



ARECANUT+DAIRY BASED INTEGRATED FARMING SYSTEM FOR UPLAND SITUATIONS OF GOA

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PROBLEM AND RESEARCH GAP

In the upland and midland region of Goa, the arecanut based cropping system is more prominent. However, the farmers introduced intercrops without considering their adoptability to this region. The intercrops are competing for resources such as nutrients, light, and space leading to less income to the farmer and more vulnerability to risk. Moreover, the income is not spread throughout the year. To overcome this, diversification of existing plantation crop-based cropping patterns with new farm enterprises suitable to the region needs to be done. Interventions for improving productivity, profitability, and livelihood of the small and marginal farmers are required by keeping in view the soil health and employment generation.

PARTICULARS AND SALIENT FINDINGS

The different enterprises in the upland IFS models evaluated like arecanut (Mangala)+ banana (Grand Naine) in 0.22 ha, piggery in 48.00 m², poultry in 56.96 m², compost unit in 42.7 m², direct catch pits 6 nos.(10.89 m² each). The arecanut+dairy system has recorded a higher net return (₹ 0.45 lakh). The piggery enterprise has produced a net return of ₹ 0.25 lakh. The total net return from the above model was ₹ 0.97 lakh during one year. The value of recycled products within the farm was ₹. 0.35 lakh. This model was evaluated in the farmers field at Mayem village in Bicholim, North Goa, 9 farmers were selected and technological inputs, seeds, and fertilizers were given for the cultivation of different crops. We guided the farmers in the adaptation of the improved package of practices for the cultivation of arecanut, coconut, spices, and fruits. The balanced use of farmyard manure and chemical fertilizers along with micronutrient mixtures was encouraged. The cultivation of fodder crops Hybrid Napier like CO-5, fodder cowpea, and fodder maize are encouraged. In addition, green vegetables including curry leaves, Cucumber, Pumpkin, red amaranth, and palak were produced for home consumption.

IMPACT

The IFS farmers on an average produced 3-4 quintals of arecanut, 3500 coconuts, and 80 kg of black pepper, and produce from fruits like mango, sapota, and jackfruit are used for household consumption. on a smaller area, with the surplus being marketed locally. Mil produced from the IFS system were utilized for home consumption and excess was sold to market. The household requirements of vegetables (Tendli, Cucumber, Pumpkin, Red amaranth, palak) were met from the kitchen garden. The use of natural matter decreased the need for fertilizer by 30%, and the application of micronutrients and macronutrients in the right quantities at the right times boosted crop production. The use of a micronutrient and Bordeaux mixture blend lowered insect infestation and the amount of flower and fruit drops in the arecanut and coconut. The mulching method was used to lower the need for and consumption of water in arecanut and coconut. Each farmer got an additional mean net income of Rs. 1.1 lakh per year by increasing residue recycling and by growing fodders in the farm. The cultivation of vegetables during rabi improved food and nutritional security and also employment to the farm family.

