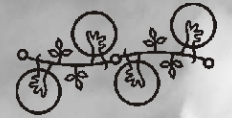


a farming system. In this demonstration plot cardamom, coffee, pepper etc., are planted along with vanilla, vegetables, medicinal plants and strawberry. Mushroom cultivation, vermi composting, fish farming, dairy farming, apiculture as well as azolla and trichoderma production also form a part of the system.

14. CABc Farm: Under the 41 acres of land with the CABc, an area of 31 acres is used for organic farming purposes. 'Robusta' coffee is planted in 2.5 acres of land and the rest is planted with CXR coffee, arecanut, banana, jackfruit, gooseberry, various other tree species. 'Prathibha' a high yielding variety of turmeric and a local variety of ginger 'Chukkamaran' also has been planted. Various sustainable development measures like conservation of natural streams, water conservation measures, agro-forestry and gene pool conservation activities can be seen in the farm. A model rain water harvesting unit has been constructed, utilising simple building technology with Ferro cement. The capacity of the tank is 10000 litres. The technology can be easily replicated on other farms.

In the quest for organic farming, the Centre has the following units to produce bio inputs-

- * **Vermi composting Unit:** A vermi compost unit for the production of earth worm cast by using a local earth worm named 'Eudrilus eugenia' is demonstrated.
- * **Azolla:** Azolla is an alga which can be used as fertilizer and cattle feed. Students and farmers can familiarise with the usefulness of the alga from the azolla unit.
- * **Bio Pesticide plants:** Plants that can control pest infestation on crops are called bio pesticide plants. CABc has conserved 20 such plants in the campus to create awareness on controlling pests without using insecticides.
- * **Trichoderma Unit:** Trichoderma is a type of fungus used to control the growth of other harmful fungi that restrains the growth of crops. The Centre has established a trichoderma unit on commercial basis to produce and distribute trichoderma to farmers at a reasonable price.



M S Swaminathan Research Foundation
Community Agrobiodiversity Centre
Puthoorvayal, Kalpetta

A Guide to Visitors

The Community Agrobiodiversity Centre (CABc) was established as a regional centre of M.S. Swaminathan Research Foundation with the goal of achieving food, health and ecological security at the village level through agro biodiversity conservation and its sustainable use. It started functioning in 1997 at Puthoorvayal near Kalpetta, Wayanad. The CABc campus has strived to showcase some of the biotic richness of Wayanad, which along with scientific working models make the Centre an interesting place for learning.

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M.S. SWAMINATHAN RESEARCH FOUNDATION



1. Conservation Garden: In the wake of increasing demand from the public in the area of education on biodiversity, CABc has established a conservation garden at the Centre. The garden spread over three acres has a collection of rare species of plants including 120 wild orchids, 60 ferns, 126 endemic trees, 27 zodiac plants and 153 climbers of the district. This garden will be of special interest to visitors, trainees, students, teachers and others for acquiring information regarding wild plant resources of the district.

2. Collection of Medicinal plants: There is a collection of over 500 medicinal plants spread over 5 acres. A special feature is a shade house containing 275 species of medicinal plants arranged in an attractive manner. All the plants are labelled with their scientific and local names. Plants that are rare and endangered are also conserved in the shade house. Some of those plants are '*Coscinium fenestratum* (maramanjil), *Salacia fruticosa* (ekamayakam), *Anaphillum wightii* (keerikkizhangu), *Commiphora mukul* (gulgulu), *Embelia ribes* (vizhal), *Baphicantha* spp. (assam indigo), *Equisetum* spp. (kochupullu), *Ipomoea mauritiana* (palmudakku). The Centre distributes genuine seedlings of medicinal plants from its nursery.

3. Wild Edible Plants: The tribal communities lead a life of relatively greater inter-dependence with their natural environment and depend directly on plants for their sustenance. There is a growing awareness of the value of such wild plants and associated traditional knowledge. The Centre is conducting scientific studies on these plants and maintains an *ex situ* collection of 78 species of wild edible leafy greens, 24 wild edible fruit yielding trees and 18 tuber yielding plants including 13 species of wild Dioscoreas.

4. Collection of Yams and Taros: Around 17 varieties of yam from within and outside the district is planted and conserved in the

Centre. This includes Dioscorea, Colocasia and Elephant root yams. These are major sources of food to the ethnic communities.

5. Collection of Local Banana Species: Around 12 local traditional varieties of banana are conserved. The collection includes medicinal varieties like 'Vettan, Kalluvazha and other varieties like Poojakkadali', which is very special for Hindu rituals.

6. Herbarium: There are over 1500 voucher specimens in the herbarium collection with details of the botanical name of the plant, its local name, specialties, habit, key characteristics etc.

7. Traditional Rice Varieties: Four years ago, CABc had conducted a study all over Kerala on the traditional varieties of rice and had collected more than 100 types of traditional rice seeds. The collection includes medicinal rice varieties like Navara (used in Ayurveda), Vattal, Jathi sakhi, Erumakkari and varieties like 'Pokkali' (which is cultivated in *oorunilangal*-flooded land especially saline in nature) and fragrant rice varieties like 'Gandhakashala, Jeerakashala, Mullan channa, Kunji' etc.

8. Butterfly garden: The butterfly garden is established in half an acre area of land behind the farm house. There are 300 butterfly host plants belonging to 151 species which serve as a source of nectar and larval food. The garden is maintained at high humidity to ensure the survival of the butterflies. The campus attracts around seventy three types of butterflies belonging to five families.

9. Collection of Bamboos: Around twenty-five varieties of bamboo from within and outside Kerala have been planted at the Centre

10. Nitrogen Fixing Plants: Many plants do not have the ability to fix nitrogen from the atmosphere. Soil nitrogen can be



enriched by planting legumes whose root nodules have Rhizobium bacteria which has the ability of fixing the atmospheric nitrogen. To create awareness on the importance of planting species that are capable of fixing atmospheric nitrogen, species like *Dainja*, *Sesbania* spp., *Kilukki* (*Crotalaria* spp.) etc., have been planted in the campus.

11. Mushrooms: A study conducted by CABc revealed that around 40 species of mushrooms are used by the people of Wayanad, out of which twenty seven important varieties are conserved here. The Centre produces mushroom spawns and sells to the general public. These spawns are produced in the laboratory through a purely scientific and time bound process. To make mushroom farming more accessible to farmers and other people as a cottage industry, CABc provides the spawn of '*Chippi*' mushroom (*Pleurotus citrinopileatus*) for Rs.15/250 Gms of spawn. Training programmes are conducted on cultivation of mushroom. Information regarding the medicinal and nutritious values of mushroom, diseases and remedial measures, various mushroom products and their marketing is disseminated.

12. Collection of Local Fish Species: Wayanad is blessed with a wide range of fish species seen in the rice fields and canals. Unfortunately, due to unscientific farming practices and increased use of chemicals in the farms, many species are disappearing. There is a collection of 48 fish species found in various waterways, many of which are used by the indigenous communities of Wayanad as food. It is hoped that this collection will sensitise the conservation efforts and will also kindle the interest of students and teachers.

13. Organic Farming: Sustainable organic agricultural farming system is adopted in one acre of land. Through this system, CABc wants to demonstrate to farmers how productivity can be increased and thus income, through recycling of bio resources in