Fisheries Transport Systems

AQS325

11. Week

Carry alive larvae

Weeks	Topics
1. Week	Carry fish by iced water
2. Week	Carrying the fishes by cooled sea water
3. Week	Carry fishes with ice
4. Week	Carry by cooled store
5. Week	Carry by freezing
6. Week	Carry by salt
7. Week	Fish transport: rules
8. Week	Carry alive fish
9. Week	Carry alive fish with oxygen
10. Week	Carry alive crustacean
11. Week	Carry alive larvae
12. Week	Carrying equipment
13. Week	Carry by frigorific track
14. Week	Carry fishes long distance

Not all fish eggs can be transported over long periods of time. The soft eggs with their wide perivitelline space can be transported successfully over a time span of 1-1½ hours during the swelling time when their oxygen consumption is very low.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

Hard eggs with thick shells and narrow perivitelline spaces, and eggs with double shells can be transported successfully over longer periods (even one day) and distance by packing them between soft and moist layers of cotton or soft wet moss.

The most unsuitable stages, from the point of view of transportation, are the morula and blastula. Eggs can also be transported in small numbers if they are placed in plastic bags under oxygen pressure.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

The transportation of fish seeds usually takes place from the hatchery to a farm which has rearing facilities. Fish larvae and just feeding fry can be transported in plastic bags with oxygen under pressure, putting 5 000–8 000 larvae or fry in one bag containing 5–7 l of water and 15–20 l of oxygen under pressure.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

It is important to prevent water splashing in the bag, since it may prove lethal to the fry.

Advanced fry and fingerlings, however, are not very much affected by splashing.

The procedure for making plastic bags is shown in Figure 68, while that for packing fish seed in bags with oxygen under pressure and their transport by different means are shown in Figures 69 and 70.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

Millions of just feeding fry can also be transported at one time in 1–2 m3 containers provided with a lid and with the provision of oxygen supply.

Such a container is half filled with clean water of the same temperature as the water in which the fry are held.

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The estimated number of fry are then carefully introduced into the container. After this the container is completely filled with water and its lid closed.

A sheet of foam rubber is fixed around the rim of the container to ensure that the container remains water tight.

A 10–15 cm long plastic tube of 1–2 cm diameter is tightly fitted into a hole on the top of the container to enable excess compressed oxygen to escape.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

About 100 000 just feeding fry can be transported in 100 l of water.

This would mean that 2 million fry can be transported in a 2 m3 container.

It is advisable to cover the container with a wet rug or grass mat or to use an insulated or partly insulated container in the tropics, to prevent water temperature from rising.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

Three to four week-old fingerlings can be transported in plastic bags; about 500–2 000 of them can be placed in one bag.

The number of fingerlings to be put inside the bag depends on the size of the fingerlings and the length of time spent in transport.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

By using the previously mentioned containers for transporting fingerlings, about 10 000 fingerlings can be transported per 100 l of water/

The fingerlings are packed in the same way as the just feeding fry; i.e., container must be completely filled with water and provided with a continuous oxygen supply.

A drain pipe can be fitted into the bottom of the container.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

The same transportation technique is not applicable to the fingerlings of all species.

It is advisable to determine through experimentation the optimum number of fingerlings in a consignment relative to transportation time and prevailing temperature and with respect to the species in question.

http://www.fao.org/docrep/005/AC742E/AC742E08.htm

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