

EFFICACY OF DIETARY SUPPLEMENTATION OF BANANA PEEL POWDER ON PROXIMATE COMPOSITION AND DIGESTIBILITY OF *LABEO ROHITA* (HAMILTON, 1822) FINGERLINGS

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ABSTRACT : The present experiment was conducted for 60 days to assess the effect of Banana Peel Powder Supplemented Diet on Proximate composition and Digestibility of *Labeo rohita* (Hamilton, 1822) Fingerlings. This two month experiment was carried out from March to May 2021. The five different inclusion levels of unripe banana peel powder supplemented diet i.e. T₀ (without banana peel powder), T₁ (2%), T₂ (4%), T₃ (6%) and T₄ (8%) were used to feed the fishes. The fishes were fed @ 3% body weight once in a day. The effect of banana peel powder supplemented diet was clearly indicate by the increased weight gain, improved proximate composition and digestibility of different treatment. The best feed utilization in terms of minimum FCR (2.950±0.005) was seen in T₂ and maximum (4.250±0.040) was in T₀ (control). However, the highest protein content in fish carcass was found (16.473%) in T₂ and lowest (15.766 %) was in initial fish. The highest moisture (73.150%) was found in T₀ and lowest (70.400 %) was in initial fish. The value of fat content was maximum (4.0267%) in T₃ and minimum (3.260%) in T₀. Ash content was reported highest (3.670%) and lowest (3.316%) in T₂ and T₀, respectively. The amount of carbohydrate (6.5767%) content was highest in initial fish and lowest (3.920 %) in T₀. The highest value of digestibility (68.129±0.771) was reported in T₂ (4 % banana peel powder) and lowest (62.887±0.494) in T₀ (Control). From the current research work, it can be concluded that banana peel powder positively improves the proximate composition and digestibility in *Labeo rohita* fingerlings.

Key words : Banana peel powder, digestibility, proximate composition, rohu.

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INTRODUCTION

The global fish production in 2018 reached 179 million tonnes in which 46 per cent was contributed by aquaculture sector. China remains the world's top producer of fish in 2018 by accounting 35 per cent of total production. Aquaculture, probably the most growing food producing sector of the world and plays an important role in the socioeconomic development of many countries in view of its potential contribution to national income, nutritional security, social objectives and sustainable large export earnings (FAO, 2020). The fish production of India in 2018-19 was 13.57 million metric tonnes which get increases by 14.16 MMT in 2019- 20 and the total value of fisheries export was Rs. 46,662.85 crore in 2019-20. In India, the fisheries sector contributes to 1.24 per cent of the GDP and 7.28 per cent of the agriculture GDP (Handbook on Fisheries Statistics, 2020).

Fish being an affordable and abundant source of rapidly digestible, high quality animal protein involves all the necessary amino acids, vitamins (A, B and D), minerals (Ca, I, Fe, Zn, Se) and fats (long chain omega-3 fatty acids) (FAO, SOFIA, 2016). Rohu is an ideal candidate for carp polyculture practice due to its adaptability for resource utilization with other freshwater carps, mostly catla (*Catla catla*) and mrigal (*Cirrhinus mrigala*) (Jhingran, 1999).

Bananas are beneficial fruit and are known as nutritious gold mine. They are important source of fibre. They are rich in vitamin B6 and potassium. Vitamin B6 helps to fight against infection and is necessary for the synthesis of heme, the iron containing part of haemoglobin (Vincy, 2016). Banana peel is used as a feed in the nutrition of livestock around the world (Adeniji *et al*, 2007; Anhwange *et al*, 2009). *C. garipepinus* showed better