



## Incorporation of Duckweed (*Spirodela polyrrhiza* L. Schleiden) in Carp Diet - Effect on Water Quality and Fish Productivity

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**Abstract:** A study was conducted to assess the efficacy of duckweed incorporated diets, containing sundried *Spirodela polyrrhiza* @ 10, 20, 30 and 40% levels, for Indian major carps (*Catla catla* Ham., *Labeo rohita* Ham. and *Cirrhinus mrigala* Ham.) in a semi-intensive poly-culture system. The present study reveals that *Spirodela* inclusion in carp diet did not affect the water quality (pH, dissolved oxygen, total alkalinity, ammonical-nitrogen, nitrite-nitrogen, nitrate-nitrogen and soluble phosphate). Although significant higher growth of fish was supported up to 40% *Spirodela* inclusion level, but maximum growth was recorded at 30% *Spirodela* inclusion level with lowest feed conversion ratio (1.53), resulting in 43.11% higher yield over the control diet. Hence, sundried *Spirodela* can be incorporated in carp diet @ 30% for formulating low cost eco-diets for higher productivity in a poly-culture system.

**Key Words:** Carp poly-culture, duckweed, non-conventional feed, water quality, fish productivity

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