

**Prakash Chandra**

Programme Assistant (Fisheries)  
Krishi Vigyan Kendra  
Sitamarhi  
Vill+Post- Balha Madhusudan  
Pupri, Sitamarhi, Bihar  
India – 843 320

**Aditya Kumar**

Fisheries Extension Officer  
District Motihar  
Bihar, India

**Rameshwar Prasad**

Snior Scientist & Head  
Krishi Vigyan Kendra, Sitamarhi  
Vill+Post- Balha Madhusudan, Pupri  
Sitamarhi, Bihar  
India – 843 320

**Kinkar Kumar**

SMS (VET. Science)  
Krishi Vigyan Kendra, Sitamarhi  
Vill+Post- Balha Madhusudan, Pupri  
Sitamarhi, Bihar  
India – 843 320

**Sachchidanad Prasad**

SMS (Agronomy)  
Krishi Vigyan Kendra  
Sitamarhi, Vill+Post- Balha  
Madhusudan, Pupri, Sitamarhi, Bihar  
India – 843 320

**Manohar Pnajakar**

SMS (Horticulture)  
Krishi Vigyan Kendra  
Sitamarhi, Vill+Post- Balha  
Madhusudan, Pupri, Sitamarhi  
Bihar, India – 843 320

**Corresponding Author**

Prakash Chandra  
[prakash.nduat@gmail.com](mailto:prakash.nduat@gmail.com)  
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## *Role of Fishery Co-Operatives in Augmenting Income of Fishermen*

Cooperatives are the shield against social as well as economics exploitations for the poor and weak peoples. Importance of cooperative is well documented for the cause of social-economic upliftment of one the most downtrodden community in India, the fishermen. Indian fishermen are among the latest fishery technologies are the contributing factors for their miseries. This vicious critical is further strengthened by lack of institutional support extended in the form of infrastructure development and finance. Consequently, fishermen are subjected to exploitation by middleman who acts as money lenders, traders and contractors. Fishermen discovered co-operatives could spare them from exploitation and improve their socio-economic conditions. In India, fisheries co-operative societies are regulated by a separate set of rules for channeling the government assistant on the principle of self-help and management. They are broadly three-tiered system consisting of a primary cooperative for village, a district or regional federation and a state level cooperative federation. In India, these cooperative societies are helping fish farmers in implementing the various programme pertaining to horticulture-forestry-cum-fish farming, duck based fish farming, fish-cum-poultry farming, fish-cum fig integration, goat-cum-fish system, fish-cum-cattle farming and aquatic-plant-cum-fish farming. Effort made in this direction has yielded good results in some areas but strengthening of the cooperative movement in fisheries will certainly improve income as well as socio-economic status of those involved in this sectors.

### **INTRODUCTION**

Cooperatives are important for farmers, especially for small-scale farmers in rural development. By uniting themselves, more assets, knowledge and skills become available; and it increases the mobilization of resources for farmers, by having more strength and power to negotiate about prices. Adding to that, the farmers become easily accessible to traders and buyers because they are pooled together hence more able to assure availability of the produce (Koopmans, 2006).

Co-operatives can play an important part for fishermen, especially for small-scale fishermen. Co-operation is only the solution of problems arises from mechanization and multi-nationalisation in fishery. Contract system of fishing was well-known generalized practices before independence, government encourage fishermen for farming co-operatives. Afterwards fishermen were able to know the benefits of forming co-operatives. Fishermen co-operative were worked for fishing and marketing.

### **INCOME GENERATION COMMODITIES**

In present time fisheries sector is a fast growing area for development of income sources of fish farmers. Today fisheries sector is not only for fish farming its cluster of livestock, vegetable crops, fruits plant, flower plant as well as crop production in the near of fish pond embankment or upper portion of pond embankment use fish farming cum-different commodities culture as given above and aquatic plant cultivation etc.

### **HORTICULTURE AND FORESTRY CUM-FISH FARMING**

Horticulture, agro-forestry is one of the most profitable culture practices with fish farming. Horticulture and forestry are good source for income augmenting because these culture systems are less caring, less investment, very little management and less cast expenditure. Farmers are grown up leafy vegetables, seasonal fruits, either they use embankment for transplantation of Eucalyptus.

### **FISH FARMING WITH DUCK BIRDS**

It is another culture practice for income augmenting, combine culture of ducks and fishes can be justified economically as they are naturally beneficial and profitability of the integrated system enhances manifolds. The prime advantage is to gain larger quantity of animal protein from limited area. Construction cast of fish pond is recovered quickly and the duck or benefited by the fish pond growth is accelerated by duck manure, which maintains a continuous supply of organic matter. Ducks are collecting their food from surrounding area of fish pond as snails, earthworm, insect and newly leaf of plants. Ducks are laying egg in early morning so for safety of eggs subjected to some soft any plant of leaf put in to the bottom of duck house.

### **FISH-CUM-POULTRY FARMING**

Poultry farming is an old culture practice of fish farmers or agriculture farmers for income augmenting. Today fish culture in conjunction with poultry rearing is a compatible business and can provide a readymade fertilizer for fish pond. For one hectare water body, 10,000 birds produce sufficient mature with 90,000-100,000 eggs and over 1,500 of meat per year while broiler rearing provides, over, 1,500 kg meat/ batch. At least 5-6 batches can be reared in a year. A production of 3,000-4,000 kg of multi-species fish could be harvested from such systems.

### **FISH-CUM-PIG INTEGRATION**

This system improves socio-economic status of the weaker section of society and the people living in rural areas. The tribal's who traditionally raise can take up fish-pig farming society. In pig cum-fish farming excreta of pig provide nutrients for pond fertilization it enhance natural productivity of fish pond and increases population of phytoplankton and zooplankton. The partial harvesting of marketable fish offers higher yield in this type integration. This system provide 3000kg to 4000kg fish production per hectare without use supplementary feed and fertilizer when maintain stocking density @ 8,000-8500 fingerlings per hectare.

### **FISH FARMING WITH GOAT**

Their very old cultures practice of fish farmers or agriculture farmer that plying very important role to improving socio-economic status of fish farmers. The all poor fish farmers either, co-operative fish farmer or non-co-operative fish farmers, they have some numbers of goat for their current income source. Goat is the "live gold" of farmers. The fish farmers raising goats for milk, meat and manure purposes. This integration could produce 3-4 tones/ hectare /year fish without supplementary feeds of fertilizer in pond. These type culture practice produce 750kg goats meat.

### **FISH-CUM-CATTLE FARMING**

For certain group of rural folk in India, cattle raising is a way of life and the application of cattle is an ancient practice. Consequently the fish dairy integrated farming is easily adopted by such farmers. Every farmer have some number of cow and buffalo, either fish farmer or agriculture farmers, because farmers and castles are ancient relationship as agriculture purposes or milk production.

### **AQUATIC PLANT-CUM-FISH FARMING**

Some aquatic plants are beneficial for extra income augmenting, these are transplanting in fish pond that are: Singhara (water Chestnut), Makhana and Lotus. These aquatic plants are very commercially important for income augmenting and these plants inside the fish pond increase productivity of fish pond. Fish farmer of Bihar, West Bengal and Assam etc. should be done integration with Makhana-fish farming. Fish farmer of Uttar Pradesh should be done Singhara (water Chestnut) fish integration that increase income of fish farmer. The lotus is a naturally growing plant in fish pond and other large water bodies. The lotus plants growing after complete harvesting of fish pond. The fish farmer collect lotus fruits from plant parts that is very good income source and roots of lotus use as vegetable that is very costly and good source of nutrients. So the lotus is really extra income augmenting source.

### **CONCLUSION**

For the extra income generations, fisheries co-operative members are doing some extra activities with fish farming. Further, it can be told the Fisheries Cooperative Societies can play vital role for management of large aquatic water bodies, planning of group work and it control difficult work in to normal way. Today small scale work not provides large number of income opportunities to social system.

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