

Bioavailability of Nutrients from Fermented Golden Snails (*Pomacea canaliculata*) in Feed on Growth Performance of Cork Fish (*Channa striata*)

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ABSTRACT

This study aims to determine the effect of the addition of probiotic bacteria (*Bacillus plantarum*), prebiotics (purple sweet potato flour) and synbiotics on the bioavailability of golden snail nutrients on the growth performance of cork fish (*Channa striata*). This study consisted of 4 treatments and 3 replicates, namely treatment A (Control), treatment B addition of probiotics 2%, treatment C addition of prebiotics 1%, treatment D addition of probiotics 2% and prebiotics 1%. The variables observed were feed proximate, enzyme activity, total feed consumption, feed efficiency, feed conversion, absolute growth and survival. Feed proximate results were analyzed descriptively, while fish growth performance was analyzed using analysis of variance (Anova), if significantly different, then continued with the Duncan test to determine the best treatment among other treatments. These findings suggest that synergistically fermented golden snails have the potential to be functional feed raw materials that support optimal growth and nutritional efficiency in cork fish. The use of local resources such as golden snails and purple sweet potatoes also supports the development of sustainable and economical cultivation systems. The results showed that the addition of synbiotics had a real and best effect on feed quality and performance of cork fish.

INTRODUCTION

Cork fish is one of the leading commodities of freshwater fish that is easy to cultivate and has high economic value (Khaeriyah *et al.*, 2018; Mujito *et al.*, 2024). In addition to its delicious meat flavor, cork fish also contains high albumin (Chasanah *et al.*, 2015; Khasani & Astuti, 2019; Nurilmala *et al.*, 2021) so that it is needed by postoperative patients (Nurhikmah, 2020), besides that cork fish also has non-essential amino acids including alanine, aspartic acid, glycine, alloisoleucine, proline, and glutamine (Zeng *et al.*, 2024). On the other hand, essential amino acids are dominated by leucine, lysine, and phenylalanine (Chasanah *et al.*, 2015; Alviodinasyari *et al.*, 2019; Fitriyani *et al.*, 2020; Niga *et al.*, 2022). This makes cork fish a favorite for the community and the pharmaceutical industry. However, the obstacle in cultivation is that cork fish is very dependent on the supply and suitability of feed nutrient content needs, to