CPCRI

A Century of Service to the Nation

Companion of coconut community
Since 1916

ICAR

ICAR-Central Plantation Crops Research Institute

http://www.cpcri.gov.in/

केंरोफअसं
CPCRI

Milestones in the Journey of 100 Years

2016 — Research Centre, Minicoy Re-mandated

2012 — Research Centre, Kannara phased out

2007 — Central Marine Fisheries Research Institute Research Centre merged with CPCRI RS, Minicoy

2006 — Research Centre, Hirehalli transferred to Indian Inst. of Horticultural Research, Bangalore; Seed Farm, Kidu upgraded to Research Centre

2002 — World Coconut Germplasm Centre, Andamans handed over to Central Agric. Research Inst., Port Blair

2001 — Research Centre, Palode transferred to National Research Centre for Oil Palm, Pedavegi

1999 — International Coconut Genebank-South Asia

1998 — ICAR, Research Complex, Goa

1989 — National Research Centre for Cashew, Puttur & National Research Centre for Spices, Kozhikode

1986 — World Coconut Germplasm Centre, Sipighat, Andamans

1982 — Regional Station, Calicut; Field Station, Iriinjalakuda; Research Centre, Goa & Lakshadweep; Research Centre, Palode

1975 — Research Centre, Appangala

1974 — Seed Farm, Kidu

1973 — AICRP on coconut & arecanut

1972 — AICRP on spices & cashew

1971 — Central Arecanut Research Station, Vittal and sub centres & Central Coconut Research Station, Kayamkulam merged

1970 CPCRI

1916 Central Coconut Research Station, Kasaragod

Sectoral Challenges

The plantation sector in India is dominated by millions of small and marginal farmers and mainly confined to the economically and ecologically vulnerable regions. The changing cropping pattern, climate change concerns and constraints on natural resource use and reduction in profitability in the plantation scenario warrants innovative strategies and approaches to address challenges and promote accelerated growth of the sector.

Coconut, arecanut and cocoa are important plantation crops of India with a profound influence on the rural economy by supporting the livelihoods of 20 million people in the country. However, of late, these crops are facing unprecedented crisis on account of various macro and micro level factors. The productivity of these crops is constrained by the low input use efficiency in conjunction with other biotic and abiotic stresses which are priority areas of research. The aspects of mechanization also demand for adequate importance, considering the scarcity of skilled labour.

Above all, the most important facet is value addition, which should be strengthened to address the issues of low profitability of the coconut, arecanut, and cocoa sectors. The relevance of CPCRI arises exactly in this context, wherein the institute strives for technology generation and dissemination to address the challenges and to convert the weaknesses into opportunities, in a concerted and synergized fashion.

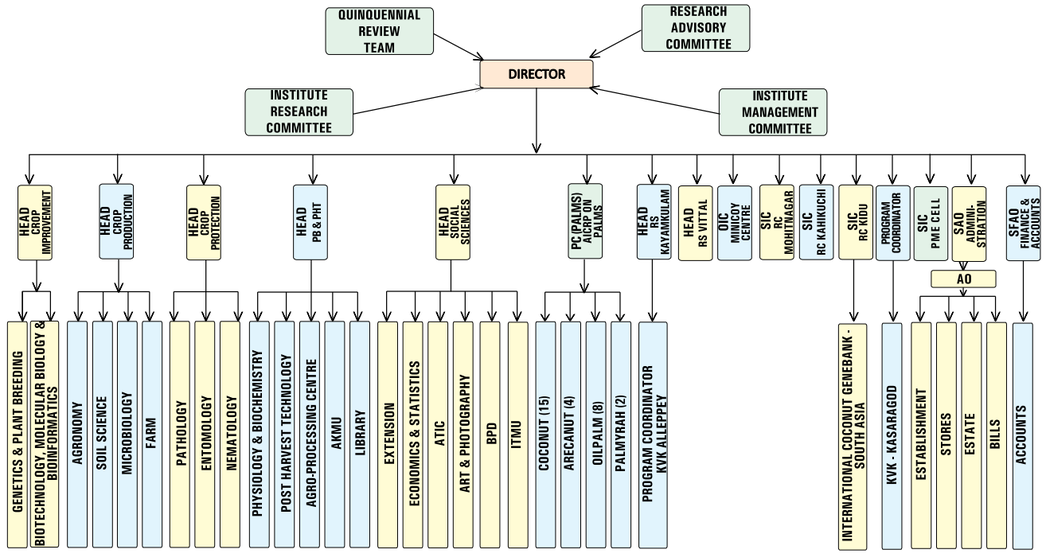
About us

The Central Plantation Crops Research Institute (CPCRI) was established in 1916 as Central Coconut Research Station, and was later taken over by the Indian Council of Agricultural Research (ICAR). The ICAR formed CPCRI in 1970 by merging Central Coconut Research Stations at Kasaragod and Kayamkulam as well as Central Arecanut Research Station, Vittal and its five substations at Palode (Kerala), Kannara (Kerala), Hirehalli (Karnataka), Mohitnagar (West Bengal) and Kahikuchi (Assam). The research centers of CPCRI for spices, cashew, oil palm and coastal agriculture were upgraded to independent institutes and directorates.

At present, CPCRI focuses on research in coconut, arecanut and cocoa. The headquarters of the institute is situated at Kasaragod, Kerala and the two regional stations are at Kayamkulum (Kerala) and Vittal (Karnataka). There are four research centres under the Institute *viz*., Mohitnagar (West Bengal), Kahikuchi (Assam), Kidu (Karnataka) and Minicoy (Lakshadweep).

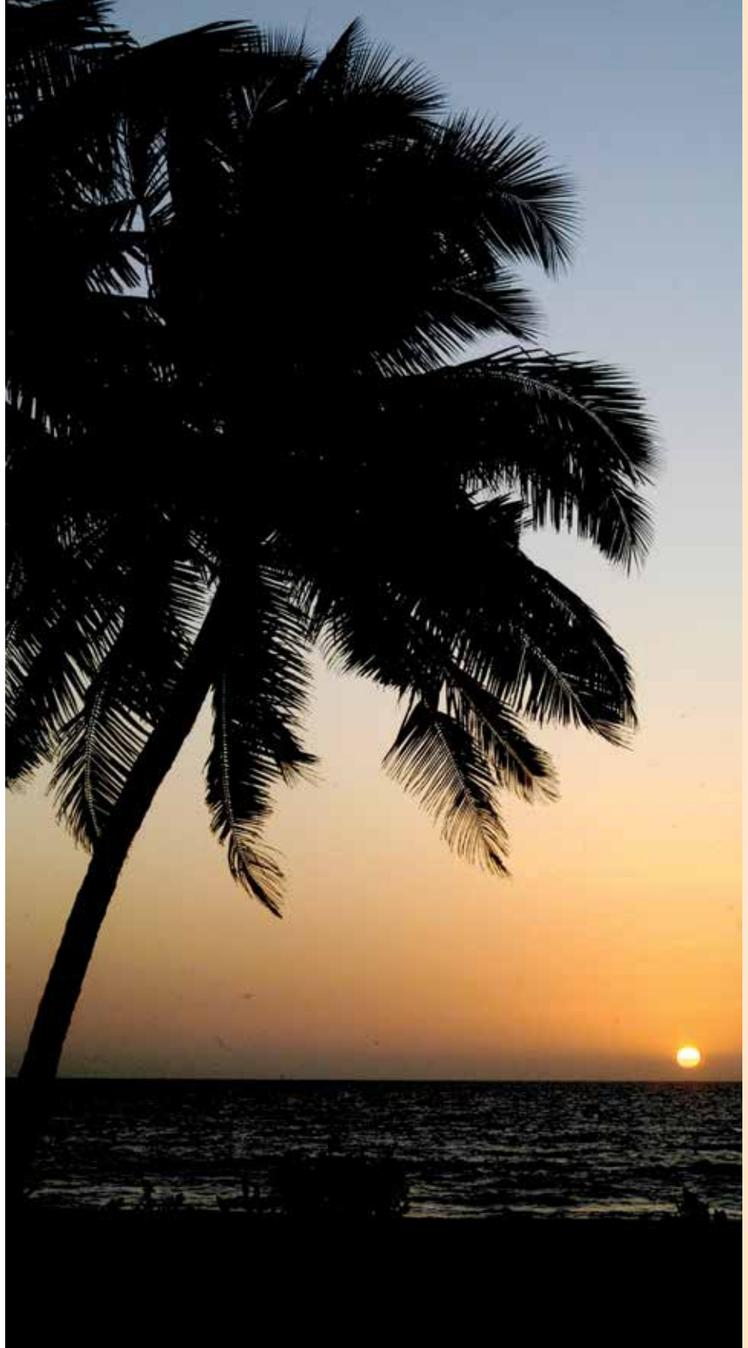
Besides, there are two KVKs (Kasaragod and Kayamkulam) under the Institute. All India Co-ordinated Coconut and Arecanut Improvement Project (AICCAIP) started functioning from 1972 at CPCRI, Kasaragod and later renamed as All India Coordinated Research Project (AICRP) on Palms in 1986. The AICRP has 15 centres on coconut, four on arecanut, eight on oil palm and two on palmyrah.

Organisational Setup



Governance

CPCRI is an ISO 2008:9001 certified institution and is managed by the Director, assisted by Head of Stations and Head of Divisions with the support of administrative and finance wings.



Vision

Develop CPCRI as a technology generation and repository centre, wherein the Institute strives to showcase, demonstrate and compare world-wide technologies in the commodity chains of coconut, arecanut and cocoa to make India the global leader.

Mission

To develop technologies that enhance resource use efficiency, profitability and livelihood security of people who depend on plantation crops.

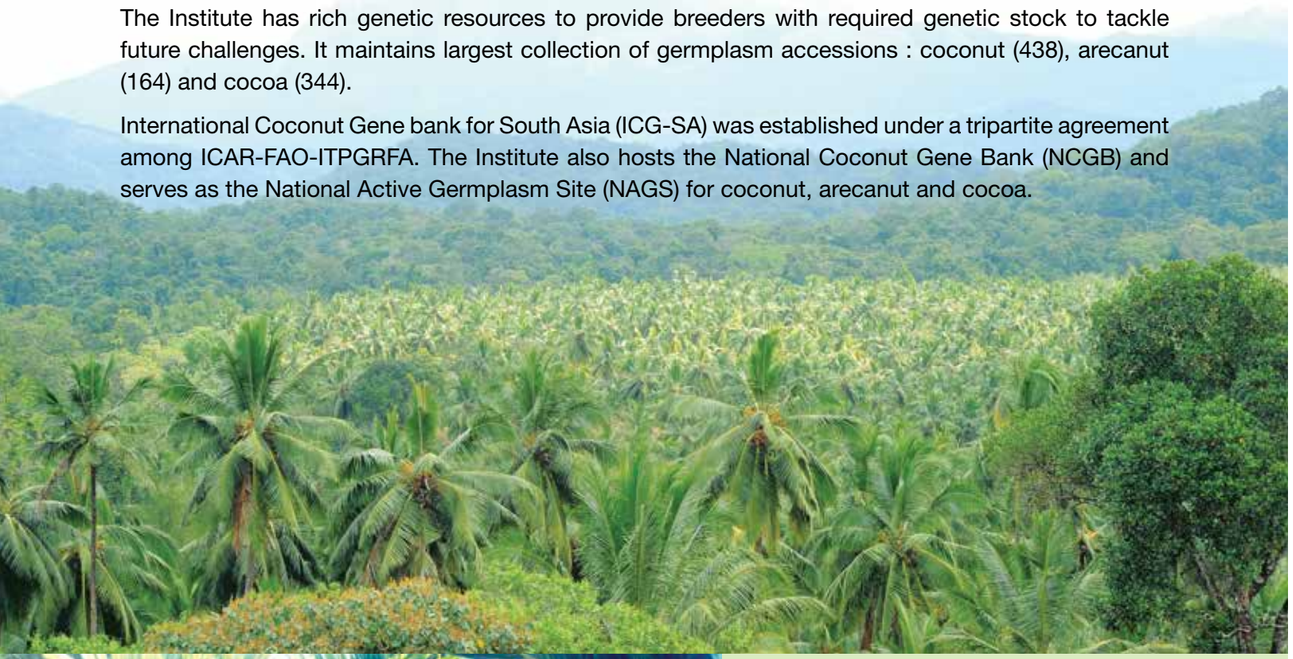
Approach

Evolve technologies that enhance resource use efficiency, profitability and livelihood security of people through basic and applied research and transfer the research findings to the farmers and other stakeholders through the collaborative synergy of developmental agencies.

Conserving for the Future

The Institute has rich genetic resources to provide breeders with required genetic stock to tackle future challenges. It maintains largest collection of germplasm accessions : coconut (438), arecanut (164) and cocoa (344).

International Coconut Gene bank for South Asia (ICG-SA) was established under a tripartite agreement among ICAR-FAO-ITPGRFA. The Institute also hosts the National Coconut Gene Bank (NCGB) and serves as the National Active Germplasm Site (NAGS) for coconut, arecanut and cocoa.



Breeding Brings Smile to the Farmers

The focused research efforts improved productivity and overall profitability to the farmers through development and release of high yielding varieties and hybrids.

Coconut

Nineteen improved high yielding varieties including thirteen selections and six hybrids were released which are suitable for copra/ tender nut/ biotic and abiotic stress tolerance. The released varieties have potential of two to six times higher yield than the locally grown varieties in different coconut growing regions.

Dual purpose varieties for copra and tender nut

Kalpa Pratibha

Tall, green fruits

Kalpa Haritha

Tall, green fruits, tolerant to eriophyid mite

Kera Chandra

Tall, round shaped green fruits

Kalpa Samrudhi

MYD x WCT hybrid, oval shaped green fruits

Kalpa Sreshta

MYD x TPT hybrid, oval shaped green fruits

Chandra Sankara

COD x WCT hybird, oval shaped brown fruits

Dwarf varieties for tender nut

Chowghat Orange Dwarf

Orange coloured round fruits

Kalpa Surya

Orange coloured oval fruits

Kalpa Jyothi

Yellow coloured oval fruits

Varieties for root (wilt) disease prevalent tracts

Kalparaksha

Semi tall oval shaped green fruits

Kalpasree

Dwarf oval shaped green fruits

Kalpa Sankara

CGD x WCT hybrid, oval shaped green fruits

Varieties for copra, moisture deficit tolerance

Chandra Kalpa

Tall, brown coloured oblong fruits

Kalpatharu

Tall, brown coloured oval fruits

Kera Keralam

Tall, green coloured oval fruits

Kalpa Mitra

Tall, greenish oval fruits

Kalpa Dhenu

Tall, large, green fruits

Kera Sankara

WCT x COD hybrid, oval shaped green fruits

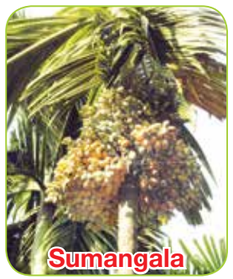
Chandra Laksha

LCT x COD hybrid, oval shaped fruits

Arecanut

Ten improved varieties of arecanut were released including eight selections and two dwarf hybrids. These varieties have increased the nut yield 2 to 3 times more over local varieties with higher dry kernel recovery.

Semi tall, dry kernel yield of 4.11t/ha



Tall, dry kernel yield of 4.38t/ha

Tall, dry kernel yield of 4.36t/ha

Tall, dry kernel yield of 5.03t/ha

Tall, dry kernel yield of 5.18t/ha

Tall, dry kernel yield of 5.07t/ha

Tall, dry kernel yield of 4.85t/ha

Tall, dry kernel yield of 5.69t/ha

Hybrids

Hirehalli Dwarf x Sumangala hybrid, dry kernel yield of 3.48t/ha, early flowering

Hirehalli Dwarf x Mohitnagar hybrid, dry kernel yield of 3.62t/ha, early flowering

Cocoa

Seven high yielding varieties including three elite clones and four hybrids, which yield up to 2.5 kg dry bean/tree/year with varying processing qualities were released.

VTLCC 1
Green to yellow coloured pods

VTLCS 1
Green to yellow coloured pods

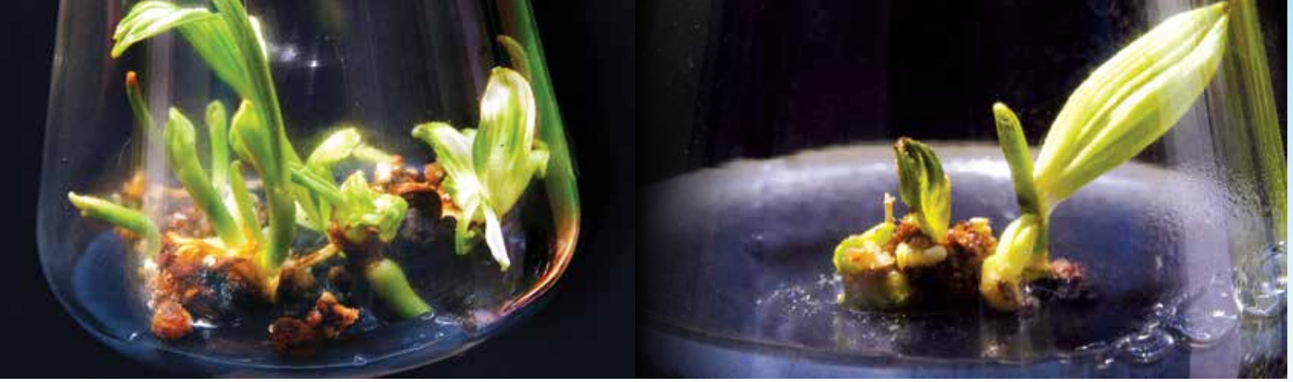
VTLCS 2
Green to purple coloured pods

VTLCH 1
Green to yellow coloured pods

VTLCH 2
Green to yellow coloured pods

VTLCH 3
Green to yellow coloured pods

VTLCH 4
Green to purple coloured pods



Biotechnology Brings New Hope

In arecanut, a protocol developed for somatic embryogenesis and plantlet regeneration is a major breakthrough for mass multiplication of dwarf hybrids and yellow leaf disease tolerant palms.

In coconut, efforts are being made to refine the protocol for regeneration of plantlets from plumule explants through somatic embryogenesis.

Coconut embryo culture protocol has been developed for long term storage and easy transport of germplasm during exchange.

Techniques have been standardized for cryopreservation of mature coconut zygotic embryos and coconut pollen.

Sequence characterized amplified regions (SCAR) markers have been developed for confirming the hybridity at seedling level in both coconut and arecanut.

CPCRI hosts Distributed Information Sub Centre (Sub-DIC) under the Biotechnology Information System Network (BTISnet), the Bioinformatics Centre and Agri-Bioinformatics Promotion Centre (ABPC).

Optimizing Resources to Maximize Profit

Coconut or arecanut based inter/mixed, multi-storied multi-species cropping as well as mixed farming systems have been developed by integrating livestock to increase total productivity.

The coconut based cropping system using multi species cropping of coconut with pepper, banana, nutmeg, pineapple, ginger, turmeric and elephant foot yam generated a net income of ₹ 3.7 lakhs per ha, which is 150% higher than that of coconut monocrop (₹ 1.4 lakhs), while the coconut based mixed farming system (CMFS) comprising coconut, pepper, banana, crossbred cows, poultry birds, goat, and pisciculture generated a net return of ₹ 5.5 lakhs which is 288% higher than that of coconut monocrop.

Arecanut based cropping system with cocoa, banana and black pepper as component crops generated net returns as high as ₹ 8.8 lakhs per ha, which is 132% higher than that of arecanut monocrop (₹ 3.80 lakhs). On the other hand cropping systems like arecanut+vanilla, arecanut+medicinal and aromatic plants, and arecanut+cocoa have generated 68%, 53%, and 26% higher net returns respectively over arecanut monocrop. Arecanut based mixed farming system (AMFS) with dairying, fresh water aquaculture and fodder grass (Hybrid Napier) components generated net returns up to ₹ 6.6 lakhs per ha, which is 74% higher than that of arecanut monocrop.

In addition to the economic benefits, the systems provide food and nutritional security and sustainability.

Contributing Towards Clean and Green Environment

Recycling of crop wastes in coconut and arecanut through vermicomposting helps in disposing of wastes, improving soil fertility, reduction in use of chemical fertilizers and sustaining the yield.

Coconut gardens of one hectare area can generate up to eight tonnes of leaf biomass residues every year. Technology has been developed to utilize these wastes for production of mushrooms and vermicompost using the local isolate of *Eudrilus sp.* earthworm. These wastes could produce 1660 kg of fresh mushroom, which can give a net income of more than ₹ 50,000 per year. Vermicomposting technology can generate ₹ 50,000 to 60,000 per year. It can also meet 50% of the nitrogen requirement of coconut palms. Vermiwash produced from coconut waste vermicomposting unit is a good liquid fertilizer for organic farming. On farm coir pith composting technology has been developed to produce organic input to the plantation as well as soil-less medium for crops.

Vermicompost produced from arecanut leaf wastes (12 t/ha) also has the potential to meet nitrogen and phosphorus requirements of arecanut which can save the cultivation cost to the extent of ₹ 5,200/ha. The yield of arecanut can be sustained at 26 q/ha by recycling waste as vermicompost.

Similarly, arecanut and cocoa gardens generate biomass of 12 and 8.5 tonnes/ ha respectively and these wastes could be effectively utilized for production of vermicompost, oyster mushroom and as livestock feed. A net income of about ₹ 30,000 could be generated from vermicompost production from wastes of one hectare arecanut garden. While arecanut leaf sheath and bunch waste can result in production of 643 kg fresh mushroom with a net income of about ₹ 30,000.

Plant growth promoting rhizobacteria (PGPR) based products, Kera Probio and Cocoa Probio have been released for clean and green, sustainable cultivation of coconut.

Modern Weapons against Pests and Diseases

Root (wilt), bud rot, basal stem rot and stem bleeding of coconut; fruit rot and yellow leaf disease of arecanut; black pod and stem canker in cocoa are major diseases that cause substantial crop losses.

Integrated disease management strategies developed for root (wilt) and leaf rot affected coconut gardens could increase yield by 25-83% depending on severity of the disease.

Prophylactic treatments of 1% Bordeaux mixture or placement of perforated fungicidal sachets or *Trichoderma* coir pith cake just before monsoon in the inner most leaf axil of the coconut has saved thousands of coconut palms in the bud rot endemic areas.

The soil application of *Trichoderma* enriched neem cake has been able to revive several coconut gardens affected with basal stem rot and stem bleeding disease.

Phytoplasmal etiology of yellow leaf disease has been established and management of the affected gardens with appropriate nutrient management has been advocated.

Timely spraying of 1% Bordeaux mixture for arecanut bunches or covering the bunches with polythene bags just before onset of monsoon has reduced the loss due to fruit rot in arecanut.

Adoption of integrated disease management involving phytosanitation and 1% Bordeaux mixture application has helped the farmers to harvest healthy cocoa pods free from black pod disease.

The '*Trichoderma* coir pith cake', a new eco-friendly bioformulation has shown great potential to protect the cocoa trees affected with stem canker disease.

Clean and green technologies have been developed for management of rhinoceros beetle, red palm weevil and coconut black-headed leaf eating caterpillar. IPM module for management of rhinoceros beetle through integration of biocontrol agents *viz*., *Oryctes rhinoceros* nudivirus (OrNV), Green Muscardine Fungus (GMF), *Metarhizium anisopliae*, botanicals (leaf axil filling with neem/ marotti cake @ 250g mixed with equal volume of sand) and pheromone trap @ 1trap/ ha has been developed.

A PVC pipe pheromone trap was designed for keeping Oryctalure, the aggregation pheromone for trapping adult rhinoceros beetle in coconut gardens.

The nano-matrix loaded pheromone for red palm weevil and rhinoceros beetle developed at CPCRI are long lasting and thereby reducing the cost by four times than that of commercially available pheromone lures.

For management of black headed caterpillar *Opisina arenosella*, biocontrol technology using release of stage-specific parasitoids *viz*., *Goniozus nephantidis* and *Bracon brevicornis* has been developed.

Integrated pest management strategy involving soil application of neem cake (2kg/ palm), chlorpyriphos and entemopathogenic nematodes (EPN) developed for arecanut root grubs has shown to reduce the root grub menace in several arecanut gardens.

The technology of placing thiamethoxam (2g) in perforated poly sachets in the innermost two leaf axils of areca palms during April–May has helped in protecting the arecanut palms from spindle bug damage.

IPM strategies developed for phytophagous mites and pentatomid bugs involving the spraying of neem oil emulsion (0.5%) has been found effective in controlling these sporadic pests on arecanut.

Per Drop, More Crop

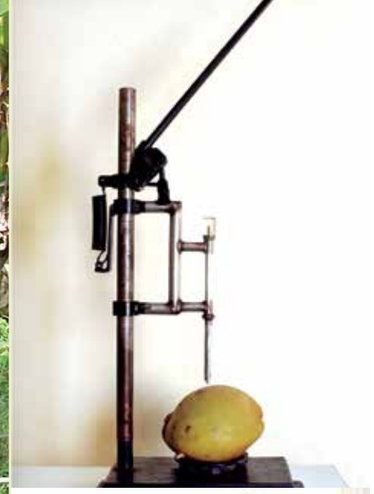
In situ soil and water conservation techniques such as, half-moon bund reinforced with pine-apple planting, trench filled with coconut husk and bund reinforced with pineapple planting and providing catch pits helps in augmenting the soil moisture availability in coconut plantations having mild slope and could enhance coconut yield up to 60%. This could reduce soil erosion from 2.73 t/ha to 0.02 t/ha. Further, it could reduce nutrient loss due to soil erosion (such as N from 7.98 to 0.36 kg/ha, P from 12.52 to 0.9 kg/ha and K from 28.5 to 1.1 kg/ha).

Drip irrigation in arecanut, coconut and cocoa has reduced the use of water to the extent of 35-40 per cent with increase in yield by 30-40 per cent. Drip fertigation in these crops has reduced the use of chemical fertilizer from 50 to 75 per cent with increase in yield by 35-40 per cent.

Conserving Water in Plantations

Low-cost water harvesting structures like check dam, sub surface dam, vented cross bars, storage structures using ferrocement technology could augment surface/ sub surface water resources.

The Institute has developed hydraulically efficient, environmentally compatible and cost effective filtration systems and structures for roof water harvesting, run-off collection, storage and percolation tanks.



Meeting Aspirations Through Mechanization

Mechanization of farm operations is the immediate requirement of the farmers to reduce the cost of production and increase the labour efficiency, especially in the context of high labour wages and their non-availability for timely farm operations.

The safety attachment incorporated by CPCRI to Chemberi Joseph model of climbing device has become an effective solution since it could be operated even by women with proper training. This the gives much required confidence to the climbers especially the beginners.

Apart from this, manual and power operated coconut husking machines; coconut shell splitting device; de-shelling machine; tender coconut punch and cutter; coconut dryers of varying capacities and using different fuel sources; testa remover; coconut slicing machine, coconut milk expeller, VCO cooker, VCO fermentation tank, copra moisture meter and telescopic sprayers are the other major contributions from the institute.

Brightening the Nutraceutical Prospects

Building Agri-business

There exists a huge scope for coconut based agri-business in India in order to increase the present 8% level of value addition to 25%. Value added products can thereby became a deciding factor in the price movement of coconut to ensure fair, reasonable and steady price to coconut farmers.

In an effort towards value addition, Institute has developed complete package of practices for the production of virgin coconut oil, coconut chips, coconut honey, jaggery and sugar.

CPCRI has developed 'Coco-sap Chiller' for collecting fresh, hygienic and unfermented coconut inflorescence sap called Kalparasa. Bottling technology developed for Kalparasa to extend shelf-life up to 45 days under refrigerated condition without adding any preservatives and additives. It has been demonstrated that a farmer tapping 15 coconut palms for Kalparasa could earn on an average net profit of ₹ 45,000 a month, while a tapper can earn about ₹ 20,000 per month.

Several value added technologies are available for arecanut by-product utilization such as making of eco-friendly disposable plates and bowls from areca leaf sheath, leaf sheath fodder, oyster mushroom production from leaf and bunch wastes and vermicomposting. It is also noteworthy that about 1.8 t dry leaf sheath waste is available from one hectare and the micro-enterprise venture for production of arecanut leaf sheath plates and cups accrue income of ₹ 27,000/ha.

Skill development/ capacity building for women SHGs and rural youth for efficient by-product utilization in arecanut by various means is necessary to ensure value addition and income generation.

Coconut is an excellent source of good fats (MCTs – medium chain triglycerides) which encompasses heuristic health benefits. The application of coconut oil helps in shielding the skin from harmful UV rays of sunlight and various infections in addition to combating skin infections like dermatitis, eczema and psoriasis.

The presence of fibre in coconut kernel helps in addition of dietary fiber to food materials. The presence of lauric acids, polyphenols and anti-oxidants in virgin coconut oil finds a place in baby care, hair care, skin care and overall health care formulations.

VCO developed by CPCRI method contains 15 to 30 µg/g tocopherol, 500 to 700 µg/g polyphenols and 80 to 90% antioxidant activity which is nearly 3 times higher than the conventional coconut oil. VCO also proved to have positive effect on Alzheimer's Patients.

Similarly, tender coconut water is a rich source of essential electrolytes like sodium, potassium, magnesium, calcium and phosphorus. It is also rich in tocopherol, polyphenol and anti-oxidant activity.

Coconut sugar consumption not only provides metabolic energy, but also essential minerals and amino acids.

Cocoa on the other hand contains physiologically active substances like flavanoids, stearic acid, methylxanthines (caffeine and theobromine) and magnesium. In view of these substances, cocoa helps in reducing free radicals, LDL cholesterol, blood pressure and platelet aggression.

Endowing Future Harvests

The Institute has been producing quality planting materials in coconut, arecanut and cocoa for distribution to farmers. Seed gardens of improved varieties have been established in the institute as well as in farmer's garden to augment planting material production.

CPCRI nurseries at Kasaragod, Kidu, Kayamkulum and Vittal were graded with 'four-stars' in the five-star scale by National Horticultural Board.

Quality planting materials are produced to an extent of 1.2 lakh coconut seed nuts including 40,000 hybrids, 5 lakh arecanut seed nuts including one lakh seedlings and 1.1 lakh cocoa including 70,000 grafts/ seedlings annually.

DUS Centre for Plant Variety Protection

The Institute is recognized as the approved centre for distinctiveness, uniqueness and stability test (DUS) of coconut and arecanut varieties under the Protection of Plant Varieties and Farmers Rights Authority, Govt. of India, New Delhi. The Institute has facilitated development of the DUS guidelines for coconut and arecanut for effecting plant variety protection mechanism.

Gearing up for Climate Resilience

Rapid methods for identification of vigour and moisture stress tolerance at seedling levels has been developed using physiological parameters. Identified moisture deficit tolerant coconut varieties, Chandra Laksha, Kera Sankara, and Chandra Kalpa. Moisture stress management strategies using burial of husk or composted coir pith in the basin and mulching with coconut leaves or with farm bio-waste gave higher soil moisture retention and increased nut yield by 20 to 75%.

In cocoa, five cocoa accessions (NC23; NC29; NC 31; NC39; NC42) and two hybrids (II-67xNC 42/94, II-67xNC 29/66) were identified as moisture stress tolerant.

InfoCrop-Coconut model developed at this institute can be utilized for delineating potential yield, climate change impacts and adaptation strategies for coconut plantations across India. This model projects increase in coconut productivity by 4.3% in 2030 and 1.9-6.8% in 2080.

The C-sequestration potential of coconut is very high i.e., 20 to 35 t ha^{-1} y^{-1}. It is the highest compared to any other plantation crop. Areca-cocoa system has a standing biomass of 23.5, 54.9 and 87.10 t ha^{-1} in 5^{th}, 8^{th} and 15^{th} years of growth, respectively. Annual increments in biomass or net primary productivity ranged from 1.38 - 2.66 t ha^{-1} in cocoa and 3.34 - 7.11 t ha^{-1} in arecanut.

Transcending Gender Barriers

Coconut based agri-business offers immense scope for transcending gender barriers and women empowerment. Coconut based microenterprises have increased the income of women self help groups (SHGs) by 3-5 times as compared to the previous income from copra, securing a steady source of additional income. Equally important, the intervention provided employment opportunities to formerly unemployed and under employed rural women resulting in enhanced self esteem, and economic and social empowerment. Training on coconut climbing, using climbing devices has helped women overcome gender barriers. Trained women serve as pollinators for coconut hybrid seed production and plant protection squad for detection and treatment of pest and disease.

Reaching the Farmer

The Institute and its KVKs are acclaimed by stakeholders and developmental and extension agencies as nodal center for coconut, arecanut and cocoa. Methodology evolved for participatory group approach through community based organizations for sustainable income enhancement among small and marginal holdings. Training and capacity building programmes at the Institute with strengthened ICT facilities have built up a walk-in knowledge base for availing first-hand information. Dissemination of technologies are pursued through on-campus and off-campus training programmes, frontline demonstration of farming systems, INM, IPM, IDM and post-harvest technologies, exposure visit of clientele, diagnostic field visits, Kisan Melas, exhibitions, mass communication media and print media. Research-extension-farmer interface are facilitated through interactive video conferencing.

Quantifying the Impact

The consistent research efforts of the institute have greatly contributed towards the overall growth of area, production and productivity of the mandate crops. In terms of Gross Value Output, coconut contributes ₹ 95,000 million to the national income and arecanut contributes ₹ 45,000 million. In the case of cocoa, the contribution to the national income amounts to ₹ 2,000 million. In terms of exports, coconut earns ₹ 21,385 million (including coir products) while the contribution of arecanut is ₹ 300 million. The analysis on impact of yearly planting materials supplied from CPCRI revealed that there would be an economic impact to the tune of ₹ 1604 lakhs/year, considering the economic life span of the coconut palms. The practice of recommended IDM measures would generate an additional benefit of ₹ 10200/ha/year and in the long run, eight percent more Internal Rate of Return will be generated per year. The overall economic impact (per annum) due to the adoption of CPCRI technologies has been estimated to be ₹ 19,000 million.

Augmenting the Institutional Strength

Krishi Vigyan Kendras: CPCRI hosts two KVKs,

one at Kasaragod and the other at Kayamkulam. These KVKs extend farm oriented training and support to farmers in agriculture and rural development.

Agricultural Technology Information Centre: Agricultural Technology Information Centre (ATIC) at CPCRI, Kasaragod provides a 'single window' delivery system of service to the farmers. Quality planting materials, various technological inputs

and products and priced publications including CD ROMs on various aspects of coconut, arecanut and cocoa cultivation are sold to farmers and other stakeholders through ATIC.

Institute Technology Management Unit (ITMU):

The unit takes care of the Intellectual property management and commercialization of technologies developed at the Institute in partnership mode through licensing to the entrepreneurs.

Business Planning and Development Unit (BPD):

BPD is functioning at the headquarters, which has all the basic facilities needed for business incubation.

Laboratory Facilities: Well established laboratories with modern facilities/ equipments/ instruments required for high quality

research on plantation crops.

Library: CPCRI has one of the oldest and

rich collection of literature pertaining to the plantation crops. To provide better information retrieval and resource sharing an online union catalogue of library publications, providing web online public access catalogue (OPAC) has been developed.

Cyber Extension: A group video conferencing

system through ISDN is installed at the ATIC, CPCRI, Kasaragod to facilitate interaction between various stakeholders for enhancing technology utilization.

Agricultural Knowledge Management Unit: The AKMU is functioning with blade servers and National Knowledge Network (NKN) router for knowledge sharing.

Agro-processing Centre: The center houses various technology gadgets designed and developed by CPCRI for demonstration and training. This includes mainly machineries for the production of virgin coconut oil, coconut chips, tender coconut punch and cutter and the portable snow ball tender nut machine.

Staff Amenities: At Kasaragod, there is Kendriya

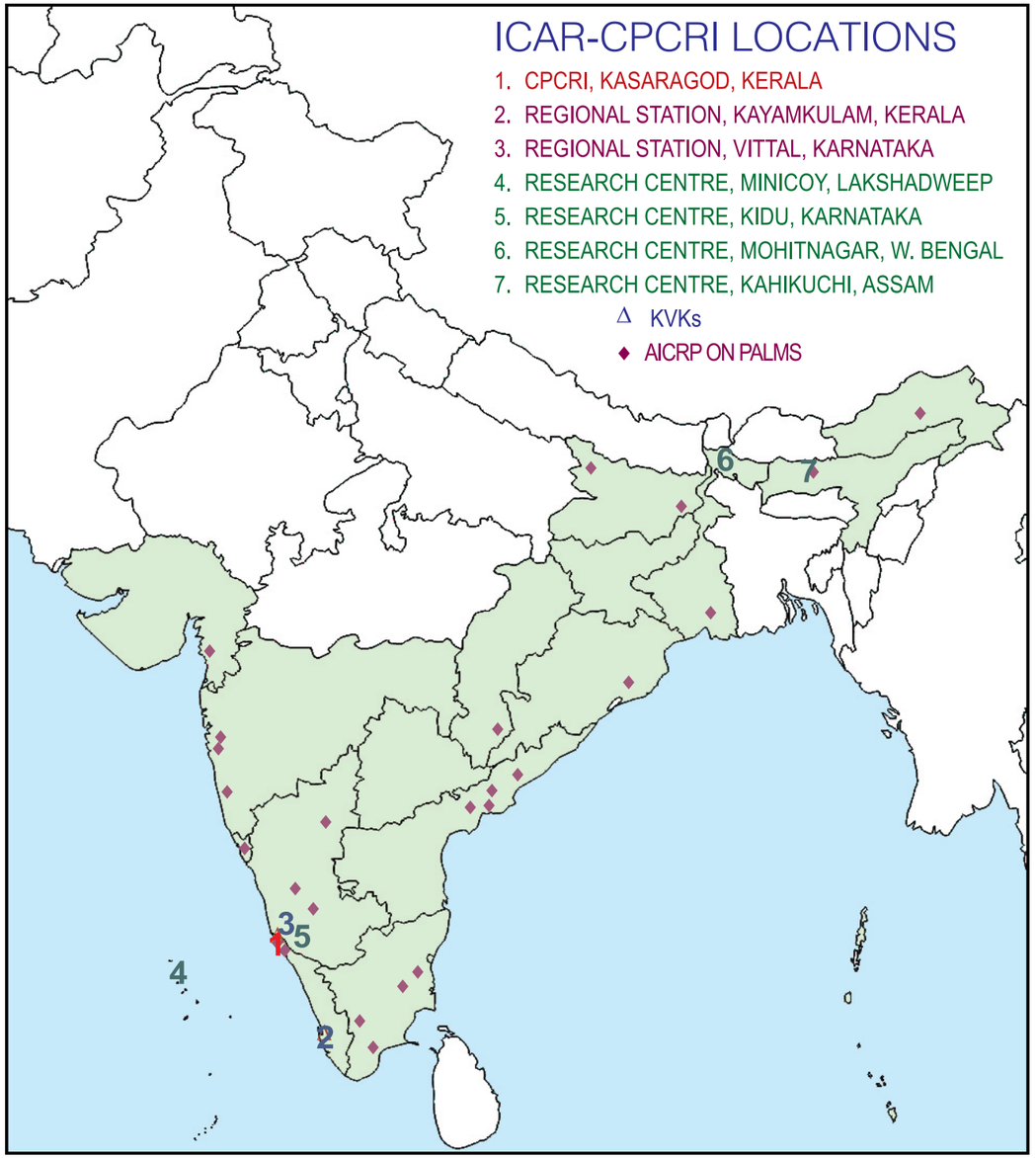
Vidyalaya, a nursery school and a crèche. For the medical needs, dispensaries are functioning at all centres. An Employees Co-operative Society is functioning at Kasaragod and Vittal. Departmental canteens are functioning at Kasaragod, Kayamkulam, Vittal and Kidu.

Residential complex & guest houses: There are staff quarters at headquarters, regional stations

and research centres. CPCRI has three guest houses and a trainee's hostel at Kasaragod and guest house facilities at all other centres.

Recognitions


KALPARASA


ICAR-CPCRI LOCATIONS
1. CPCRI, KASARAGOD, KERALA
2. REGIONAL STATION, KAYAMKULAM, KERALA
3. REGIONAL STATION, VITTAL, KARNATAKA
4. RESEARCH CENTRE, MINICOY, LAKSHADWEEP
5. RESEARCH CENTRE, KIDU, KARNATAKA
6. RESEARCH CENTRE, MOHITNAGAR, W. BENGAL
7. RESEARCH CENTRE, KAHIKUCHI, ASSAM
KVKs
AICRP ON PALMS
1
2
3
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HEADQUARTERS: KASARAGOD (estd. 1916)

12° 528' N 74° 969' E, 10.7m MSL
Kudlu P.O, Kasaragod Dist., Kerala - Pin 671124
Phone : 04994 232333 (Dir.), 232893, 232894, 232895, 233090, Fax: 04994 232322
e-mail: director.cpcri@icar.gov.in, Website: www.cpcri.gov.in
Railway Station: Kasaragod (5 km), Nearest Airport: Mangaluru (50 km)

Crops: Coconut and Cocoa, Area 78 ha
Priority areas of research: Genetic resources management, breeding, biotechnology, water and nutrient management, organic cultivation, cropping/ farming system, microbiology, pests and diseases management, physiology and biochemistry, value addition and farm mechanization, economics, statistics and transfer of technology. Various activities are envisaged under five divisions *viz*., Crop Improvement, Crop Production, Crop Protection, Physiology, Biochemistry and Post-Harvest Technology and Social Sciences

REGIONAL STATION: KAYAMKULAM (estd. 1947)

9° 15' N 76° 515' E, 3 m MSL
Krishnapuram P. O., Alappuzha Dist., Kerala, Pin - 690 533
Phone: 0479 2442160; 2442004; 2442104, Fax: 0479 2445733
E-mail: headrskayamkulam.cpcri@icar.gov.in
Railway Station: Kayamkulam (7 km), Nearest Airport: Kochi (100 km)

Crop: Coconut, Area 24.17 ha
Priority areas of research: Etiology and management of root (wilt) and other diseases and pests management.

REGIONAL STATION: VITTAL (estd. 1956)

12° 77' N 75° 11' E, 58 m MSL
Vittal, D. K. Dist., Karnataka, Pin - 574 243
Phone : 08255 265289 (Head), 239238, 239222, Fax: 08255 239666
E-mail: headrsvittal.cpcri@icar.gov.in
Railway Station: Kabaka Puttur (10 km), Nearest Airport: Mangaluru (50 km)

Crops: Arecanut and Cocoa, Area 68.34 ha
Priority areas of research: Genetic resources management, breeding, production and protection, cropping systems and drought tolerance.

RESEARCH CENTRE: KAHIKUCHI (estd. 1958)

26° 11' N 91° 612' E, 48 m MSL
Guwahati, 781 017, Assam
Phone: 0361 2840251, Fax: 2841785
E-mail: sicrckahikuchi.cpcri@icar.gov.in
Railway Station: Guwahati (17 km), Nearest Airport: Guwahati (4 kms)

Crops: Coconut and Arecanut, Area 25.99 ha
Priority areas of research: Genetic resources management, cropping system, soil, water and nutrient management.

RESEARCH CENTRE: KIDU (estd. 1972)

12° 47' N 75° 2' E, 281 m MSL
Nettana, D. K. Dist., Karnataka, Pin - 574 230
Phone: 08251 262355, 262221, Fax: 08251 262221
E-mail: sicrckidu.cpcri@icar.gov.in
Railway Station: Subramanya Road (4 km)
Nearest Airport: Mangaluru (100 km)

Crops: Coconut, Arecanut and Cocoa, Area 120 ha
Priority areas of research: National coconut gene bank, International Coconut Gene bank for South Asia (ICGSA), soil and water conservation, quality planting material production.

RESEARCH CENTRE: MOHITNAGAR (estd. 1958)

26° 51' N 88° 66' E, 91.3 m MSL
Jalpaiguri Dist., West Bengal, Pin - 735 101
Phone: 03561 250698, 250198, Fax: 03561 250698, 231149
E-mail: sicrcmohitnagar.cpcri@icar.gov.in
Railway Station: Mohitnagar (3 km), Nearest Airport: Bagdogra (45 km)

Crops: Coconut, Arecanut and Cocoa, Area 15.76 ha
Priority areas of research: Cropping system, crop protection and production of quality planting materials.

RESEARCH CENTRE: MINICOY (estd. 1976)

8° 16' N 73° 3' E, 2 m MSL
Minicoy, Lakshadweep, Pin - 682 559
Phone: 04892, 222491, 222228, Fax: 04892 222239
E-mail: rsminicoy.cpcri@icar.gov.in
Nearest Port: Minicoy (2 km)

Crop: Coconut, Area 5.7 ha
Priority areas of research: Fruits and vegetables production and demonstration in the island, demonstration of production and processing technologies in coconut production.

KRISHI VIGYAN KENDRAS

KVK, Kasaragod (estd. 1993)
CPCRI Kasaragod Campus, Kudlu P.O, Kasaragod Dist.
Kerala, Pin - 671124, Phone: 04994 232 993
e-mail: kvk.kasaragod@icar.gov.in

KVK, Alleppey (estd. 2000)
CPCRI RS, Kayamkulam Campus, Krishnapuram P. O.
Alappuzha Dist., Kerala, Pin - 690 533, Phone: 0479 2449268
e-mail: kvk.kayamkulam@icar.gov.in

ALL INDIA COORDINATED RESEARCH PROJECT ON PALMS

CPCRI Kasaragod Campus, Kudlu P.O, Kasaragod Dist.
Kerala, Pin - 671124, Phone: 04994 232 733
e-mail: pcpalms.cpcri@icar.gov.in

Indian Society of Plantation Crops (Journal of Plantation Crops)
CPCRI Kasaragod Campus, Kudlu P. O, Kasaragod Dist.
Kerala, Pin - 671124, Phone: 04994-232894
e-mail: ispcjpc@yahoo.com

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किसानों का हमसफर
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ICAR-Central Plantation Crops Research Institute
Kudlu P. O., Kasaragod, Kerala - 671 124
Phone: 04994 232893, 232894, 232895, 232090, 232333 (Director); Fax: +91-4994 232322
E-mail: chowdappa.p@icar.gov.in, directorcpcri@gmail.com, website: www.cpcri.gov.in
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Shri S. Jayasekhar, Dr. K.B. Hebbar and Shri H. Muralikrishna
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