

# COCONUT BASED CROPPING SYSTEM FOR PROFITABILITY

Success Story/2023-2

## COCONUT BASED CROPPING SYSTEM MODEL WITH PINEAPPLE AND PASSION FRUIT AS INTERCROPS FOR DOUBLING THE INCOME OF GOAN COCONUT FARMERS

Authors: Dr. V Arunachalam, Principal Scientist (Horticulture)  
Dr. Paramesha, V., Scientist (Agronomy)

### PROBLEMS/CONSTRAINTS

Coconut is important plantation crop of Goa state. Coconut farmers of Goa are unable to get attractive price for mature coconut fruit and meet the cost of cultivation expenses of the crop. A suitable cropping system model with suitable and profitable intercrops cater to the needs of coconut farmers in increasing the income flow and ensure year round employment opportunities. For more income generation and better utilization of resources, multi-species cropping is beneficial in coconut plantations, intercropping are practiced for efficient utilization of resources and enhancing income generation and employment.

### INTERVENTIONS

After a five years long period of research (2016-21) with treatments of six different cropping system models, a suitable model of coconut + pineapple+ passion fruit gave the highest net return (Rs. 1,30,270/-) was identified with a benefit cost ratio (B:C ratio) of 1.99. The net return for coconut monocrop was only Rs. 60,220/- per ha with B:C ratio of 1.21. An additional average coconut equivalent yield of 8605 nuts per ha is obtained after intercropping coconut with pineapple and passion fruit. Intercropping with pineapple and passion fruit in coconut plantation gave coconut equivalent yield of 19587 nuts per hectare of over monocropping of coconut with 10982 nuts per hectare.



Technology developed at Institute

### IMPACT

The technology has commercial potential in irrigated coconut gardens to double the income of farmers. The cropping system model was evaluated for nutrient use efficiency and environmental impact analysis including global warming potential. The model was demonstrated in five locations of 5 ha area of Goa state at farmer's field owned by individuals and self help groups.

Village	Block	Taluk	District	Lat (N)	Lon (E)	No. farmers
Badsare	Gadongrim	Canacona	South Goa	15.05866	74.165866	16
Fulamol	Gadongrim	Canacona	South Goa	15.008201	74.121283	1
Fulamol	Gadongrim	Canacona	South Goa	15.008518	74.119436	1
Cotigao	Cotigao	Canacona	South Goa	14.953887	74.137197	1
Divar	Narao	Tiswadi	North Goa	15.538628	73.922258	4

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Before intervention



After intervention



Badsare Self Help Group