The feed were tested for their efficacy in two groups of animals weighing less than 200 mg and more than 200 mg for the optimum growth, health and colour retention. Amino acid profiles of two of the feed formulations is shown in Table 3. The cost of these feed range from Rs. 75-150 kg\(^{-1}\). With sap system (SAS system TM www.extru-technic.com) with capability to extrude feed of 300 microns to 1.2 mm having international acceptance as shown in Fig. 5 can be adopted for commercial scale production.

### Table 3. Amino acid composition of the feed indicating optimum performance (g kg\(^{-1}\))

<table>
<thead>
<tr>
<th>Amino acids</th>
<th>Feed Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asp</td>
<td>26.23</td>
</tr>
<tr>
<td></td>
<td>43.34</td>
</tr>
<tr>
<td>Glu</td>
<td>47.94</td>
</tr>
<tr>
<td></td>
<td>68.40</td>
</tr>
<tr>
<td>Ser</td>
<td>17.95</td>
</tr>
<tr>
<td></td>
<td>28.91</td>
</tr>
<tr>
<td>Gly</td>
<td>34.73</td>
</tr>
<tr>
<td></td>
<td>33.50</td>
</tr>
<tr>
<td>His</td>
<td>6.93</td>
</tr>
<tr>
<td></td>
<td>10.55</td>
</tr>
<tr>
<td>Arg</td>
<td>14.23</td>
</tr>
<tr>
<td></td>
<td>22.30</td>
</tr>
<tr>
<td>Thr</td>
<td>13.36</td>
</tr>
<tr>
<td></td>
<td>19.06</td>
</tr>
<tr>
<td>Ala</td>
<td>25.81</td>
</tr>
<tr>
<td></td>
<td>27.92</td>
</tr>
<tr>
<td>Pro</td>
<td>27.39</td>
</tr>
<tr>
<td></td>
<td>31.68</td>
</tr>
<tr>
<td>Tyr</td>
<td>9.09</td>
</tr>
<tr>
<td></td>
<td>10.51</td>
</tr>
<tr>
<td>Val</td>
<td>18.34</td>
</tr>
<tr>
<td></td>
<td>21.26</td>
</tr>
<tr>
<td>Met</td>
<td>6.64</td>
</tr>
<tr>
<td></td>
<td>4.93</td>
</tr>
<tr>
<td>Cys</td>
<td>0.87</td>
</tr>
<tr>
<td></td>
<td>2.66</td>
</tr>
<tr>
<td>Ile</td>
<td>15.53</td>
</tr>
<tr>
<td></td>
<td>18.63</td>
</tr>
<tr>
<td>Leu</td>
<td>27.35</td>
</tr>
<tr>
<td></td>
<td>36.29</td>
</tr>
<tr>
<td>Phe</td>
<td>22.60</td>
</tr>
<tr>
<td></td>
<td>19.35</td>
</tr>
<tr>
<td>Lys</td>
<td>25.46</td>
</tr>
<tr>
<td></td>
<td>41.83</td>
</tr>
</tbody>
</table>

The feed were tested for their efficacy in two groups of animals weighing less than 200 mg and more than 200 mg for the optimum growth, health and colour retention. Amino acid profiles of two of the feed formulations is shown in Table 3. The cost of these feed range from Rs. 75-150 kg\(^{-1}\). With imported and repacked freshwater ornamental fish feed retailing at Rs. 500 kg\(^{-1}\), these feed would serve as good import substitutes. This is the first effort towards development of indigenous fish feed technology for marine ornamental fish. Instead of extruding pellets of larger dimension and crushing them to smaller particles of desirable size manually, state-of-the-art feed technology is available today for the manufacture of these types of feed. Sphere-izer Agglomeration technology (SAS system TM www.extru-technic.com) with capability to extrude feed of 300 microns to 1.2 mm having international acceptance as shown in Fig. 5 can be adopted for commercial scale production.


Disclaimer : Either the authors or CMFRI neither endorses nor implies criticism of any of the products or processes described.

**Conservation programme for marine turtle, olive ridley (*Lepidochelys olivacea*) at Dabholi-Waingani landing centre of MH-1 Zone, Maharashtra**

**Bashir Ahmed Adam Shiledar**

*Ratnagiri Field Centre of CMFRI, Ratnagiri*

During the survey tour at Dabholi-Waingani landing centre on 18/12/07 and 19/12/07, it was understood that preservation of Olive ridley (*Lepidochelys olivacea*) eggs was carried out by a local person Mr. Suhas Toraskar who is a member of the Sea Security Force. His procedure of turtle eggs conservation is as follows.

The eggs were kept buried inside the sand on the seashore taking care that the high-tide water may not damage the eggs. The net was applied using the wooden poles so that the eggs remain protected from dogs, jackals etc. The hatchlings come up after 45 to 55 days pushing the sand aside. This person gets guidance from Sahyadri Nisarga Mitra, Chipuln (Ratnagiri) and Forest Department of Maharashtra (Sindhudurg District).

On 22/03/08, a visit was made to this centre to collect this data and confirmed that these hatchlings belonged to the species *Lepidochelys olivacea* as it has seven lateral scutes on dorsal side. The
Number of eggs protected & Number of hatchlings released

<table>
<thead>
<tr>
<th>Date</th>
<th>No. of eggs protected</th>
<th>Date</th>
<th>Incubation period</th>
<th>No. of hatchlings released</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/12/07</td>
<td>120</td>
<td>02/02/08</td>
<td>55 days</td>
<td>117</td>
</tr>
<tr>
<td>02/01/08</td>
<td>103</td>
<td>02/03/08 to 05/03/08</td>
<td>60 to 63 days</td>
<td>76</td>
</tr>
<tr>
<td>26/01/08</td>
<td>Not counted</td>
<td>22/03/08</td>
<td>56 days</td>
<td>56</td>
</tr>
<tr>
<td>01/02/08</td>
<td>Not counted</td>
<td>27/03/08</td>
<td>55 days</td>
<td>103</td>
</tr>
<tr>
<td>08/02/08</td>
<td>105</td>
<td>28/03/08</td>
<td>49 days</td>
<td>103</td>
</tr>
<tr>
<td>22/02/08</td>
<td>121</td>
<td>15/04/08</td>
<td>53 days</td>
<td>84</td>
</tr>
<tr>
<td>26/02/08</td>
<td>74</td>
<td>15/04/08</td>
<td>49 days</td>
<td>66</td>
</tr>
<tr>
<td>28/02/08</td>
<td>108</td>
<td>15/04/08</td>
<td>47 days</td>
<td>97</td>
</tr>
<tr>
<td>13/03/08</td>
<td>101</td>
<td>30/04/08</td>
<td>48 days</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>732</td>
<td></td>
<td></td>
<td>753</td>
</tr>
</tbody>
</table>

Fig. 1. Turtle - at the time of nesting

Fig. 2. Turtle hatchlings

On 22/03/08, fifty six hatchlings were released carefully into the sea. The photographs taken during this visit are also shown in Fig. 1 and 2.

Bumper catch of spiny lobsters by trawlers and gill netters at Okha, Gujarat


Veraval Regional Centre of CMFRI, Veraval

During the post-monsoon months of September and October in 2007, an estimated 900 t of spiny lobsters *Panulirus polyphagus* worth of Rs. 67 crores was landed by trawlers and gill netters at Okha and Rupenbander. A total of 15 - 20 t was landed daily at Okha and Rupenbander during these months and the average catch per boat was 150 kg for trawler and 50 kg for gillnetter. This was the first time in the last two decades that such heavy landings of lobsters were recorded (Fig. 1). Furthermore in