

Inputs for Brackish Water Aquaculture

Promotion of Shrimp farming through involvement of group of fishers and fish farmers i.e., SHGs, JLGs, Fisher Cooperatives etc in cluster/area approach is the major aim in developing of brackish water aquaculture. The brackish water farming is almost identified to shrimp culture in most of the maritime States. Over the period, farming of vannamei white shrimp (*Litopenaeus vannamei*) has taken predominant position replacing culture of tiger prawn (*Penaeus monodon*) with share of nearly 90 % in the total shrimp culture production. The rapid growth in shrimp farming witnessed in the country is largely attributed to the establishment of a large number of new hatcheries across the States and use of Specific pathogen free brood stock, resulting in availability of assured supply of quality seed. ICAR-CIBA, Chennai, ICAR-CMFRI has standardized captive breeding and seed production of several commercially important brackish water species

West Bengal possesses all types of fishery resources of which brackish water potential area of about 0.91 lakh ha is spread over three coastal districts of which the maximum (52.41 %) area is in South 24 Parganas followed by 38.81 % in North 24 Parganas and 8.78 % in PurbaMedinipur districts, respectively. Whereas, the brackish water culture area is maximum (34,560 ha) in North 24 Parganas followed by 17,759 ha in South 24 Parganas and 7,171 ha in PurbaMedinipur.

As only 65% of brackish water area is under culture so there is a possibility of potential growth through horizontal expansion of aquaculture is imperative to meet the ever-growing demand of fish in the State. Increase of fish production through pisciculture in newly constructed brackish water pond is the need of the time.

Objectives:

- To bring underutilized vast fellow inundated land area under aquaculture by constructing ponds/tanks
- Enhance fish and shrimp production & productivity
- Livelihood & Employment generation.
- Ensuring Nutritional Security.

Justification of the Scheme

This scheme will contribute in horizontal expansion of crop area which will lead to increased production & productivity of fish. And thus, increased per capita income, generation of livelihood and employment will be achieved.

Selection procedure of beneficiary

At the district level, notified committee (DLC) shall screen the proposals submitted.

Project Location

Different districts in the State of WB as detailed in Fund Requirement Table.

Implementation of Plan

After the due approval of schemes by the Government, the schemes will be implemented through District Fisheries Officers by the beneficiary under the technical guidance of Block Fishery Extension Officers (FEO).

Benefits from Implementation of Plan

Following benefits after implementation of plan:

- Horizontal expansion of crop area.
- Increased production & productivity of fish.
- Increased per capita income
- Availability of fish (Nutritional security).
- Eco friendly: Ground water/Aquifer recharged
- Additional gainful livelihood and employment

Government Assistance

The total admissible Government Share against the scheme will be limited to:

- 40% of the project cost for general category beneficiaries and
- 60% of the project cost for weaker sections like Scheduled Castes (SCs), Scheduled Tribes (STs) and women.

Beneficiary contribution can either be self-financed or bank loan or both.

Eligible Beneficiary

All Fishers, Fish farmers, Fish workers and Fish vendors, Fisheries Development corporations, Self Help Groups (SHGs)/Joint Liability Groups (JLGs) in fisheries sector, Fisheries cooperatives, Entrepreneurs and private firms, Fish Farmers Producer Organizations/Companies (FFPO), SCs/STs/Women/Differently abled persons

Sources of Finance

The estimated project cost of "Inputs for Brackish water Aquaculture" has been limited to Rs. 6 lakh as per GOVERNMENT guidelines.

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Time line for Project Implementation

Activity	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR
Submitting DPR												
Approval of DPR												
Beneficiary selection and approval												
Purchase of unit												
Physical verification												
Release of subsidy												
Assessment and evaluation												

Scheme for "Inputs for Brackish water Aquaculture for Polyculture of Tiger Shrimp & Mullet" in the newly constructed ponds/tanks				
Unit Area for Scheme: 1 ha			Period of culture : 4 months	
Details break up of Scheme:				
A) Cultural Cost				
Sl No	Items of Expenditure	Quantity	Rate (in Rs)	Amount (Rs)
1	Cost of pond preparation @ Rs. 15000.00/ha	1	15000.00	15000.00
2	Cost of Shrimp Seed (PL 15 - 20)	120000	1.00	120000.00
3	Cost of Mullet Seed (Bhangan, Avg 1 - 2 inch)	3000	12.00	36000.00
4	Cost of Mullet Seed (Parshe, Avg 1 - 2 inch)	3000	4.00	12000.00
5	Cost of lime (Calcium oxide) @300 kg/ha/year	300	14.00	4200.00
6	Cost of inorganic fertiliser SSP @ 100 kg/ha/year	100	10.00	1000.00
7	Cost of inorganic fertiliser Urea @ 100 kg/ha/year	100	11.00	1100.00
8	Mullet Feed (Kg.) (protein >25%, fat-4 ±1 %) [considering natural feed present in the pond]	1200	45.00	54000.00
9	Shrimp Feed (Kg.) (protein >30%, fat-4 ±1 %) [considering natural feed present in the pond]	2600	90.00	234000.00
10	Aerator (2HP 4 paddle wheel, Dielsel Engine, ISI Mark)	1	45000.00	45000.00
11	Prophylactics & Medicine		(LS)	21700.00
12	Labour charges with periodical netting and Harvesting Expenses (LS)		(LS)	50000.00

13	Expenditure for Supervising, monitoring, documentation and any other incidental cost	(LS)	6000.00	
Total			600000.00	
B) Economics:				
I	Expected Production of Shrimp (Considering 80% survival with average body weight 20 gm with a 4 months culture period)		1920 kg	
I	Expected Production Mullet - Parshe (Considering 80% survival with average body weight 100 gm with a 4 months culture period)		240 kg	
I	Expected Production Mullet - Bhangon (Considering 80% survival with average body weight 300 gm with a 4 months culture period)		720 kg	
II	Income from Sale of Shrimp & Mullet (Considering sale of Shrimp @ Rs. 320.00/kg, Mullet @Rs.300.00/kg)		902400.00	
III	Net Profit [Income - Cultural cost] i.e. Rs. 902400.00 - Rs. 600000.00 = Rs. 302400.00		302400.00	
C) Funding pattern				
	Type of Beneficiary	Unit Cost (Rs.)	Govt. Assistance (both Central & State Govt.) (Rs.)	Beneficiary Contribution (Rs.)
	General Category	600000.00	240000.00	360000.00
	SC/ ST/ Women	600000.00	360000.00	240000.00

Note: The prices of the above-mentioned items are indicative only. The actual prices of the items may vary as per the local marketing conditions. The govt. subsidy will be given to a beneficiary with or without institutional finance. However, for subsidy calculation purposes the amount will be restricted as per the guideline of the Government.

Scheme for "Inputs for Brackishwater Aquaculture for Tiger Shrimp (<i>P. Monodon</i>)" in the newly constructed ponds/tanks				
Unit Area for Scheme: 1 ha			Period of culture : 4 months	
Details break up of Scheme:				
A) Cultural Cost				
Sl No	Items of Expenditure	Quantity	Rate (in Rs)	Amount (Rs)
1	Cost of pond preparation @ Rs. 15000.00/ha	1	15000.00	15000.00
2	Cost of Shrimp Seed (PL 15 - 20)	150000	1.00	150000.00
3	Cost of lime (Calcium oxide) @300 kg/ha/year	300	14.00	4200.00
4	Cost of inorganic fertiliser SSP @ 100 kg/ha/year	100	10.00	1000.00

5	Supplementary pelleted feed (protein >30%, fat- 4 ±1 %) [considering natural feed present in the pond]	4000	90.00	360000.00
6	Prophylactics & Medicine		(LS)	20000.00
7	Labour charges with periodical netting and Harvesting Expenses (LS)		(LS)	43800.00
8	Expenditure for Supervising, monitoring, documentation and any other incidental cost		(LS)	6000.00
Total				600000.00
B) Economics:				
I	Expected Production (Considering 70% survival with average body weight 25 gm with a 4 months culture period)			2625 kg
II	Income from Sale of Fish (Considering sale of fish @ Rs. 350.00/kg)			918750.00
III	Net Profit [Income - Cultural cost] i.e. Rs. 918750.00 - Rs. 600000.00 = Rs. 318750.00			318750.00
C) Funding pattern				
	Type of Beneficiary	Unit Cost (Rs.)	Govt. Assistance (both Central & State Govt.) (Rs.)	Beneficiary Contribution (Rs.)
	General Category	600000.00	240000.00	360000.00
	SC/ ST/ Women	600000.00	360000.00	240000.00

Note: The prices of the above-mentioned items are indicative only. The actual prices of the items may vary as per the local marketing conditions. The govt. subsidy will be given to a beneficiary with or without institutional finance. However, for subsidy calculation purposes the amount will be restricted as per the guideline of the Government.

Scheme for "Inputs for Brackishwater Aquaculture for Vannamei (<i>L. vannamei</i>)" in the newly constructed ponds/tanks				
Unit Area for Scheme: 1 ha			Period of culture : 3 months	
Details break up of Scheme:				
A) Cultural Cost				
Sl No	Items of Expenditure	Quantity	Rate (in Rs)	Amount (Rs)
1	Cost of pond preparation @ Rs. 15000.00/ha	1	15000.00	15000.00
2	Cost of Shrimp Seed (PL 13 - 15)	200000	0.75	150000.00
3	Cost of lime (Calcium oxide) @300 kg/ha/year	300	14.00	4200.00
4	Cost of inorganic fertiliser SSP @ 100 kg/ha/year	100	10.00	1000.00

5	Supplementary pelleted feed (protein >30%, fat- 5 ±1 %) [considering natural feed present in the pond]	4500	80.00	360000.00
6	Prophylactics & Medicine		(LS)	20000.00
7	Labour charges with periodical netting and Harvesting Expenses (LS)		(LS)	43800.00
8	Expenditure for Supervising, monitoring, documentation and any other incidental cost		(LS)	6000.00
Total				600000.00
B) Economics:				
I	Expected Production (Considering 80% survival with average body weight 20 gm with a 4 months culture period)			3200 kg
II	Income from Sale of Fish (Considering sale of fish @ Rs. 250.00/kg)			800000.00
III	Net Profit [Income - Cultural cost] i.e. Rs. 800000.00 - Rs. 600000.00 = Rs. 200000.00			200000.00
C) Funding pattern				
	Type of Beneficiary	Unit Cost (Rs.)	Govt. Assistance (both Central & State Govt.) (Rs.)	Beneficiary Contribution (Rs.)
	General Category	600000.00	240000.00	360000.00
	SC/ ST/ Women	600000.00	360000.00	240000.00

Note: The prices of the above-mentioned items are indicative only. The actual prices of the items may vary as per the local marketing conditions. The govt. subsidy will be given to a beneficiary with or without institutional finance. However, for subsidy calculation purposes the amount will be restricted as per the guideline of the Government.

