Shrimp industry in India: Current Trends and Expansion Plans

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1. Shrimp production trends
2. Quality and Traceability
3. Future plans
Indian Seafood Export Against Global Scenario

Global Exports (US $ Billion)

- Global
- India

India Exports (US $ Billion)
Status of export oriented aquaculture production

Shrimp and prawn (Qty in MT)

- P. monodon
- L. vannamei
- Scampi
- Other shrimps

Year
- 2008-09
- 2009-10
- 2010-11
- 2011-12
- 2012-13
- 2013-14
- 2014-15
- 2015-16
- 2016-17
- 2017-18
- 2018-19

Quantities:
- 6,91,748
- 6,82,142
- 5,70,637
- 6,91,748
- 6,82,142

MPEDA2019
Shrimp Aquaculture Production: Composition of species

- L. vannamei: 90.70% (6,186,780)
- P. monodon: 8.05% (549,010)
- Scampi: 1.05% (7,222)
- Other shrimps: 0.19% (1,344)

Legend:
- L. vannamei
- P. monodon
- Scampi
- Other shrimps
As a result of the increase in aquaculture production, India became the leading producer of shrimp by overtaking Thailand, Vietnam and China.
Production 2018-19 - *L. vannamei*

Average Productivity: 8.2 MT/Ha/Year

Total production: 618,678 MT

States:
- Andhra Pradesh: 450,797 MT
- Gujarat: 58,764 MT
- Tamil Nadu: 29,846 MT
- West Bengal: 24,123 MT
- Odisha: 29,846 MT
- Maharashtra: 4,718 MT
- Karnataka: 2,412 MT
- Kerala: 2,412 MT
- Goa: 4,718 MT

Total production: 618,678 MT
Production 2018-19 - P. monodon

Average Productivity: 0.94 MT/Ha/Year

- West Bengal
- Andhra Pradesh
- Odisha
- Kerala
- Gujarat
- Tamil Nadu
- Karnataka

Total Production: 47842
Shrimp Hatcheries and Production Capacity

460 hatcheries

<table>
<thead>
<tr>
<th>Region</th>
<th>Capacity (Million)</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>329</td>
<td></td>
</tr>
<tr>
<td>TN</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Odisha</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Kerala</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Gujarat</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
<td></td>
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</table>
Shrimp Feed Mills - State wise

1.1 million MT/Yr from 18 feed mills

<table>
<thead>
<tr>
<th>State</th>
<th>No. of Plants</th>
<th>Production in MT/Annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>11</td>
<td>915440</td>
</tr>
<tr>
<td>TN</td>
<td>4</td>
<td>95000</td>
</tr>
<tr>
<td>Gujarat</td>
<td>2</td>
<td>90000</td>
</tr>
<tr>
<td>Odisha</td>
<td>1</td>
<td>250</td>
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MPEDA2019
Feed mill production per annum

<table>
<thead>
<tr>
<th></th>
<th>Shrimp</th>
<th>Fish</th>
<th>Shrimp/Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Plants</td>
<td>19</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Production in MT/Annum</td>
<td>1100690</td>
<td>208000</td>
<td>1047915</td>
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Present

- Farm Enrollment
- Capacity building for adoption of Better Management Practices (BMPs)
- Cluster farming – promoted through National Centre for Sustainable Aquaculture (NaCSA)
- National Residue Monitoring Plan (NRCP)
- Encouraging Pre-Harvest Test for screening of antibiotics
- State-level ask forces for regulating use of antibiotics in aquaculture
- Moving towards Certification
## Farm enrollment

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<thead>
<tr>
<th>State</th>
<th>No</th>
<th>WSA (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>45772</td>
<td>64732</td>
</tr>
<tr>
<td>Daman &amp; Diu</td>
<td>12</td>
<td>38</td>
</tr>
<tr>
<td>Goa</td>
<td>18</td>
<td>55</td>
</tr>
<tr>
<td>Gujarat</td>
<td>1052</td>
<td>3768</td>
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<tr>
<td>Karnataka</td>
<td>418</td>
<td>480</td>
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<tr>
<td>Kerala</td>
<td>2307</td>
<td>7754</td>
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<tr>
<td>Maharashtra</td>
<td>331</td>
<td>1257</td>
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<tr>
<td>Odisha</td>
<td>7326</td>
<td>5917</td>
</tr>
<tr>
<td>Puducherry</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>2159</td>
<td>4445</td>
</tr>
<tr>
<td>West Bengal</td>
<td>11315</td>
<td>83180</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70725</td>
<td>171650</td>
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</tbody>
</table>
Fool proof traceability with block chain technology

Demonstration of fully traceability system from farm, exporters (Sandhya Aqua Exports) and importers and retailers (Walmart) – Block Chain Technology
State level taskforce inspecting the aquashops

Task force inspections 2018-19
Hatchery -479
Aqua shops-1029
Moving Towards Certification

New initiative for shrimp farms

* Adopt BMPs and SOP approved by MPEDA
* Use farm inputs with proper labelling
* Keep records
* Test the Produce – Pre Harvest Test (ELISA) for antibiotics.
* Quality declaration of produce by the farmer attested by MPEDA
Antibiotic free shrimp seed production pilot project

Outline

* Three shrimp hatcheries in Andhra Pradesh state
* Three tanks each for three treatments
  * Bacteriophage
  * Bacteriophage + Probiotic
  * Probiotics alone/Control
* Three cycles
* Expected to complete by Jan/Feb 2020
Outcome:

* Production of antibiotic free shrimp PL
* ~10% higher survival when compared to control
* Production of WSSV and EHP negative tested PL
Suggestions for the certification came in 2018 - hatchery operator consultations conducted by MPEDA

Formulation of the Scheme

- A Committee - representatives of Hatchery & farmers associations, and MPEDA prepared the draft & placed in the public domain
- Sent to all leading national and international institutions,
- Farmers associations, hatcheries associations etc.
- Carried out over 19 stake holder consultations covering over 1500 stake holders
- The scheme finalized is proposed to be implemented on fully online platform

Pilot to be implemented from January 2020

Scaling up planned for 2021

Next phase: **antibiotic free farmed shrimp certification**
Thank You