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COLLECTION OF CHANNA MARULIUS SEED FROM “MOHI TUMMEDA VAGU” OF SIDDIPET, TELANGANA

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ABSTRACT

Fish seed is the most important component for fish culture. Culturing of high resistance, High growth rate and low mortality rate fish species will brings huge production rate. The mohi tummeda vagu have providing shelter for various species of fishes, birds, weeds and other Aqua related organisms. The freshwater resources of our country for fish culture are estimated to be 2.85 million hectares of pond and tanks. In addition to this, another 2.05 million hectares of water area is available in the form of reservoirs or lakes. It has been estimated that nearly 14250 million fry would be required for stocking even the present available cultivable resources of 2.85 million hectares on a conservative stocking rate of 5000 fry/ha. The present production is 15007 million fry. Apart from this, at least an additional quantity of 4100 million fry are required for stocking the available area of lakes and reservoirs with an average stocking rate of 2000 fry/ha. This indicates that there is a necessity to raise the fry to stock the available water resources.

Key Words

Fish seeds, Fry, Stocking, Freshwater resources, Mohi tummeda vagu.

INTRODUCTION

Channa marulius (bullseye snakehead or great snakehead) is a large species of snakehead native to South Asia. Mohi Tummeda vagu

Its a tributary of Godavari River, Sinagaraya project, Shanigaram project, Baswapuram projects are located on this river. Its serving hundreds of village people for their drinking and irrigation purposes. Finally it merged with Maneru river near karimnagar, at this junction

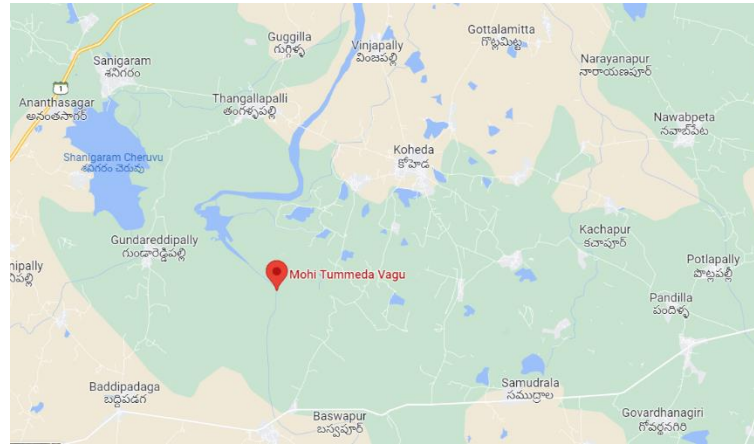


Fig.2.1 Distribution view of Mohi tummeda vagu

Lower Maneru Dam Was Constructed. This LMD Serves Irrigation And Drinking Needs Of Karimnagar And Warangal Districts People.

MATERIALS

Spawn collection net, Earthen Pot, Mango juice, Net, pH paper strips.

METHOD'S OF FISH SEED COLLECTION

We had collected Channa marulius seeds in the month of July 2023. We had identified the species by their Colour, Appearance, we had collected with the help of spawn

collection net as mentioned in the below (fig.2.2) primarily we had collected, In a plastic bucket for clear observation and grading of species depend upon their size (to over come from Cannibalism).

We reached site location by 4:00 pm , we had cleaned our pot with $KMNO_4$ (Potassium permanganate) and collected ~30%

of Mohi tummeda vagu water in a Earthen pot we had checked pH

of water with the help of pH paper strips, it is slightly acidic in nature, we had added some amount of mango juice to regulate pH of water.



1.1 Site Selection for Seed Collection

A pre-monsoon survey is conducted to ascertain: The topography of the terrain and bank features at and in the vicinity of a site to determine the extent of operational area. The topography of dry beds and bank features to gauge the likely current pattern of the river at different stages of flooding. The distribution and composition of the fish fauna in the selected stretch of the river, resident or immigrant, for assessing the abundance of major carps during the monsoon Season. The location of tributaries, rivulets and canals along with their main river, as they might constitute important connecting links between the river and breeding grounds. The identity and accessibility of the site. Best seed collection sites lie on the side of the sloping bank but at the spot the current force the seed to the sides by centrifugal force. These spots are best to operate nets to collect large amounts of spawn.

1.2 Methods of Seed Collection

Generally shooting nets are used to collect the seed in the rivers. A shooting net is a funnel-shaped net of finely woven netting, and is fixed with the mouth of the net facing the current. It is operated in the shallow margins of a flooded river. At the tail end of the net, there is a stitched-inring of split bamboo or cane, and to this is attached, during the operation, a receptacle, termed the gamcha. A gamcha is a rectangular open piece of cloth. The seed moving along with the marginal current collects in the gamcha, and is stored in hapas or containers after removal. The puncha is fixed in position with the help of two more bamboo poles

Water Current: There is no effect on spawn when the water current is mild (0.086 km/h). No significant effect is seen on spawn upto 0.4km/h water velocity. With increased water velocity all the spawn is carried away down the stream. The slow and gentle current velocity varying from 0.5-3 km/hr is the best to collect the spawn. While faster current of the mid- stream carry little spawn, low velocities of less than 1 km/hr are unfavourable for soawn catch. In deeper parts of river, the spawn is not available due to non generation of floods

Other factors

There is no effect of turbidity , pH , and dissolved oxygen on spawn availability in the rivers .however, turbidity is associated with floods , and determines the efficiency of spawn collection.the turbidity reduces he mesh size of the net , and it is better to clean the bets at regular intervals. Air and water temperatures never show any effect on the spawn availability the optimal temperature is 28-31° C. Light also does not show any effect on spawn collection.

Calculation

We had collected around 1500 spawns, we had calculated with the help of spoon in an Average method

$$\text{Total Number of seeds} = \text{Number of seeds in one spoon} \times \text{Total number of spoons}$$

$$\text{Total Number of Seeds} = 1500$$

Method of Seed introduction in a Plastic tank

The collected seeds were transported and shifted to a large take temporarily which had a capacity of 100 liters. The tank is filled ~40% local water(water quality parameters)

had tested & ~60% of Mohi tummeda vagu water to adopt the local environment. If not there is chance for acclimatization. We had graded the fishes Depend upon their size to overcome from cannibalism.



RESULT & DISCUSSION

The captured seeds were transferred to plastic tank at Department of M.Sc Fisheries, Government Degree & PG College (Autonomous) Siddipet for their better growth, they were cultured till they attain fingerling stage. We had observed for Ten days, during the observation by Comparing with other cultured seeds this wild variety shown high resistance and low mortality rate.



Fig:2.2



Fig:2.3



Fig:2.4



Fig:2.5

Fig 2.2-Spawn collection net

Fig 2.3-Channa marulius seed collection

Fig 2.4-Collected Seeds

Fig 2.5-Seeds released into a plastic tank

Conclusion

With this we conclude that wild varieties of Murrel type (Channa Marulius) shown high resistance, low mortality & High growth rate, by culturing of these varieties there is high rate chances to get a better crop rate for better production.

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