

## NAME OF THE INNOVATION

### **Multiroot system in Nutmeg**

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### **Description of Innovation:**

Local Nutmeg trees possess less rooting intensity. So these trees are prone to lodging problems during heavy winds. To tackle this problems, Multiroots were developed in nutmeg by employing approach grafting. Then these approach grafted saplings were budded with high yielding varieties. Yearly on an average 25000 saplings are being sold to the fellow farmers. In the past years the farmer achieved an acreage of success in about 3213 acres of land. When compared with the local nutmeg the multirooted nutmeg has an advantage of 20 % more productivity which stabilizes the economic status of the fellow farmers.

Spread of the Multiroot system technology is found across all parts of Kerala, nation and worldwide. Demand for the purchase of saplings of nutmeg, cocoa and other crops are received from almost all parts of the world. The architecture of a multi root system may influence its ability to withstand uprooting by wind. It gives better root anchorage that enables the trees to resist strong winds and other adverse conditions. Kerala in the past few years have seen extreme climate vagaries including heavy winds, and flooding. Therefore, nutmeg farmers all over Kerala have showed greater adoption rate as the multiroot system has broad soil adaptability, rapid initial development, drought resistance, early bearing, and high productivity. Moreover, the traits of disease resistance and lower incidence of wilt increases its acceptance among farmers. This innovative technology has achieved an adoption rate of 85% in Kerala and more than 20% all over the World. On an average, these nutmegs are longer, oval shaped, about 5 cm long and 6.5 cm wide, weighing 13-15 gm dried.

The multi root system greatly accelerate the growth of nutmeg trees twice as large as the normal trees. So, the trees fruit earlier and bear more fruit compared to the normal trees. This enables the farmers to attain better yields and also better prices at local as well as export market. This technology has positively changed the standard of living of nutmeg farmers in the state. Another remarkable achievement of this technology is reflected in the increasing number of young farmers expressing interest in Nutmeg farming.

Since its inception, it has attracted more youth into farming. Also the farmer employs 28 rural youth in his farm to support his innovative system. Due to promising yield and better resilience to climate changes, the number of young farmers (age group of 30 – 40) adopting this technology has steadily increased from a meagre 8% in 2015 to a stable 17% in 2021. This is indeed a remarkable achievement in an era, where youth no longer considers agriculture as a way of life. Innovative multiroot system in nutmeg contributed the farmer to start a nursery named Cherukunnel Nursery (Govt. Approved) with a turnover of 80 lakhs/year on average where he assures a record

production and marketing of saplings at a marginal cost of Rs. 1000/- and above as per the age of sapling.

This technology also enables the plant to perform well in intercropping systems of coconut, Cocoa and Black pepper. Here the farmers are provided an opportunity to diversify their farm with higher returns. This has attracted even conventional pepper and cocoa farmers to undertake horizontal diversification of their farms.



#### Recognition

- Kerala Karshakothama award in 1995
- Best Innovation award in 2018
- Sixteen Block Level Award of Adimali for the innovation
- Twelve District Level Award of Idukki district
- Five Kerala State Level Agricultural Department Award
- Special honoring and award received from Spices Board
- Special honoring and award received from CPM Political Party
- Special honoring and award received Kaumudi newspaper Award
- Special honoring and award received Mangalam newspaper Award