

An Innovative Coconut based Mixed Farming Model

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“ World Coconut Day comes on
September 2 of every year.



Kozhikode district is famous for coconut farming and the North Eastern part of the district is well-known for the West Coast Tall cultivar Kutiady local. Coconut remains the main stay of agriculture in the region and occupies an area of 1,19,064 ha in the district. Coconut based mixed farming is gaining momentum recently among the farmers. K.T. Francis, Kaithakualath House, Maruthomkara, of Kozhikode district is one such farmer who is highly successful in mixed farming with a diversity of crops and other components.

He served as a physical education teacher in a local school for thirty years and started farming seriously after retirement. He was born in a farming family and his father was a successful conventional farmer. That motivated him to adventure into farming after retirement. He owns three acres of land and mainly coconut based mixed farming is practiced in the entire farm.

The main crops include coconut, arecanut, spices, cocoa, coffee, tuber crops, medicinal plants, fruit plants, forest trees, fodder grass, upland rice and so on. In addition, dairying, goatery, duck rearing, apiculture, fish culture, poultry farming etc. are also practiced.

Main coconut cultivars include WCT, Kerasree, Malayan dwarfs etc. A total of 200 coconut palms including about 50 young palms are the main component of the farm. Mainly organic farming practices are followed. Abundant Farm Yard manure available from his own farm is applied in plenty. Main interventions/ innovations practiced by farmer for productivity enhancement are contour terracing, mulching, application of coir pith in coconut basins, husk burial, water harvesting pits etc. which will conserve moisture and improve yield.

Effective use of organic manure available in farm is another added advantage and all the biological wastes are recycled in the farm. The average yield from a palm is around 200 nuts per year. He is a farmer identified by Krishi Bhavan to supply coconut seed nuts for seedling production and produces WCT coconut seedlings, arecanut seedlings and make it available to the needy farmers. Farmers from all around the district approach him for quality seedlings.

In addition to copra, ball copra, coconut seed nuts and coconut seedlings are the main output

from the farm. An electrically operated copra drier helps to produce quality copra at farm level. Another coconut ball-copra making unit with a capacity of 25,000 nuts helps to produce ball copra without firewood and enables farm level processing without environmental pollution from smoke and loss of fire wood. This helps to sell quality produce in the local market.

Arecanut is another important component of the farm. The main cultivars are Mangala, Mangala interse cross, Mohitnagar, South Kanara types totalling about 750.

Black pepper is the main spice crop of the garden. A total of 500 vines in different growth stages are grown in the farm. He cultivates high yielding varieties like Sreekara, Subhakara, IISR Thevam, Panchami, Pournami and Panniyur 6. Local cultivars like Narayakkodi, Arakkulam Munda, Karimunda are also available. He also has bush pepper plants that yields throughout the year. The main standards of pepper are coconut and arecanut. Regular prophylactic spray of Bordeaux mixture is given to the vines to protect from deadly Phytophthora foot rot disease.

Other spices include turmeric (variety Prathibha), ginger (IISR Varada), Kasturi turmeric, nutmeg (IISR Vishwashree and elite local types), clove etc. Cardamom is grown on an experimental basis to evaluate its performance in low land areas. In addition, vanilla has also been introduced in the garden recently with about 400 vines. He also has an abundance of tuber crops as intercrops in the garden which fetches a reasonable income. These include amorphophallus, colocasia, yams, cassava, arrow root, coleus etc.

Another attractive feature of the garden is an array of various fruit crops. He collects all the available fruit plants whenever he travels in different parts of the State and outside. In addition to common fruit plants, rare and exotic fruit plants are the highlight of his collection.

Some of these include mangosteen, rambutan, pulasan, passion fruit, noni, carambola, durian, milk fruit, different citrus fruits, rose apple, West Indian cherry, and the list is endless. He also earns a good amount from Red Lady papaya cultivation by sale of fruits in nearby markets. Self-sufficiency in household vegetable requirement is another remarkable achievement. He has all the tropical vegetables in his garden like



okra, brinjal, bitter guard, cowpea, amaranthus, chillies, snake gourd, leafy vegetables etc. He also has a good collection of medicinal plants. These include kacholam, lemon grass, vetiver, chethikoduveli, neela amari, chittaratha, nilapana, adapathiyam, asoka, pathimugham, koovalam, chittadalodakam, thulasi, Aloe vera etc.

In addition to crops, livestock and poultry are the other highlights of the farm. Cow breeds include Kasargodan, Holstein Friesian and local breeds. Goat breeds like Malabari and Jamunapari are other attractions of the farm. Milk, curd and ghee from these are sold providing him a reasonable income. To sustain them, fodder crops like Hybrid Napier Co-3 is also cultivated in the garden.

A wide variety of ornamental birds are also reared by him. These include swan, love birds, Kadakkanath hen, Guinea fowl, Japanese quail etc. He also rears Gramasree breed of poultry and ducks and earns a fair amount through sale of eggs and meat.

A vertical farming model incorporating, ornamental birds above the edible fishes culture tank is another innovation. He cultures Pangasius an air breathing fish commonly known as tiger shark. The nutrient rich water from the fish tank is used for irrigating various crops. Nearly 50 percent water is exchanged in 2-3 days interval there by benefiting vegetable crops and fishes.

Apiculture is also practiced in the farm. In addition to providing honey, it also helps in the pollination of the crops thereby improving yield. A total of 60 bee hives are maintained in the farm. A small forest is also maintained in the farm to ensure biodiversity.

Irrigation is mainly through sprinkler system. Systematic contour terracing/bunds is the peculiarity of the farm which also have innumerable water harvesting pits that ensures percolation of rain water into the soil and avoids run off. A biogas plant installed near the dairy unit provides cooking gas for the household needs.

The entire farm is maintained as an organic farm with recycling of farm waste and crop residues. Plentiful of poultry manure, biogas slurry, cow's urine, goat manure, vermicompost, green manure etc. is used in abundance to maintain a nutrient rich soil in the farm. The soil is rich in humus and innumerable number of earthworms



The Best coconut farmer award of the Government of Kerala for the year 2017- 18 is the latest in the list adding another golden feather to his achievements in mixed farming.



in the periphery of the soil is a clear indication of the above.

All crops management practices are carried out in organic methods. To add to this, the entire farm operations is done by him and he hires only one additional labourer as and when required. The farm is a model of an organic farm maintained in a highly sustainable manner.

Many farmers visit his farm every day. He explains everything in a simple way, takes them around the farm and motivates every one interested in farming. He also continuously experiments in his farm, brings in new models and is the first one to introduce any new technology released by research institutions.

That is why no one was surprised when he was awarded with a number of State and district level awards. His garden served as an IFS model farm for this region which got shape with the due intervention of Krishi Vigyan Kendra working under ICAR- Indian Institute of Spices Research, Kozhikode.

