



Influence of Substitution of Dietary Fish Oil with Different Vegetable Oils on Growth Performance, Body and Fatty Acid Composition of Juvenile Common Carp, *Cyprinus carpio* (Linn.)

Sonu Baweja and Bhupinder Kaur Babbar

Department of Zoology, Punjab Agricultural University, Ludhiana-141 004, India
E-mail: sonubaweja3@gmail.com

Abstract: Three different vegetable oils (canola, soybean and sunflower oil) were used in different substitution ratios (25%, 50%, 75% and 100%) with fish oil to investigate the effects of replacing dietary fish oil with different vegetable oil sources on growth performance, muscle proximate and fatty acid composition of juvenile *Cyprinus carpio*. Significant differences were not detected during 60 days feeding trial in net weight gain, specific growth rate and the muscle proximate composition (crude protein, crude lipid, moisture and ash) of common carp. However, significant differences among fish fed control diet versus other treatment diets were determined in the tissue fatty acid composition. The dietary fatty acid profile reflected the fatty acid composition of fish. Vegetable oil inclusion significantly reduced eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) concentrations in fish muscle. The ratios of n-3 to n-6 fatty acid also decreased with increasing vegetable oil percentages in all the diets.

Key Words: Common carp, Fish oil replacement, Fatty acids, Vegetable oils
