

# Shrimp farming in Iran

A study conducted in 2002 by VDS Belgium, based on its local shrimp feed production and pond management experience. Shrimp feed production is done according to the 'Crustoclean' standard, in Iran, as developed by VDS Belgium.



Shrimp farming in Iran started 8 years ago as this activity has been seen as a good way to develop unproductive salty coastal flats.

Iranian farmed raised shrimp production is utterly export oriented. The main shrimp farming species in Iran is *Penaeus indicus* but some few ponds are stocked with other shrimp species like *P. monodon* or *P. semisulcatus* which are all endemic species to Iranian coastal waters



There are about 3600 ha of shrimp ponds in Iran and shrimp farms are located in Khuzistan, Busherhistan, Hormuzgan and Balochistan. Khuzistan. Shrimp farm units are usually of 20 ha and composed of 1 ha ponds. The most important shrimp farming province is still located in Busherhistan with a shrimp pond surface totalising 1200 ha.

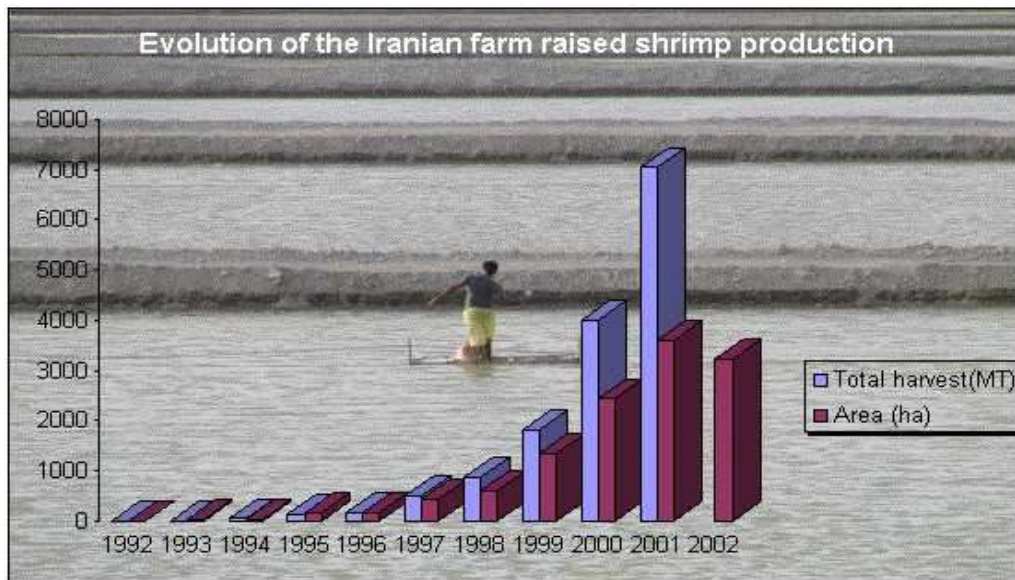


Shrimp farming in Iran is characterized by high pond water salinity and temperatures. Very high salinity (up to 60 ppt) can be observed during the first month of rearing when pond water exchange is low. Pond water temperatures are fluctuating between 30 and 35°C during the hottest months (from July to mid September) and in certain areas like Hormuzgan province pond water temperatures can reach 40°C during several days. Stocking density is averaging 25 PL's/m<sup>2</sup> and yield is averaging 2MT/ha.



Only one crop per year is achieved in Provinces located along the Persian Gulf due to low temperatures encountered between October and April. However, two crops per year can be achieved in Balochistan where shrimp farming conditions are better in terms of pond water salinity and temperature most of the year excepted during January and February

Total farm raised shrimp production was about 7000 MT in 2001 and about 6000MT of shrimps should have been harvested in 2002.



“White Spot” disease outbreaks occurred this year in Khuzistan and all the ponds were chlorinated before being drained out in order to control the spread of the disease. Nevertheless, this decrease in the production was mainly due because less ponds were stocked in 2002 and the productivity is actually increasing each year (from 500 kg/ha in 1993 to more than 2MT/ha in 2002) due to better management practices and also due to availability of shrimp feeds produced locally and adapted to these particular rearing conditions.

Although little quantities of feed were imported, the bulk of the feeds used, was produced locally by 4 companies. Havorrash Co. has about 60 % of the market. VDS Crustocean Feeds is the technical consultant for shrimp feeds produced by Havorrash Co since 2002, and has the responsibility for production management, formulation, supplying essential ingredients such as Vitamin/trace minerales concentrates, and quality control. Special high salinity feeds were designed and this has resulted in a higher growth rate and bigger harvest size. Shrimp continued feeding and growing at 1 g per week, even at more than 55 ppt salinity and temperatures above 35°C.

### Results obtained with Crustocean Havorrash feeds

#### Feed: Havorrash Competitors

<b>Days of culture</b>	125	145
<b>Average Body Weight (g)</b>	14,2	12,7
<b>Growth rate (g/week)</b>	0,8	0,62
<b>Survival (%)</b>	77	74,1
<b>FCR</b>	1,34:1	1,65:1

Here are shown the mean results (Average Body Weight at harvest (ABW), growth rate, FCR) obtained with ponds fed with Havorrash feeds and an other Iranian shrimp feed brand during the 2002 season. These ponds were located at the same area in Busherhistan and these ponds were managed by the same shrimp farming specialist

These results show that using Crustocean-Havorrash feeds give better results in terms of growth rate and in terms of survival rate. Consequently shrimp farmers can harvest bigger size animals in shorter culture period, and increase their yields and the profitability of their shrimp farming operations.