater collection tanks (5 fish per 200 l tank). In two tanks, the fish got artificial food, in other two tanks natural food (weeks 1-3: water flea, weeks 4-5: water flea + mealworm, weeks 6-7: mealworm) of the same weight. In the course of the 7 weeks, the feed amount was increased from 0.8 to 3.2 grams per fish. The natural food resulted in significantly larger fish compared to the artificial one after 7 weeks, the growth being from 0.52-56 g and 21-22 mm to 37.62-38.94 g and 95-98 mm, as well as from 0.56 g and 21-22 mm to 9.54-9.92 g and 60-62 mm, respectively. The Average Daily Gain, Specific Growth Rate and Feed Conversion Ratio values showed significant differences between the two treatments. The differences in the Condition Factor, however, were not significant - both feeding strategies resulted in fish of good condition status. In both feeding systems, the correlation was significantly positive between the fish weight and length, as well as between the feed dosage and the body parameters.

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