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Effect of dietary protein supplementation on nutritive value of fish, *Labeo rohita*

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Abstract

Present study is aimed to determine the feed formulation, with optimum protein level using locally available economic protein sources, in order to achieve the better growth of the fish and was conducted in four different earthen ponds to observe the effect of varying protein sources (jawar and ground nut oil cake) and protein levels of supplementary feed (28% to 40%) on the growth performance of *Labeo rohita* fed on 5% body weight per day for 180 days. After preliminary preparation of the ponds, fingerlings of Rohu (25±2 gm, 10±1.2 cm) were stocked (12500 fingerlings per hectare) in the month of March for year 2011 and 2012. Four different diets were prepared by using fish meal, jawar, soya bean, groundnut oil cake, wheat, rice bran and millet. Highest growth was observed for the fingerlings which were fed on 34% protein rich diet. ALWG, SGR and fish muscle protein increased and FCR decreased with increasing dietary protein level up to 34%. Growth performance of fingerlings fed on 28% protein rich diet using ground nut oil cake was recorded high. Phosphate, total Kjeldhal nitrogen, ammonia, alkalinity and planktonic population in the pond water increased with increase in dietary protein. Fish production, cost of inputs and net profit were calculated and maximum profit was recorded from 34% protein rich diet, hence present findings will benefit fish farmers, fish feed industrialists and consumers.

Biography

Vineeta Shukla has completed her PhD at the age of 27 years from Maharshi Dayanand University, Rohtak (Haryana,India) and joined as Assistant Professor in the same university. She acted chairperson/head of the department from 2009-2012 and presently is senior professor in the deparment. She has published more than 36 papers in reputed journals with impact factors and serving as assistant editor & reviewer of many international and national journals of repute. Dr.Shukla authored text books entitled Animal Physiology; Developmental Zoology; Animal Physiology and Biochemistry. She has supervised 8 PhD and 3 research scholars are enrolled for PhD degree still.