105 Private Fish Hatcheries in Bogra District
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a) Researcher's Identity

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b) Objectives

To know the condition of private hatcheries, the present study was undertaken with the objectives of:

i. studying the sources and stock management of brood fish and sources of Human Chorionic Gonadotropin (HCG)/Pituitary Gland used for induced breeding;

ii. assessing the production capacity and actual production of the private hatcheries;

iii. exploring the marketing and transportation system of spawns/fingerlings;

iv. assessing the level of knowledge and training requirements of technical workers of the private hatcheries; and

v. finding out the problems associated with hatchery management and fish production through induced breeding.

c) Executive summary

Introduction

The role of fisheries in the economy of Bangladesh is very important. At present the production of fish is not sufficient to fulfill the demand for it. Therefore, massive efforts should be made to increase the fish production. Recently several programmes have been taken up for the development of culture based fisheries. Availability of quality fish seeds is most important prerequisite for the development of culture-based fisheries. As the production of fish seeds in the public sector hatcheries have also been established in the

private sector. But the questions are arising about the quality of fish seeds produced in the private sector hatcheries. The present study was conducted to explore the overall condition of private hatcheries and to find out the problems of hatchery management and fish seeds production.

The study was conducted in two Thanas; Bogra Sadar and Kahalu in Bogra district. All private hatcheries of these two Thanas were surveyed with a designed questionnaire. Detailed information about hatchery management and fish seeds production through induced breeding were collected through interviews of hatchery owners.

Findings

Most of the physical facilities like overhead tanks, power pumps, circular tanks and cisterns of all the hatcheries were found in good condition. But the brood fish ponds and nursery ponds were found to be insufficient in almost all of the hatcheries.

The hatchery owners collected brood fish from two sources. All the hatchery owners rear their own produced fingerlings and prepared them as brood fish. Besides, 83.33% of the hatchery owners purchased adult male and female fish for seeds production before the spawning season.
Brood fish management of the surveyed hatcheries was found to be very poor. Preparation of brood fish ponds was not performed by the most of hatchery owners. Stocking density of brood fish varied from 2,000 kg to 4,000 kg per hectare. Manure and fertilizer were applied twice a year. Supplementary feeds comprising of rice bran, oil cake and fish meal were applied only during the month of February to August.

Pituitary glands were collected from Jessore via some middlemen and HCGs were collected from Dhaka.

Annual production capacities and actual production were ranged from 300-2,400 kg and 200-2,000kg respectively.

Fish seeds produced in the surveyed hatcheries were sold in two stages, spawns and fingerlings. Spawns were sold mainly to the nursery owners and fingerlings were sold to the fish farmers and middlemen. Most of the customers of fish seeds of the surveyed hatcheries were from greater Bogra, Rangpur and Dinajpur districts. Polythene bags filled with water and oxygen were used to carry spawns and fingerlings to a long distance and Aluminum pots were used to carry to a short distance.

About 78% of the hatchery owners had no institutional training on hatchery management and induced breeding. Initially all the hatchery owners hired a technician and worked with him. Many hatchery owners were producing fish seeds through unplanned hybridization i.e. crossing between brother and sister or parents and off springs due to lack of awareness and proper knowledge and lack of commercial interest.

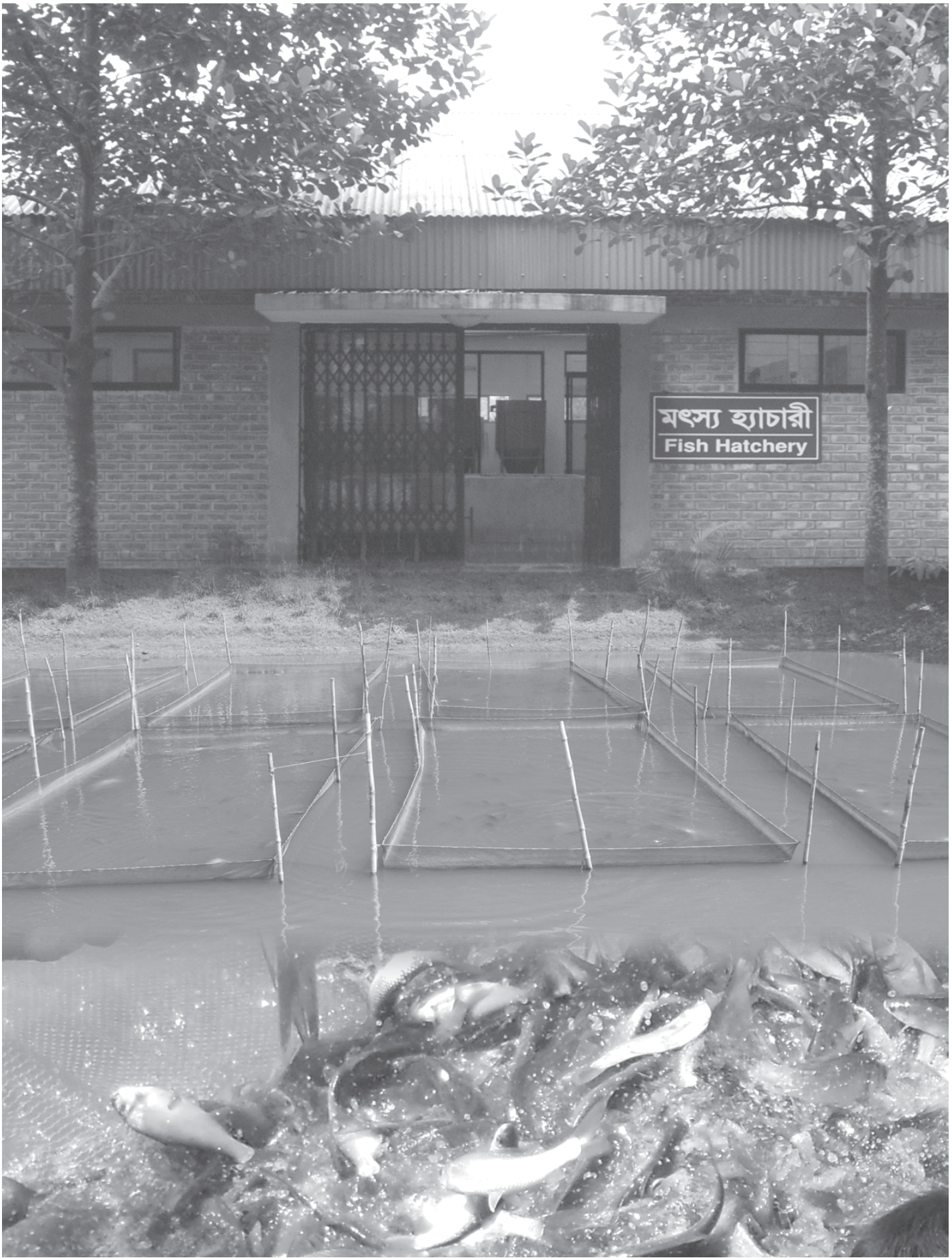
Some problems like selling of spawns on credit, shortage of brood fish ponds, non-availability of Pituitary Glands (PG) in the local market, shortage of skilled workers, insincerity of the workers and the mechanical disturbance of water pump were affecting the hatchery management and fish seeds production through induced breeding.

d) Conclusion

In spite of the availability of most of the physical facilities required for hatchery management and fish seeds production, overall situation of private fish hatcheries was not satisfactory. Poor management of brood stock was found in most of the hatcheries. Due to lack of institutional training almost all the hatchery owners/operators were found with very shallow knowledge about hatchery management and fish seed production through induced breeding. Besides, some problems like, selling of spawns on credit, shortage of brood fish ponds, non-availability of Pituitary Glands (PG) in the local market, shortage of skilled workers, negligence of the workers and the mechanical disturbance of water pump were affecting the hatchery management and fish seeds production through induced breeding.

The hatchery owners and operators should be given an institutional and in depth training on hatchery management and fish seeds production through induced breeding. In this course special emphasis should be given on different aspects of brood stock management and induced breeding. Besides, during the training course, awareness of the hatchery owners and operators about the negative impact of unplanned hybridization would be increased.

If the hatchery owners and operators are given intuitional trainings and provided with necessary inputs and support services by the government and non-government organizations, they would be able to produce quality fish seeds which can contribute enormously to the increased fish production in the country.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Fish Hatchery