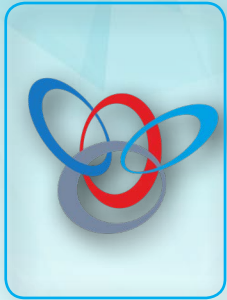


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Role of Sesame meal in improvement of Body Composition, Mineral Absorption and Immunological indices of Common Carp (*Cyprinus carpio*)

Fish meal (FM) is the principal component in fish feeding, but the FM prices have increased in the past decade and are expected to increase further to meet the sustained growth. Therefore, plant protein sources are being considered as an alternative source for protein in diet formulation for inexpensive cost and more easily available sustainable source. The present research work was conducted to evaluate the effect of sesame meal based diet on body composition, mineral absorption and immunological indices in *Cyprinus carpio* fingerlings. Six test diets (0%, 10%, 20%, 30%, 40% and 50%) were prepared using alternative plant protein (sesame meal) with fish meal by adding chromic oxide (1%) as an in-digestible marker. Triplicate tanks were used for all treatments and fish were feed at 4% of live body weight. Feces were collected twice a day from each tank to find the mineral absorption. After 70 days trial, blood and whole body samples were collected for analysis. Results manifested that fingerlings fed with test diet III (20% replacement of sesame meal) showed best result in the carcass composition (crude protein; 17% fat; 7% gross energy; 2kcal/g and ash; 6%), immunological indices (WBCs; $8 \times 10^3 \text{mm}^{-3}$ and monocytes; 4%) and mineral (Ca; 67%, Na; 70%, K; 72% and P; 69%) absorption in the fish body. From results it was observed that, if further increase the replacement levels it may negatively affects the fish performance. So, it was concluded from the results that 20% replacement of fish meal with sesame meal making cost-effective and eco-friendly fish feed as compared to other test diets

Keywords: *Cyprinus carpio* fingerlings, Sesame meal, minerals, immunological indices, carcass.