World Academy of Science, Engineering and Technology
International Journal of Marine and Environmental Sciences
Vol:19, No:08, 2025

Effects of Dietary Synbiotics on Growth Performance, Antioxidant Capacity, Digestibility and Intestinal Health of Nile Tilapia (Oreochromis Niloticus)

Authors : Addise Kerebih Chekol

Abstract : Current aquaculture practice is sustainable, environment friendly and produces safe products to end users. However, the disease becomes a limitation to the above-mentioned aquaculture practices. Excessive use of antibiotics and chemotherapeutics is practiced in aquaculture health management. The implication of excessive use of antibiotics leads to increasing antibiotic resistance cases among pathogenic bacteria from aquaculture sites and seeping into the food chain. Last but not least, cost is another key determinant for the applicability of the product. In fact, animal feed is one of the main expenditures in aquaculture, which typically accounts for more than 60% of the total expenditure in a fish farm. The intricate production method and the extensive research needed to validate treatment efficacy require sufficient funding. Therefore, the production of cost-effective yet high-quality feed has been a primary agenda for the industry. Therefore, plant herbal could be promising supplements added to fortify the existing animal feed attributed to their multiple potentials in promoting growth, strengthening immunity, and increasing the resistance of animals towards diseases and stresses. Thus, alternative methods in aquaculture species health management should be applied instantly. So, the aim of this study is to determine the effects of dietary synbiotics on growth performance, immunity, and intestinal health of aquatic animals.

Keywords : synbiotics, probiotics, prebiotics, Nile Tilapia
Conference Title : ICFAS 2025 : International Conference on Fisheries and Aquatic Sciences
Conference Location : Toronto, Canada
Conference Dates : August 09-10, 2025