

# I. PRODUCTION RELATED TECHNOLOGIES IN INLAND SALINE AREAS

## Technology No. 1

### **CULTURE OF PACIFIC WHITE SHRIMP, *Litopenaeus vannamei* IN INLAND SALINE WATER**

**Inventors:** Dr. A.K. Reddy, Dr. V. Harikrishna, Dr. P.S. Ananthan and Dr. W.S. Lakra

**Division:** Aquaculture

#### **Technical details:**

- Shrimp culture is traditionally practiced in coastal areas across India. It can also be done in some inland areas where ground saline water (IGSW) is available BUT ONLY with appropriate technology developed by ICAR-CIFE.
- 40%(2.2 million ha) of the salt-affected soils in India that lie in Haryana, Punjab, U.P., Delhi and Rajasthan have become less productive or increasingly unfit for crop cultivation.
- Since the IGSW different from natural seawater with regard to potassium, calcium and magnesium, it is very important to manipulate the ionic compositions to bring them within the optimum range.
- ICAR-CIFE has innovated and perfected a cost-effective solution to alter / amend the IGSW to make shrimp culture feasible and viable in inland saline ecosystem.
- The technology was demonstrated successfully in CIFE's Rohtak farm during 2012-13 and in farmers field during 2013-14.

**5. Geographical area of use:** Inland areas affected with saline soil

(ICAR-CIFE Rohtak centre is located in Lahli Village, Rohtak, Haryana. The centre is located about 15 km from Rohtak city on Rohtak – Bhiwani road)

**6. Approximate Number of users:** > 450 Farmers

#### **7. Impact, if any:**

- ICAR-CIFE's technology adoption and spread has kept doubling every year during the last 5 years across Haryana, Punjab, Rajasthan and Delhi.
- In 2019, about 450+ farmers have adopted the technology in about 1000 acres with production estimated to be nearly 2000 tons.

### Salient features of the technology

- Shrimp farming in inland states of Haryana and Punjab is already a success story with the technology being hailed and appreciated by farmers, Fisheries Departments and Chief Ministers as well as institutions such as NABARD.
- The *cumulative revenue generated from the technology during the last 5 years of technology spread (2013-2018) is estimated to be nearly 600 crores which would only increase multiple fold in the coming years.* It far outweighs the investments in R&D / technology development.
- Apart from generating avenues of direct employment, technology has also lead to generation of indirect employment through development of supporting industries like icing, transportation, netting, feed and chemical marketing. It is estimated that each acre of *shrimp farming generates about gainful employment for 4 people directly and 2 people indirectly* which is a great boon, given the otherwise unproductive lands that supports no employment as of now. It is expected that in future the technology will have a huge impact in the development of rural economy and livelihood generation (through support industry namely icing, transportation, netting, production and marketing of shrimp feed and chemicals).



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