

EFFECT OF USING ARTIFICIAL FEED WITH DIFFERENT LEVELS OF CRUDE FIBER FOR GROWTH AND RETENTION ENERGY FISH STOMACH AND WITHOUT STOMACH

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ABSTRACT

Fish are aquatic organisms that require food to provide energy in the body. Fish need energy to perform daily activities, metabolic activity and growth. The energy deposited in the body and used for growth (Haryati et al, 2011). Fish have the digestive system to digest food. According Sulmartiwi and Suprpto (2009), the tool consists of fish digestive tract and digestive glands. Not all fish have the stomach and instead there is a modification to adjust his habits. One of the fish that have the stomach is tilapia (*Oreochromis niloticus*), whereas fish that do not have the stomach is common carp (*Cyprinus carpio*). Fish with stomach has a more complete digestion of the fish without stomach. On the stomach fish, feed storage located on the front of an enlarged colon instead of the stomach function.

The purpose of this study was for determine the interaction energy between the growth and retention of fish have and haven't stomach feeding with different levels of crude fiber. The research method used was experimental with a completely randomized design (RAL) with 2 factors factorial variables (fish and feed) and 3 replications. The main parameters measured were growth and energy retention. Parameters measured were supporting water quality. Analysis of data using variant analysis (ANOVA) and to determine the differences between treatments performed tests Distance Regression Duncan.

The results showed that there were significant differences ($p < 0.05$) on growth and energy retention of fish have and haven't stomach. The highest growth was found in fish have stomach with crude fiber content 4% (A_1B_1). Retention highest energy contained in the fish without stomach with high levels of crude fiber 4% (A_1B_1). Water quality maintenance media carp and tilapia are temperature 27 ° - 30 ° C, pH 7, and dissolved oxygen (DO) 4-5 mg / l.

KEYWORDS : *Growth, energy retention, crude fiber, fish with stomach*