

The use of baker's yeast to promote growth of carp (*Cyprinus carpio* L)

Henky Manoppo^{1*}, Magdalena E.F. Kolopita²

¹ Laboratory of Fish Health, Environment and Toxicology, Faculty of Fisheries and Marine Science, Sam Ratulangi University

² Aquaculture Study Program, Faculty of Fisheries and Marine Science, Sam Ratulangi University, Manado-Indonesia 95115

Abstract: This research was carried out to examine the effect of baker's yeast cells supplemented in feed on growth performance of carp (*Cyprinus carpio* L). Fingerlings (mean weight 3.42 ± 0.77 g) were obtained from Freshwater Aquaculture Board in Talelu, Minahasa Regency. Fish were put in oxygenated-plastic bags and transported to the Laboratory of Aquaculture Technology at the Faculty of Fisheries and Marine Science, Sam Ratulangi University. Before running the experiment, the fish were acclimatized for two weeks in two $2 \times 1 \times 1$ m³ concrete tanks, each was equipped with one inlet pipe, out let, and aerator. During acclimatization process, fingerlings were fed with commercial feed (pellet) at 5% of body weight per day, twice a day at 09.00 am and 16.00 pm. After acclimatization, fish was captured from the adaptation tanks and randomly distributed into 15 aquaria (five triplicated experimental treatments) measuring $0.6 \times 0.4 \times 0.4$ m³ each with a density of 25 fishes/aquarium. Commercial pellet was supplemented with baker's yeast cells as immunostimulant at 5, 10, 15 and 20 g/kg pellet while control pellet was not supplemented with yeast cell. Fish was fed with treatment pellets for four consecutive weeks at 5% of body weight per day, twice daily at 09.00 am and 16.00 pm. Water exchange as much as one-third was conducted once every three days to maintain an optimal water quality. Fish weight was measured at the end of feeding period. The result showed that baker's yeast cells supplemented in feed significantly influenced the growth of fish ($p < 0.01$). The highest weight gain was achieved in fish fed pellet supplemented with 5 - 10 g yeast/kg pellet. Thus, adding baker's yeast cells into commercial fish feed improved growth of carp.

Keywords: baker's yeast, *Cyprinus carpio*, fingerling, growth, weight gain.