

Plant Propagation and Nursery Management Unit, Vellanikkara, Thrissur

Phone :

Mobile:

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Website:

Station Head		Dr. K. Aravindakshan	
Longitude		76° 13' E	
Lattitude		10° 31' N	
Nearest City/ Town	Thrissur	Distance from Nearest City/ Town (km)	10
Nearest Railway Station	Thrissur	Distance from Nearest Railway Station (km)	10
Nearest Airport	Cochin Internatinoal Unit Nedumbassery	Distance from Nearest Airport (km)	60

About Station

The Plant Propagation and Nursery Management Unit was established in 1989 with the objective of production and distribution of quality planting materials of fruit plant, plantation crops, spices & ornamental and vegetables. Campus Development Scheme was launched in the KAU main campus during 1990 for the general development and beautification of the main Campus. Itty Achuthan Memorial Botanical Garden and Ccoconut Development Farm also come under the purview of PPNMU. The waste lands were brought under high value crops like cashew which serve as the scion bank for the large scale production of graft of elite plant released by the University. The total area under PPNMU is 103 acres. The land utilization is as follows.

Land utilization

Sl. No.	Crops	Area (acre)
1	Coconut Farm	50
2	Cashew plantation	2
3	Progeny Orchard	5
4	Vegetables and banana	10

5	Nursery area	6
6	Botanical garden	30
TOTAL		103

Objectives

- Beautification of the entire Campus
- Maintenance and upkeep of the progeny orchards
- Upkeep and maintenance of Botanical garden
- Maintenance of Central irrigation facility
- Upkeep and maintenance of building premises of main campus such as Head quarters, central library, central auditorium etc.
- Supply of labourers on need base for KAU HQ, KAU school etc as per official request
- Maintenance cleaning of premises of university student hostels, international hostels, scientist and staff quarters including pruning/ training of trees
- Vegetable seed production
- Planting material production of fruit crops, plantation and spices, cash crops, ornamentals and flowering plants, tree crops etc
- Sale and distribution of seeds, planting materials and other produces
- Coconut oil production
- Hybrid coconut seed production
- Banana cultivation
- Integration of coconut farming with meat goat
- Rabbit production
- Live stock and dairy production
- Bio control agents and bio fertilizers production
- Production of Tissue Culture Banana and ornamentals
- Vermicompost and Oushadhi compost production
- Offered courses to students and Project guidance

Vision

Large scale production and distribution of quality seeds of important vegetables viz. bittergourd, amaranthus, bhindi, cucumber, ashgourd, pumpkin, snakegourd, cowpea, brinjal, chilly and other vegetables; quality planting materials of fruit plants like Mango, Jack, Sapota, Guava and minor fruits; plantation crops viz. Coconut, hybrid coconut, arecanut; spices viz. pepper, clove, nutmeg, cinnamon, garcinia; forest plant and ornamental and flowering plants; Bio control agents, Vermicompost, TC plants etc to meet the need of farmers and homesteads of Kerala.

Mission

It is a recognized fact that the environment created by architecture and landscape plays a significant role in the realization of a University's academic and social aims. Campus Development scheme at the main Campus of Kerala Agricultural University envisages the creation of a beautiful environment by a harmonious combination of buildings and the landscape. Hence, the Campus Development Scheme was launched in the KAU main campus during 1990 for the general development and beautification of the main Campus.

The role of trees and various plant species in developing a living or utilitarian environment is well known. Developing a botanical garden and arboretum by incorporating the various elements of environmental landscape horticulture is of great value that when fully developed they will be unique in the various aspects like aesthetic value and ecological conservation and landscaping effects would have been combined to form an ideal model. In the main campus of the KAU, an area of 11-12 ha has been developed as a botanical garden. It is rich in biodiversity with about 200 trees species. The botanical Garden has been named as Itti Achuthan Memorial Botanical Garden since 2006.

Quality seed production of the important vegetables viz. bittergourd, amaranthus, bhindi, cucumber, ashgourd, pumpkin, snakegourd, cowpea, brinjal & chilly are being taken up in large scale according to the demand. The waste lands were brought under high value crops like cashew which serve as the scion bank for the large scale production of graft of elite plant released by the University. Integrated irrigation water supply system for the entire campus was installed under the control of the Special Officer, Campus Development

The Coconut Seed Farm established in KAU Main Campus by Coconut Development Board, Cochin was handed over to KAU during 2004-2005. The farm has a total cropped area of 15 hactres planted with 6 Tall Coconut varieties (Komadan, Tiptur Tall, LO, WCT Kasargode, Kuttiyadi and Malappuram eco types) and 3 Dwarf varieties (CGD, Gangabandam and COD). In the Coconut Development Farm, in addition to coconut, cultivation of crops like banana, fodder crops, heliconia, ginger, turmeric, yam etc are taken up on a regular basis. Meat goat unit, Dairy unit, Rabbit unit, Vermi Compost unit, Bio Control production Unit, Coconut oil production unit, Tissue culture production unit are also functioning at Coconut Development Farm. Hybrid coconut production under RKVY project is also carried out here since 2010.

Achievements

1. POP Recommendations

- Concurrent growing of cowpea in dry seeded rice

When there is an undue delay in the onset of monsoon, concurrently grown cowpea can be incorporated by spraying 2,4 –D @ 1.0 kg ha⁻¹ at 30 days after sowing without affecting the yield of rice with a substantial reduction on weed incidence. (Page No. 15 after the 1st paragraph in the 2nd column in KAU POP crops 2010)

- Concurrent growing of daincha in wet seeded rice

In wet seeded rice, daincha can be raised as an intercrop by sowing 20 kg seed of daincha ha⁻¹ along with rice (seed rate 60 kg ha⁻¹) to serve as a source of green manure. Daincha can be incorporated by spraying 2,4 –D @ 1.0 kg ha⁻¹ at 30 days after sowing thereby adding substantial quantity of green manure. System of concurrent growing of daincha can also reduce the weed pressure in wet seeded rice. (Page No. 15 in KAU POP crops 2010).

2. Planting of 20 days old two seedlings per hill at a spacing of 20 x15 cm with intermittent irrigation and concurrent growing of daincha and its subsequent incorporation at 30 days after sowing by spraying 2, 4 – D can be recommended as a management alternative for high production cost and low yield of paddy under Kerala conditions.

3. Concurrent growing of daincha and its subsequent incorporation at 30 days after sowing by spraying 2, 4 – D was found to be very effective in controlling the weeds and supplying the required quantity of organic manures (12 t ha⁻¹) to rice with minimum investment without any yield reduction.

4. There was a significant increase in the yield of coconut (48% and 37%) respectively due to intercropping of ginger and turmeric. Higher Land Equivalent Ratio (2.27) and Coconut Equivalent Yield (82808 nuts/ha) of coconut- turmeric system revealed the bio suitability of coconut- turmeric system compared with coconut- ginger and pure crops. Monetary return based on LER (Rs. 277972/-), gross return (Rs. 496848/ha), net return (Rs. 391848/ha) and B: C ratio (4.7) were also high in coconut- turmeric system compared to coconut- ginger and pure crops. Both in terms of production as well as economics intercropping of annual spice such as turmeric and ginger in coconut is viable compared to pure crop of coconut.

5. Performance improved ginger varieties under open and shade conditions revealed that ginger variety IISR Mahima recorded the highest yield (22.38 t/ha) under open condition. Under shaded situation ginger variety IISR Rajatha recorded the highest yield (14.7 t/ha)

6. Integration of meat goats increased the total profitability of the coconut farm from Rs. 14152 ha⁻¹ year⁻¹ to Rs. 26058 ha⁻¹ year⁻¹ and it is a sustainable model suitable for small scale coconut farmers.

7. Vegetative propagation studies of elite nutmeg trees was attempted by budding with *M.beddomei* and *M. fragrans* as the rootstock revealed highest success percentage with green budding on *M.beddomei* (70%) followed by green budding on *M. fragrans* (65%) and brown budding on *M. beddomei* (60%).

8. Potting mixture containing coarse sand + cowdung+ soil is the best growing medium for anthurium. NPK @ 17: 24: 20 and 18: 18:18 are beneficial for the desirable characters. 82.6% shade and irrigation @3lit/day are required during summer. For field planting a closer spacing of 30 cm x 40 is beneficial. The flower can be harvested at a stage when ½ or ¼th of the stigma along the spadix become receptive. Vase life is found to be higher in 2% sugar or 1.5% sucrose solution.

The following Development projects / large scale production programmes are carried out for the last 5 years

Head of A/C	Name of the Projects
KAU Plan 383-31-3302	Development of Main Campus
383-31-3305	Development of Botanical Garden
383-31-3323	Intensive vegetable seed production programme
383-31-4528	Campus Beautification
ICAR	
383-31-8287	CSS-NHM Spices
383-21-5118	Modernization of agricultural farms
383-31- 5162	Project on Fertigation studies in coconut and Project on Fertigation studies in banana as pure crop and intercrop in coconut gardens
Other EAPs	
383-31-8260	SHM Project on Rehabilitation of existing tissue culture lab at PPNMU
383-31-8551	Net work project on production and distribution of quality planting materials(TC)
383-31-8666	RKVY Project on – Development of Production units for hybrid Coconut seedlings and other Planting materials in three districts of Kerala
383-31-8766	Production and Distribution of Elite seeds and planting material-Network Project

383-31-8935	Setting up of a model commercial unit for herbal waste composting in collaboration with Oushadhi
383-31-8959	Production and Distribution of Elite seeds and planting material- Network Project
383-31-9303	Commercial Micro Propagation as per National Certification System for Tissue Culture Plants
Revolving funds.	
383-65-6120	Establishment of Central Nursery
383-65-6121	Coconut Oil Production
383-65-6122	Production and distribution of quality planting materials –TC plants
383-65-6358	Development of Production units for hybrid Coconut seedlings and other elite planting materials

Research News and Events (recent) concerned with the Station

Two farmers training programmes on nutmeg cultivation of two days duration each were conducted for nutmeg farmers as a part of NHM project.