The Philippines' milkfish breeding program

The Bureau of Fisheries and Aquatic Resources (BFAR) of the Philippine Department of Agriculture reported the status of the National Bangus Breeding Program (NBBP), as of June 1992. The program established one project site in each of the country's regions.

The projects in Regions II and VIII were suspended because of frequent damage to cages by typhoons. In the Region VIII site in Tacloban, Leyte, 330 2-year old milkfish are reared in ponds.

REGION I
Location: NBBP office - Lucap, Alaminos, Pangasinan (300 km north of Manila); maturation cages installed in Hundred Islands (30 min. by motorboat from Lucap)
Date started: 1981
Stock:

<table>
<thead>
<tr>
<th>Cage</th>
<th>No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85</td>
<td>9/6</td>
<td>4.5</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
<td>8/8</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
<td>8/8</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>184</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hatchery: Existing but not producing well

REGION III
Location: Office and maturation cage - Bamban, Masinloc, Zambales
Date started: 1981
Stock:

<table>
<thead>
<tr>
<th>Cage</th>
<th>No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>44</td>
<td>9/6</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Spawning record: March 1986
Hatchery: Existing but not operational

REGION IV
Location: Maturation cages - Tiniguiban Cove, Puerto Princesa City
Date started: 1983

<table>
<thead>
<tr>
<th>Cage</th>
<th>No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18</td>
<td>9/0</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>5/0</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>70</td>
<td>5/0</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>200</td>
<td>4/0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>318</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spawning record: 1989
Hatchery: Existing but not operational

REGION V
Location: Maturation cages - Damacan, Bacacay, Albay
Date started: 1983
Stock:

<table>
<thead>
<tr>
<th>Cage</th>
<th>No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>191</td>
<td>5/3</td>
<td>4.5</td>
</tr>
<tr>
<td>2</td>
<td>39</td>
<td>5/3</td>
<td>4.55</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>4/3</td>
<td>2.91</td>
</tr>
<tr>
<td>4</td>
<td>77</td>
<td>4/3</td>
<td>2.91</td>
</tr>
<tr>
<td>5</td>
<td>92</td>
<td>4/3</td>
<td>2.91</td>
</tr>
<tr>
<td>6</td>
<td>139</td>
<td>2/3</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>638</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spawning record: 1992
Hatchery: None
**REGION VI**
*Location:* Maturation cages - Barangkalan, Carles, Iloilo  
*Date started:* November 1989  
*Stock:*

<table>
<thead>
<tr>
<th>Cage No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Spawning record:* None  
*Hatchery:* None

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**REGION VII**
*Location:* Maturation cage - Pangangan Is., Calape, Bohol  
*Date started:* 1981  
*Stock:*

<table>
<thead>
<tr>
<th>Cage No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>5.26</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>5.26</td>
</tr>
</tbody>
</table>

*Spawning record:* October 1986 - 1989  
*Hatchery:* Existing but not producing well

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**REGION IX**
*Location:* Maturation cages - Sangali, Zamboanga City  
*Date started:* 1981  
*Stock:*

<table>
<thead>
<tr>
<th>Cage No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>5/5</td>
</tr>
<tr>
<td>2</td>
<td>108</td>
<td>4/9</td>
</tr>
</tbody>
</table>

*Spawning record:* None  
*Hatchery:* None

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**REGION X**
*Location:* Maturation cages - Punta Miray, Baliangao, Misamis Occidental  
*Date started:* 1981  
*Stock:*

<table>
<thead>
<tr>
<th>Cage No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>8/7</td>
</tr>
<tr>
<td>2</td>
<td>90</td>
<td>5/9</td>
</tr>
</tbody>
</table>

*Spawning record:* None  
*Hatchery:* None
REGION XI
Location: Maturation cage - Tagabuli, Sta. Cruz, Davao del Sur
Date started: 1981
Stock:

<table>
<thead>
<tr>
<th>Cage No. of stocks</th>
<th>Age (yr/mo)</th>
<th>Ave. body wt. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>69</td>
<td>6/8 4</td>
</tr>
</tbody>
</table>

Spawning record: April 1986 - 1989
Hatchery: Existing but not operational

Region XII
Location: Parang, Maguindanao - three maturation cages but no stock
Date started: 1981
Hatchery: None

Problems

When the Department of Agriculture was reorganized in 1988, BFAR lost its administrative control over the NBBP stations. The stations were transferred to the regional offices; however, funds are often insufficient and released very late. Generally, the NBBP stations are poorly maintained and managed.

In spite of this situation, the broodstock in all the stations continued to spontaneously spawn. Some fertilized eggs were collected but the insufficient knowledge of the staff assigned in the sites and the poor hatchery facilities resulted in very low larval survival.

Privatization scheme

All the broodstock and cages in the project sites will be sold except in Regions I, V, and XI where 30 pieces in each station will be retained for research.

Price. Broodstock price is computed as: P1,000 multiplied by estimated age (measured in one unit per every year of life of broodstock). The minimum lot is 30 and the maximum, 100 pieces. Cages are sold based on assessed value.

The by-products of research are also sold: bangus eggs, P6,000 per million; and fry, existing market price.

Prices are subject to change.

Buyer. The potential buyer must be a Filipino citizen, a duly registered cooperative, or a Filipino-owned corporation. The capability of the potential buyer will be evaluated based on:

- Experience in hatchery operation
- Hatchery facilities
- Personnel or manpower complement
- Financial capability

Condition of sale. The Department of Agriculture reserves the right to monitor the operation of the hatcheries and broodstock farms including egg and fry production and management.

(2) Department of Agriculture Order No. 8, Series of 1992, issued by Secretary Roberto Sebastian.

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- natural food production. This includes plankton counting techniques; media preparation for algal culture; scaling-up of culture; disinfection, decapsulation, and hatching of Artemia.
- feed formulation and preparation
- disease monitoring and identification
- fabrication of hatchery tools and equipment
- harvesting, packing, and transport of fry

The Department has conducted two sessions of this course in 1991 upon the request of the Department of Agriculture. Farmers' associations may request for a session, with expenses shouldered by the requesting party. Fifteen trainees may be accommodated in a session.

Write the Training and Information Division Head, SEAFDEC/AQD, Tigbauan 5021, Iloilo, Philippines.