



RESEARCH ARTICLE.....

Effect of integrated fish cum duck farming system on productivity of fish ponds

Toshan Kumar Thakur, Pradeep Kumar Singh, Lekh Ram Verma **and** Gaya Prasad Ayam

ABSTRACT..... The experiment was conducted at Bastar district of Chhattisgarh to assess the fish cum duck farming system on physico-chemical, biological parameters of pond ecosystem and overall fish production in the ponds. This trial was conducted during three successive years 2014-2016 for the period of 8 months. The pond was stocked with fingerlings @6000 /ha of Indian major carps (*Catla catla*, *Labeo rohita*, *Cirrhinus mrigala*) in a ratio of 4:3:3 to utilize the maximum energy in the pond through polyculture. The Muscovy (Local name-Naghansh, S.N. – *Cairina moschata*) breed of ducks was used for the integrated system to fulfill the purpose of obtaining the meat and for delivering the excreta into the ponds during wild grazing. Under such cultural practice at village level no supplementary feed was given to the fish while the ducks were fed with fresh kitchen leftovers and agricultural by-products as kanki (broken cereal grains), kodha (rice bran) which are easily available commodities in rural areas. The study revealed that water quality parameters *i.e.* pH, dissolved oxygen, alkalinity were significantly higher in the integrated pond than the control pond (without ducks). Further plankton levels (Phyto and zooplankton) were also improved considerably in the integrated pond. Indian major carps in the integrated ponds exhibited better body weight than the control pond. Better growth rate in fishes was contributed to a yield of 1.980 tonnes/ha/year with integration of ducks in fish pond whereas 1.052 tonnes/ha/year yields were observed in the control pond. The results conclude that integrated fish cum duck farming is more profitable than farming fish alone with no inputs under rural conditions of Chhattisgarh.

KEY WORDS..... Fish cum duck farming, Plankton, Village pond

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Author for Corresponding -

Toshan Kumar Thakur
Krishi Vigyan Kendra (I.G.A.U.),
Bastar, Jagdalpur (C.G.) India
Email : toshan.thakur@
gmail.com

See end of the article for

Coopted authors'