

Production of stunted fish fingerling for short term dry land water bodies

Introduction

During the monsoon period all the pond in Thoothukudi was filled with rain water. Most of the community village ponds mainly used to irrigate the farm fields besides using it for live stock .Very few villages were using these village ponds for drinking water purpose but majority of the villages are having 2 or more community village ponds and the water bodies are not been utilized properly for fish production due to non availability of quality seeds and relatively short period of water storage (5-6 months). Inland fish cultivation by using stunted fish fingerlings is a good venture in these village ponds which attains marketable weight within 5-6 months in the main pond/tank. Hence stunted fingerlings provide an opportunity for fish cultivation in any ponds which has water for at least 5-6 months.

Stunted fish fingerlings

Rearing of fish fries /fingerlings at higher stocking density (2-3 lakh per acre) fed with natural food for 10-12 months produces stunted growth fish fingerlings.

Why should go for stunted fingerling?

- ✦ Main cause to use –carp have more growth rate in 2nd year than 1st year.
- ✦ Higher survival rate in grow out ponds.
- ✦ Less vulnerable to the diseases.
- ✦ More tolerant to environmental fluctuations.
- ✦ Require less time to reach marketable size (5-6 months).
- ✦ High Growth rate & can be sold at higher prize.
- ✦ Higher production and productivity.
- ✦ Unhealthy seeds are perished during stunting periods, so we get only healthy seeds.
- ✦ Majority of seasonal water bodies dries within 5-6 months where fish rearing from advanced fries is not economical.

Species selection for stunted fish fingerlings

- ✦ Indian major carps-Catla,Rohu,Mrigal.
- ✦ Exotic carps-Silver carp,Grass carp,Common carp.

Selection of pond

- ✦ Size of pond - 0.05 to 0.25 hectare
- ✦ Depth of the pond -1 to 2 meter

Pond management

I. Pre stocking management

- Removal of aquatic weeds by netting operation
- Removal of aquatic insects by using soap oils
- Removal of predatory fishes and weed fishes by using netting operation or using Mahula oil cake @ 2000 kg/hectare
- Lime application @200 -1000 kg/hectare depending on pH of soil and water
- Fertilizer application @5000 kg/hectare/single dose

II. stocking management

- Stocking rate -2 to 3 lakh of advanced fries /acre
- To minimize post-stocking mortality the fry/fingerlings should be slowly and gradually acclimatized to the temperature and quality of the water in the stocking pond. To do so, open the mouth of the seed transport bag/container and gradually add the pond water in phases and after 15–20 minutes slowly dip and tilt the bag/container in the pond so that the spawn/fry/fingerlings are free to swim out.
- Stocking should preferably be done in the cool evening hours.

III. Post-stocking management

- Feeding – supplementary food @ 1-2 % of fish biomass weight (daily)
- Maintain water quality as given below in table

Parameters	Optimum Level
Temperature	28-30°C
Oxygen	3-5 ppm
pH	7.5-8.5
Turbidity	25-35 cm





- Daily observation of fish in pond.
- Sampling and examination of fish at regular intervals (monthly once) for health check and diagnosis of the disease if any.
- Sampling and examination of fish at the onset of distress, disease outbreak or mortality.
- Fry/fingerlings are reared in ponds for about 10-12 months when they usually attain 50–100 g in weight.
- These stunted fish fingerlings attain marketable size (1.0-1.5 kg) within 5-6 months period with high survival rate.

Advantages of stunted fingerlings

- More production in less time period.
- Survivability is more.
- Diseases resistances.
- Better growth than general fingerlings.

Constrains of stunted fingerlings

- Bird predation is more in stunted yearling production.
- Mortality in stunted fingerlings due to transport stress(ensure good oxygen during transport of stunted fingerlings to long distance)

MODEL FISH POND-LINING	STOCKING SIZE OF ADVANCEDFRY	COW DUNG APPLICATION	FEEDING – BROADCAST
			
SAMPLING		STUNTED FINGERLINGS	
