

Pokkali fields –Do they have a future?

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Pokkali –Kerala’s very own indigenous rice variety is now disappearing from the fields out there. And it is necessary to discuss it because it’s not just any rice variety but Kerala’s oldest rice variety with a tradition of 3000 years in rice cultivation with numerous health and ecological benefits. This article deals with how this wonder crop, lost its importance overtime and finally, how its revival has now become the need of the hour.

What is pokkali farming?

Pokkali is a unique system of rice cultivation, practiced along the coastal saline tracts of central Kerala. In this system, shrimp and paddy are grown alternatively in an organic way. According to the Pokkali Land Development Agency officials, there used to be around 25,000 hectares of pokkali fields, a few decades ago. But now it has reduced to around 9,000 hectares distributed among Ernakulam, Alappuzha, Thrissur districts with 4000, 3000 and 2000 hectares respectively [www.iosrjournals.org]. Ongoing studies shows that this number is further going to decrease unless the required is done.

Why pokkali is unique?

Certain regions of Ernakulam, Alappuzha and Thrissur districts like Chellanam, Kadamakkudy, Kumbalangi, Varapuzha, Eloor, Puthuvype are situated at the mouth of the rivers and are close to the sea. Hence they are prone to flooding and salinity and usually remain marshy and water-logged, all round the year. The soil of these regions are also acidic in nature, making the area unsuitable for the conventional paddy cultivation. But pokkali turned out to be the best farming option as this rice variety is salinity, flood and acid-resistant to an extent. Thus rotational pokkali-shrimp farming became favourable in these regions. Here, pokkali is grown during the low saline phase and shrimp is cultured during the high saline phase. Therefore, it offers regular income to the farmers, all round the year. After harvest, the paddy stubbles and residues cater for the suitable growth conditions for the

shrimps in the future when shrimps arrive at the fields at the time of high tides. The shrimp feeds on the pests and pathogens. The shrimp shell and waste then serves as fertilizers for the paddy crop. In this way, paddy and shrimp are cultured in these saline soils organically. This rotational farming system relies upon the monsoon and tidal influx.

Inspite of such advantages, how did pokkali cultivation recede?

Harvesting of pokkali is a labour-intensive process. Also, it has low productivity. Average yield from a pokkali farm is one and a half tonnes per hectare and the maximum yield is only 4 tonnes per hectare. Besides, this rice variety fails to fetch good market price. These reasons have made the farmers, reluctant to continue its farming. Instead, they opt for shrimp farming alone, all round the year, which have turned out to be lucrative for them. Apart from these, the Vallarpadam trans-shipment terminal project initiated in 2011 in Kochi posed a negative impact. With this project, many of the pokkali fields had been taken over by MNCs for building infrastructure and other development purposes. Thus, overtime pokkali lost its importance and reduced to small pockets.

Why pokkali farming is being encouraged now?

Being salt tolerant, acid resistant and flood resistant, pokkali fields thrived the devastating Kerala floods in 2018. The wide range of adaptations, possessed by this plant, makes it necessary to conserve it, to promote climate- resilient agriculture. Scientists all over the world are trying to develop improved rice varieties from pokkali, that can tolerate salinity and temperature to a much better extent. Because this practice would turn the soil entirely saline posing drinking water shortage in such areas. Pokkali farming if done, will help withstand such salinity increase and also prevent coastal erosion.

Realising its benefits, pokkali has been hailed as a climate adaptive tool. After the Paris agreement on climate change, reviving pokkali cultivation has received impetus. 80% subsidy is provided by Agency for Development of Aquaculture(ADAK), a project of NABARD to pokkali farmers. Demand for seeds have increased considerably but marketing of pokkali is still a problem. Kerala's heritage pokkali rice cultivation needs more support. Even though the per acreage yield of pokkali is low, its benefit to ecology is deep and long which makes it worth conserving and cultivating.