**RAS Technology**
Recirculatory Aquaculture System (RAS) is a technology adopted for aquaculture wherein water is recycled and reused after filtration and removal of suspended matter and metabolites. The method is used for high-density culture of various species of fish utilizing minimum land area.

**Objectives**
- To encourage small-scale farmers and women to take up fish culture in household backyards.
- To enhance fish production and consumption in daily diet.
- To promote income generation from small-scale fish farming and to improve livelihoods

**Construction & Installation of RAS**
NCAAH will assist the farmers in construction of fish tank and bring all materials and water testing kits, fabricate and install the whole system including cages, pumps, aerators, filters etc.

**Project Components**
- Awareness Workshop to applicants by AOC (Aqua-One Center)
- Setting up by NCAAH
- Training for the farmers by AOC
- Input for culture by Farmer
- Advisory & Service delivery by AOC

**Probable Project Costs**
Total cost Rs. 7.0 lakh

**Setting up (Rs. 5.6 lakh)**
- Tank Construction (excavation-1day) : Rs. 1.0 lakh
- Procurement & installation of pumps, filters, cages, aerators, water-testing kit (9days) : Rs. 4.6 lakh

**Input (Rs. 1.4 lakh)**
- Seed (4500 fingerlings @ Rs.6/piece) : Rs.27000
- Feed (28-30% protein content) : Rs.72000
- Transportation : Rs.6000
- Probiotics : Rs.15000
- Electricity : Rs.8000
- Others including service delivery : Rs.12000

**Subsidy Component**

<table>
<thead>
<tr>
<th>Component</th>
<th>General Category</th>
<th>ST/SC/Women</th>
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<tbody>
<tr>
<td>For General States</td>
<td>Rs. 1.68 lakh</td>
<td>Rs. 2.52 lakh</td>
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<tr>
<td>For North East &amp; Hilly State</td>
<td>Rs. 2.52 lakh</td>
<td>Rs. 3.78 lakh</td>
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</table>
Model Design

Details for setting up an RAS Unit

Tank Dimension : 6.7 m x 6.7 m x 2 m
Water Volume of the Tank : 90,000 litres each
Nos. and Volume of cage : 3 cages of 30,000 litres each
Pond Bottom with Central slurry pit : Conical with 18° slope
Water Depth at deepest point : 3.3 m
Effective water depth : 2 m
Pump : 0.5 hp centrifugal pump
Aerators (Venturi system) : 4 systems in a pond
Biofilter : Trickling, Nitrifying Bioreactor

Expenditure & Income

Culture period/cycle : 5-6 months
Stocking : 1500 fish per cage; 4500 fish per unit
Harvest size : 450 gm
Expected survival : 80% (1200 fish per cage; 3600 fish per unit)
Expected yield/cycle : 540 kg per cage; 1620 kg per unit
Crops per year : 2 Crops
Total yield/unit/year : 3,240 kg
Market Sale price : Rs. 130/kg
Returns/year : Rs. 4.21 lakh
Profit/year : Rs. 1.36 lakh
Income/month : Rs. 11,300

Contact Details

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