

## SUMMARY

Common carp (*Cyprinus carpio*) is one freshwater fish that is favored by the people of Indonesia. The availability of nutrients in feed is important for the growth and development of larvae. To optimize the absorption of feed nutrients to fish larvae can be packaged in the form of microcapsules. Microcapsules are micro-sized capsules composed of a polymer matrix as the wall and a protected material as the core. This study aims to determine the growth and development performance of common carp (*C. carpio*) with different maggot microcapsule feeding treatments. The experimental design used in this study was a Completely Randomized Design (CRD) consisting of five treatments and five replications, namely T0 (commercial pellets), T1 (artemia feed), T2 (maggot microcapsules instars fourth), T3 (maggot microcapsules instars fifth), and T4 (maggot microcapsules instars sixth). The observation data obtained in the form of absolute weight gain, absolute length gain, SGR, RGR, increase in fin length (dorsal, pelvic, anal, and caudal), mouth opening, SR, intestine length, and intestine weight were analyzed using Analysis of Variance (ANOVA). The results showed significant differences using the Tukey HSD Post Hoc test. Data on mouth development, fin morphoanatomy, and water quality were analyzed descriptively.

The average weight gain was 0.04-0.12 g, the average length gain was 0.89-1.39 mm, the average SGR was 9.37-12.97%, the average RGR was 1317.67-3781.67%, the average fin length gain (dorsal fin 1.70-2.31 mm, pelvic fin 0.94-1.79 mm, anal fin 1.40-1.80 mm, caudal fin 1.48-2.12 mm), the average mouth opening width was 0.35-0.56 mm, the average final intestine weight was 0.006-0.011 g, the average final intestine length was 1.440-2.060 mm, and the average survival rate was 92-98%. The results of the ANOVA test showed a significant difference ( $P < 0.05$ ). The results of the Tukey test stated that the T2 treatment (maggot microcapsules instars fourth) gave the best effect on absolute weight gain, absolute length gain, SGR, RGR, fin length gain (dorsal, pelvic, and caudal), mouth opening, SR, intestine length, and intestine weight ( $P < 0.05$ ). However, there was no significant difference in the increase in anal fin length ( $P > 0.05$ ). The results of the visible pigmentation observations are melanophores and xanthophores. Thus, *Hermetia illucens* larval microcapsules can be used as a substitute for commercial feed to maintain carp larvae (*C. carpio*).

**Keywords:** *common carp, feed, growth, maggot, microcapsules.*