ICAR - Central Coastal Agricultural Research Institute
Old Goa, North Goa - 403402, Goa

ICAR-NRM-CCARI-Technology-2023-023
CCARI/Certified Technologies/2023-2

PLANTATION CROP BASED UPLAND INTEGRATED FARMING SYSTEM FOR WEST COAST REGION OF INDIA

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Associate Developers : Parveen Kumar, Manohara K. K., T. Mayekar, G. B. Sreekanth, Gokuldas P. P., Gopal R. Mahajan, K. Vishwanatha Reddy

TECHNOLOGY DETAILS

- Plantation crop-based IFS standardized on 0.79 ha area for upland situations of Goa. The different enterprises are cashew + pineapple, coconut + pineapple + noni + tapioca, arecanut+ banana, piggery in poultry, compost unit, and direct catch pits.
- Compared to monocrop systems, the IFS achieved significant yield increase: 82.5% for arecanut and 79% for cashew in terms of arecanut equivalent yield (AEY). The IFS system resulted in a net energy saving of 155,789 MJ through residue recycling. Water conservation measures, including a farm pond, saved ~400 m3 of water used for summer irrigation. The IFS generated a net income of 1.98 lakh/annum with a B:C of 3.39 and provided employment for 295 man days.

IMPACT

- Demonstrated 60 IFS systems covering an area of 75 ha, generating an net income of ~Rs. 2.3 lakh/annum translating to an total income generation of Rs. 1.3 crores. The adoption of IFS systems enhanced production by 43%, profitability by 62%, employment by 82%, and reduced production cost by 25% compared to the farmer's practice. The Government of Goa implemented this IFS system in 600 households with a financial outlay of 30 crores under RKVY program.
- This IFS system have potential to cover 9800 ha of arecanut based cropping system in west coast benefitting ~8600 farm families with additional income of Rs. 138 crores/annum

PUBLICATION

- **Paramesha, V.**, et al. (2019). Plantation crop based integrated farming system for upland agroecosystem of Goa. *Technical Bulletin No: 66*, ICAR-Central Coastal Agricultural Research Institute, Ela, Old Goa-403 402, Goa, India.
- **Paramesha, V.** et al. (2019). Enhancing ecosystem services and energy use efficiency under organic and conventional nutrient management system to a sustainable arecanut based cropping system. Energy 187, 115902. (NAAS rating- 14.86)
- **Paramesha, V.**, et al. (2018). Optimization of energy consumption and environmental impacts of arecanut production through coupled data envelopment analysis and life cycle assessment. J. Clean. Prod. 203, 674-684. (NAAS rating- 17.07)




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भाकृअनुप
ICAR

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that

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of

ICAR-Central Coastal Agricultural Research Institute
Old Goa

has developed the technology

Plantation crop based upland integrated farming system for west coast region of India

16th July, 2023
New Delhi

(Rajbir Singh)
Assistant Director General (A&AF)

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