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The Utilization of Corn Starch Hydrolysate as the Source of Carbohydrates in the Milkfish Feed (*Chanos chanos* Forsk.)

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Abstract : This research aims to know the effect of corn starch hydrolysate in different level of feed formulation towards the life, growth, feed conversion ratio and milkfish energy retention. The research was conducted in March-April 2016 at the Fish Reproduction Laboratory, Universitas Brawijaya, Malang. The fish which is used as the test object in this study is milkfish (*Chanos chanos* Forsk.) with the average weight of 0.77 ± 0.16 g and with the deployment density of 1 fish/l. This research was implemented by using the experimental method with a Completely Randomized Design (*Rancangan Acak Lengkap* or RAL) with 5 treatments and 3 replicates. The treatments in this study are: treatment A (the feed with a source of carbohydrate such as polar, rice bran and tapioca), B (the source of carbohydrates is substitute with 25% corn starch hydrolysate), C (the source of carbohydrates is substitute with 50% corn starch hydrolysate), D (the source of carbohydrate is substitute with 75% corn starch hydrolysate), and E (the source of carbohydrate is substitute with 100% corn starch hydrolysate). The data observed in this research include the Specific Growth Rate (SGR), the Feed Conversion Ratio (FCR), water quality and energy retention. The results showed that the addition of corn starch hydrolysate as a substitute source of carbohydrate (polar, rice bran and tapioca) in the fish feed gives such an influence which is not really different on the growth (SGR) and on the feed conversion ratio (FCR) but it is quite different towards the retention of energy. Corn starch hydrolysate can be used as a substitute material of the carbohydrates (polar, rice bran and tapioca) in the milkfish feed formulations. The percentage of the corn starch hydrolysate optimal level towards the energy retention is on the substitution level of 50,75%. The water quality which is used for milkfish farming still in a good condition.

Keywords: milkfish, carbohydrate source, feed.