

Shrimp, fish and paddy cultivation in same field is lucrative

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Three in one: In this new technique the profit margin is quite high for a farmer since fish are also grown.  
- Photo: Special Arrangement

Pokkali farming is a system in which paddy and shrimp are grown alternately in the same field. But the sad fact is that the area under this system of farming is becoming smaller day by day and not proving to be remunerative. To give a fillip to this system of farming, the Central Marine Fisheries Research Institute (CMFRI) suggested a new method of integrating fish growing in iron cages along with regular paddy and shrimp cultivation.

## Funding

A young farmer from Ezhikkara, Mr. Saibil, readily agreed for this new experiment in his field, which was funded by the National Initiative on Climate Resilient Agriculture (NICRA). He was trained on pond construction, nursery rearing, fish transportation, feeding, cage maintenance, etc. Nursery reared mullet and pearlspot fishes were stocked in iron cages. They were fed using floating formulated pellet feeds during morning and evening. Cages were cleaned fortnightly and nets changed once in two months. In eight months time the fishes were harvested and the farmer was able to get a good profit of Rs. 80,000 from the fishes alone. In addition he also earned an income of Rs. 50,000 from the paddy and shrimp. The harvest was also celebrated as a festival by the local pokkali farmers. "Growing paddy alone is not very remunerative for farmers. Paddy along with shrimp cultivation can get Rs. 50,000 but in this new technique the profit margin is quite high for a farmer since fish is also grown.

## Income

"If implemented in a hectare a farmer can get anything from Rs. 80,000 to Rs. 85,000 from this cage culture of growing fishes in addition to paddy and shrimp that can fetch Rs. 50,000," says Dr. Shinoj Subramannian, Programme Coordinator and Senior Scientist, KVK (Ernakulam) of CMFRI. Pokkali fields are spread in about 5,000 hectares area in Ernakulam, Alappuzha, parts of Kottayam and Thrissur districts of Kerala. Paddy is grown during June to October (120 days maturity period) followed by shrimp farming during November to April. Residue from the paddy crop forms the feed for the shrimps and the residue of the shrimp culture forms the fertiliser for the paddy. "It is a purely organic system and the paddy and prawn possess good taste since there are no chemical inputs used," says Dr. Subramannian. Size of a typical pokkali field ranges from two to 30 acres and each field is confined within bunds. There is a sluice gate for water movement to and from the field. The area inside the field adjacent to the sluice gate is called sluice pit (Thoombukuzhi in Malayalam).

## **Sub channels**

In addition there are many sub channels to drain water from other parts of the field into a main drainage canal. These sub channels are shallow and paddy is planted in the field as well as on top of these sub channels. The sluice pit and the sub channels are filled with water at all phases of pokkali cultivation. "Since Pokkali farming is climate dependent, constant attention is required at each phase of its practice. Even then good production cannot be guaranteed and yields unpredictable. Large amount of manual labour is required since no specialised equipment or machinery is available for this," says Dr. Subramannian. Quality and taste of pokkali paddy and shrimp are the main attractions. There is no premium market for the paddy or shrimp. They are sold in the local market. Various reasons such as lack of labour, costly manpower, pollution from nearby industries contaminating the pokkali fields, widespread attack of viral infection to the shrimps are some of the problems in this line. The initial investment for setting up the cages etc can be provided as loan to the farmers through banks.

## **Award**

During the year 2009, Pokkali farming system received Geographical Indication (GI) certificate and an approved logo for its products. The pokkali farming community also received the Plant Genome Community Saviour Award during 2010-2011.

### **For more details contact**

Dr. Shinoj Subramannian, Programme Coordinator/Sr. Scientist, KVK (Ernakulam) of CMFRI, Kasthurba Nagar, Kadavanthra, Kochi 682 020,  
e mail: er\_shinoj@yahoo.com , mobile:9496303457.