



Intercropping of spices in coconut garden - A success story from Maharashtra

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Coconut is a major horticultural crop in the Konkan region of Maharashtra, where the agro-climatic conditions are very much congenial for its cultivation. Government of Maharashtra has launched an ambitious Employment Guarantee Scheme (EGS) for fruit crop cultivation in 1990, which led to the expansion of the area under coconut cultivation to 22,750 ha (2015-2016), with productivity of 9,775 nuts/ha. In Maharashtra 95 per cent area under coconut is concentrated in Konkan region and most of the orchards are situated near the seashore, of which the majority are sole coconut orchards. In the state, coconut farmers are facing problems like fragmented holdings, scattered production, homestead nature of cultivation, lack of skilled manpower, incidence of pest and diseases, lack of adoption of scientific cultivation practices, lack of appropriate mechanization for harvesting and small scale processing and lack of awareness about improved technologies.

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for increasing production and productivity per unit area, time and inputs by more efficient utilization of resources like sunlight, soil, water and labour. Under such a cropping system, all the management practices and component production systems should be able to maintain high productivity, profitability and sustainability of the existing coconut palms to maximize economic yield of the farm. Sustainability is the main objective of farming system, where the production process is optimized through efficient utilization of the inputs in safeguarding the environment.

Spices are important crops that can be grown as intercrop in coconut gardens in the West Coast region of Maharashtra state. Studies conducted by Regional Coconut Research Station, Bhatye, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli and other research institutions of the country have unambiguously proved the technical feasibility and economic viability of intercropping of spices compared to the monocropping of coconut. Many farmers also have adopted the technology and realized the profitability and sustainability in the coconut garden. The successful experience of a farmer in intercropping of spices in coconut garden is presented below.

Mr. Deepak Gopal Sawant is a 62 year old farmer who owns five acres of land in Burodi village who is from Dapoli tahsil of Ratnagiri district of Maharashtra has adopted the intercropping system in the farm. The farmer has a diploma in Agriculture Science from Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli. After completion of his education, he joined the service as Agriculture Assistant in the same University and retired from the service. During the period of his service, he had planted Banavari variety in his five acres land during 2002 with the help of his family members, by adopting standard package of practices as recommended by the University. For



Visit of Project Coordinator along with scientists to the farm



The farmer with a bumper yield of nutmeg

planting coconut, seedlings were purchased from the nursery of All India Co-ordinated Research Project on Palms, Regional Coconut Research Station, Bhatye, Ratnagiri.

Intercrops such as black pepper (Panniyur-1) was planted during 2008, the nutmeg (430 plants - var. Swad, Sugandha and Shreemanti) and Kokum (140 plants - Konkan Amruta) was planted all along the border during 2008. For all the crops the farmer adopted recommended package with regard to nutrient management and water management. For supplying the required nutrients, he applies organic manures viz. FYM/ poultry manure/goat manures along with the major and micronutrients. Irrigation is being given by adopting micro-sprinkler system. The recyclable biomass from the crops is being recycled in the garden itself in the form of mulching and converting it into vermicompost. Since his land is undulating type, he has also adopted soil and water harvesting measures, wherein the rain water is conserved within the garden.

The coconut is being harvested for tender nut purpose and sold at farm gate itself. On an average he harvest 90 to 100 tender nuts. The yield from nutmeg is around 500 to 600 fruits per tree, along with 750 g to 1.0 kg mace per tree. The black pepper yield range from 1.5 kg to 2.0 kg/ vine and kokum yield about 200-225 kg fruit/ tree. The economic benefit (average of 2 yrs) of the system indicates that, the variable cost of production involved to maintain one ha of the system was around Rs. 2,20,000/- to Rs. 2,30,000/- per year. Average net return realized from all the crops was to the tune of Rs. 5.75 lakhs to 6.55 lakhs/ha per year depending upon the market price of the crop. Thus from his experience it was realized that, cropping system with spices in coconut is highly profitable and remunerative over a period of time in the Konkan region of Maharashtra. ■