

## Prospects and Challenges of Fish Farming in Farm Ponds in Maharashtra

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### SUMMARY

About three lakh farm ponds have been constructed through various government schemes in Maharashtra. They can be considered as a potential resource for fish culture, in addition to their primary usage as water storage tanks for farm use. However, except for few curious farmers taking up fish culture, no organised efforts have been taken so far to exploit this resource. It's right time that the farm ponds are seen as a multi-purpose resource and it's suitability is examined for aquaculture. In this article, we outline the possibilities as well as challenges in promoting fish farming in farm ponds.

### INTRODUCTION

Primarily, farmers construct farm ponds with intention to store water for irrigation of the agricultural crops, livestock rearing and domestic consumption. Thus, with state support, the farm pond has become a popular method for water saving, drought proofing, rising income through orchard cultivation, sustaining agricultural production, overall socioeconomic development and food security. However, in recent years some farmers have begun to utilise these farm ponds for fish culture with some degree of success.



Figure 1. A photograph showing farm pond and stored water.

### Prospects of Fish Culture in Farm Pond

Fish is widely considered a nutritious and healthy food rich in protein, essential amino acids and vitamins. The demand for fish in domestic as well as international markets has been increasing over the years. Greater awareness about nutritional and health benefits of fish, increasing urbanization and the growth in disposable per capita income, and the resultant changes in food consumption pattern and consumer preferences, growth in tourism and out of home eating habits, etc. have spurred the demand for fish. This demand has been largely met by increased fish production from farmed fish with wild fish harvested from the seas witnessing little growth. Bhendarkar *et al.*, (2020) reported that there is huge gap between State's potential and actual fish production which necessitates systematic policy and development efforts. In this context, fish farming in farm ponds supports the farmer in terms of providing good source of protein as well as additional income even in case of failure of other crops for any reason. Hence, farm ponds provide scope for doubling many a farmer's income.

The farm pond practice offers many benefits besides additional income:

- Fish for home consumption that can improve nutritional status of family
- Fish reared farm ponds provide nutrient rich water for irrigation purpose.
- Possibility to develop an integrated farming model by introducing poultry and other farm animals.
- Intensive vegetable cultivation can be practiced by using nutrient rich pond water.

### Challenges for Fish Farming in Farm Ponds

In spite of the potential, fish farming in farm ponds has not become popular so far due to lack of awareness and other unidentified / unaddressed issues, some of which are discussed here.

- Lack of adequate knowledge as well as basic skills for fish culture among the farmers (farm pond owners).
- Non-realization of farm ponds as potential fisheries resource by development departments.
- Non-availability of customized fish culture practices for farm ponds
- Wide variations in farm ponds in terms of size, depth of water, duration of water availability in the year, extent of usage, etc.
- Difficulties in harvesting fish in the farm ponds due to depth variations, slippery nature of plastic lining, etc.
- Marketing issues owing to economies of scale and perishable nature of fish.
- Inadequate extension service and technical guidance about fish culture – species for culture, seed quality, and quantity, stocking density, feed management, water quality management, etc.
- Failures due to inadequate knowledge/skills, poor management practices and lack of marketing support discouraging other potential farmers.
- Higher cost of fish feed and lack of knowledge about on-farm feed preparation using locally available materials.
- Blockage of drip lines due to residual fish feed in farm ponds
- Occasional theft /poaching of harvestable quality fish discourages fish farmers

### CONCLUSION

The fish farming in farm ponds offer a viable opportunity for many farmers to complement their farm income (Goswami, *et al.*, 2013). In fact, ornamental fish farming is also a good way to earn more money and supplement farm income (Satam *et al.*, 2018). The agricultural policies and collective efforts of Government are aimed at doubling the farmers' income by 2022 (Satyasai & Bharti, 2016). In this context, integrated and diversified farming approaches have proven to be more effective to enhance farmers income. Therefore, we need a special program to encourage potential farmers for adopting fish farming in farm ponds.

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