

## Transportation of Live Fish Seed

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### ABSTRACT

The fish seed transports the most important factor of fish culture because total culture depends on the seed. And seed collection of hatchery and natural resources as like river, lake, and other natural resources collect of seed for fish culture. After that transport of fish seed, some before time use of transport of seed earthen hundi. Now transport of seed use of aluminum vessels, polythene bags, brain, polythene bags with oxygen and water. The transport of fish seed of traditional methods fully sealed and high pressure in oxygen level. The use of the traditional method of mortality range is less. Before transport of seed checking not affected disease, injuries fishes and transport time temperature will 28-30°C.

**Keywords:** Transportation; Hatchery; Fish seed; Stocking

### INTRODUCTION

Transportation of seed from the collection of hatchery to the rearing ponds for culture seed included as like spawn, fry and fingerlings and formerly seed transported only short distance with a duration of 8 hours but now traditional methods transportation of throughout the brain( knowledge of physiological chemical parameter include like PH, NH<sub>3</sub>, Temperature, and more other parameters), air, ship, etc. the fish seed transport is the one place to another place of seed for culture with scientifically methods as like oxygen, water, and polythene bags or Vehicle, containers and earthen pots in this factor for use of and need for transport of fish seeds [1]. The transport of fish seeds in earthen pots, head load, or slings from seed collection center of spawn and to the nursery for stocking is practice. The traditional methods during transport heavy mortality. The transportation time knowledge of the basic physiological requirements of different age groups and also of the cause's mortality during transported of fish seed [2].

### LITERATURE REVIEW

#### Transportation of seeds

Fish seed transport technology has developed over the years. At present time transport of fish seeds under polythene bags and high pressure of oxygen is widely practiced nowadays. The high

mortality during seeds transportation. Mortality causes by depletion of dissolved oxygen of respiration of fishes due to oxidations of any organic matter including excreted waste of fish by microorganisms. The transport of fish seed knowledge of the basic physiological requirements of fishes. Few days before transportation fishes/seeds (size-wise or species-wise) should be in keeping clean water in a separate place (separate tanks) for long transportation of seed. And weak, injured, and disease-infected fishes removed. Transport of fish seed uses of chemicals also.

A notorious saying in fish culture is that "fish aren't potatoes". They need tender loving care if they're to remain strong and healthy. Forbearance of fish to transport is related to their capability to repel or acclimatize to stressful conditions. Their resistance also changes as they pass through colorful life stages. Naiads are veritably delicate as are posterity fish which are ready to lay eggs.

The seed fish transported is two type methods. (I) Open Transportation System, (II) Closed transportation System.

#### Open transportation system

The transport of seed of open system vessels and traditional uses of hundi in start Bengal in India. After some time earthen hundi was now replaced with aluminum vessels. The earthen hundies have the advantage of the keeping temperature of the

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water. The earthen vessels uses in Bengal are two types, smaller ones of 20 cm diameter and 23 liters capacity as a head load or a bamboo sling, and the larger is of 23 cm diameter and 32 liters capacity. And the use of transport of railway. The earthen vessels are filled with water of the same source of the fry. About 45,000-52,000 carp spawn are released in the small vessels and 75,000 in the larger [3]. The metal containers are improved of better than the earthen carriers because not breakable. The metal containers are used of vessels with a wide mouth, which can be closed with perforated pressed in lids; the large type about 53 cm in diameter at the base, 20 cm mouth and 38 cm high any variation to this size should be equally functional. To prevent denting and hopefully more affected insulation, wooden covers are used in the metal containers. The vessels are created and keep wet during the journey. Sometimes during journey batter exchange of respiratory gases between air and water contain splashing of water during transport likely injure of fish carried. Open packing system transportation of fish seed very cheaper going out of fashion because frequent of renewal of water during long journeys. For this purpose, truck-mounted open tanks with aeration and water circulation in uses successfully. In China and South-East Asia, efficient open containers have been developed. Fry and fingerling transport in some traditional design. In Indonesia water-tight tar-coated, plaited bamboo accommodating 10,000 fry of 5 cm in size issue. It's one liter of water required for every adult fish weight 250 g and transport oval casks of 150 liter capacity are used in Indonesia. The fry and fingerling are conditional Hapa for about 3 days without the feeding because fishes will reduce the excreta and toxic chemicals into the pots [2].

### Closed transportation system

In this system, fully sealed fish seeds are transported by packing the fish in polythene bags and containers with aeration and water, and the polythene bags packing duration 8-12 hours capacity not going to long-distance long distance should be a risk of transportation. The containers sealed rubber or plastic bag have been used, in a metal container of galvanized iron (24 × 35 × 35 cm) with a U 100 airtight opening. The transport of fingerling fish seeds 30-40 fingerling of 13-20 cm length, for a journey of 12 hours. Eighteen-liter tins with airtight screw-capped lids for filling and provided with tubes for drawing in oxygen and letting out water has been used in CIFRI, Barrack pore for transport of fry seed number of 1000 of 1-2 cm length duration a 20-hour journey. The use of polythene bags of dimensions (74 × 46 or 65 × 45 cm) is the transport of Spawn, fry, and fingerling seed. The bags are first put into a tin or any rigid box of 18-20 liters capacity and the bag is filled upon third of its capacity (6-7 liters) with water and put the required number of seed with high Oxygen pressure from a cylinder, up to 2/3 of the bag. 10-15 cm of the upper of the bag is twisted and airtight with a string. Carps Spawn (20,000-40,000), fry (300-600), and fingerling (40-70) p47215er bag depending on the distance are packed and transport and mortality reported nil or 5%.

Before 2008, the only method used in Sri Lanka for the transportation of fish seed was by packing in oxygenated polythene bags. Fish were packed in bags (1,220 mm height ×

457 mm width) made out of gauge 40 polythene. Bags were filled with about 15 liters of water. Generally, around 250 fish fingerlings (5-7 cm in length), 1000 fish fry (2-3 cm in length), or 2,000 post-larvae of freshwater prawn (day 45) were packed in a bag. The bags were oxygenated and sealed. These bags were transported in crew cabs, open trucks, or any other vehicle, often over long distances, and in some instances taking 5 to 6 hrs. To reach a destination situated more than 300 km away (Figure 1).



Figure 1: Polythene bags packing of spawn.

### Quantity of fish seed

Approximately 90,000-110,000 fish fingerlings or around 300,000 fish fry can be transported in a browser at a time, whereas in a truck of similar capacity only around 31,000 fish fingerlings (125 bags, each bag with 250 fish fingerlings) or 125,000 fish fry (125 bags, each bag with 1000 fish fry) can be transported. Packing and handling Time taken for packing of fish and extent of handling of fish during packing are minimal for transport in the browser when compared to packing in oxygenated polythene bags [4].

It was observed that fish fingerlings and fry transported in the browser are generally very active and less stressed upon reaching the destination when compared to those transported in oxygenated polythene bags. In general, mortalities observed even after long-distance transport of fish in the browser was low (10-15 fish fingerlings). In contrast, mortalities observed after long-distance transport of fingerlings in bags was fairly high (5-10 fish fingerlings per bag), sometimes reaching about 5%. Active, less-stressed fish fingerlings have a better chance of survival upon being released into reservoirs.

### Mortality of transport

Sudden problems of temperatures transporting times [5,6]

Problems of dissolved oxygen in holes of bags

Transportation of roads lines problem

Create stress

Disease

## CONCLUSION

The seed transport of traditional methods and the seed ultimate goal of the produce of fish of farmers that meet both his needs and the market demand. Through artificial breeding, and the farmer can select desirable characteristics such as fast growth, resistance to disease, etc. The fish seeds of demandable in aquaculture and the seeds transport from one place to another place use of hundi, earthen vessels, aluminum vessels, and polythene bags oldest time transport of long fish seed very difficult but now aquaculture sector developed and people use traditional methods and fulfillments farmers seed demands.

## REFERENCES

1. Biswas A. Fish Seed Collection and Transport in India. Research gate. 2017;1-3.
2. Chellappan A, Sundaram S, Kamble SD. Collection, transportation and stocking of fish seed. CMRFI.2014;1-2.
3. Jhingran VG. Fish and Fisheries of India, Hindustan Publishing Corp. India) New Delhi.1991;1-2.
4. Chandrasoma J, Pushpalatha C. Introduction of a bowser for the transportation of fish seed in Sri Lanka: Impacts and economics. SLJAS. 2016;21(1):3-9.
5. Islam MN, Hossain MA. Mortality rate of fish seeds (*Labeo rohita*) during traditional transportation system in the Northwest Bangladesh. J Sci Res. 2013;5(2):383-92.
6. de Graaf M, Machiels MA, Wudneh T, Sibbing FA. Declining stocks of Lake Tana's endemic *Barbus* species flock (Pisces, Cyprinidae): natural variation or human impact?. Biol Conserv. 2004;116(2):277- 87.