Abstract Template

Abstract Title:

Himalayan Fruit Lapsi *Choerospodias axillaris* (Roxburgh, 1832) Enhances Immunity in Rainbow Trout (Oncorhynchus Mykiss) During Raceways Aquaculture

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Abstract (not more than 300 words)

Disease management has become prominent in aquaculture due to emergence of antibiotic resistant pathogen and overuse of chemotherapeutic agents. One among the developmental strategies to control disease outbreak is by enhancing the fish immunity using immunostimulants. The use of dietary herbal Immunostimulants can improve the immune defense of fishes, providing resistance against infections. Thus, present study evaluated the possible effects of *C. axillaris* (lapsi fruits pulp) supplemented diets on the growth and innate immunity of rainbow trout *O. mykiss* fish. Rainbow trout fingerlings (mean weight 5.13±0.14 g) were separated into six groups (T_1, T_2, T_3, T_4, T_5 and T_6) in triplet forms and cultured by making a small cage (1x1x1) in raceways aquaculture system. Each group was fed with diets supplemented with 0, 1, 2, 4, 8 and 16 g at the rate of 3% twice daily for 90 days. Trout were examined for growth and innate immune parameters and results revealed that lapsi supplemented diets enhanced growth and innate immune parameters during feeding trials. Growth performance and immunological parameters were significantly ($P < 0.05$) increased in fish fed experimental diets. Thus the results suggested that fish fed with lapsi fruits supplemented diets enhances growth, improved immune system and increased survival rate in rainbow trout (*Oncorhynchus mykiss*) fingerlings.

Keywords—*Fish immunity, Lapsi (C. Axillaris), Fish growth, Herbal immunostimulants*

Professional Biography (100-150 words)

Prof. Dr. Shyam Narayan Labh is the Head of Department of Zoology at Tribhuvan University, Amrit Campus, Kathmandu, Nepal and has been teaching Fisheries and Aquaculture since more than three decades. Prof. Labh has obtained his Master Degree in Zoology (Fisheries) from Tribhuvan University; Doctor of Philosophy (Ph. D.) in Aquaculture Nutrition from University of Delhi and Post-Doc from FNBPD, ICAR-CIFE, Versova, Mumbai. He is the Senior Member of Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEES, UK), Fellow of Zoological Society India (FZSI) and the Fellow of Linnaean Society of London (FLS).

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