

ICAR-CCARI

At a Glance



ICAR – Central Coastal Agricultural Research Institute
(Indian Council of Agricultural Research)
Old Goa, North Goa - 403402, Goa



As a Director of the Institute, it gives me immense pleasure to present the ICAR-CCARI at a glance. A brief glimpse about the Institute and its achievements in this flier and I hope that it will be useful for researchers, policy makers, planners and extension personnel.

Eaknath B. Chakurkar
Director

Profile

ICAR- Central Coastal Agricultural Research Institute (CCARI) was established as ICAR Research Complex for Goa in 1979 and upgraded as ICAR-CCARI in April, 2014, is one of the leading research Institutes established under Natural Resource Management (NRM) division of Indian Council of Agricultural Research (ICAR), New Delhi, Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India. Spread over 51 ha. of fertile land of Ela, Old Goa in North Goa District of the Goa State. Institute caters to the research need of the entire coastal India. It is headed by the Director and supported by 20 Scientists, 18 Technical, 21 Administrative and 32 Skilled Support personnel.

The Institute conducts applied and strategic research involving multi disciplinary and multi commodity aspects which are carried out through functional groups namely



Natural Resource Management, Crop Sciences, Horticulture Sciences, Animal Science and Fishery Science. The Institute has evolved and contributed significantly over last twenty five years to address the research gaps in agriculture and allied sectors of coastal region. ICAR- CCARI continuously serving farmers and disseminating its technologies through ICAR- Krishi Vigyan Kendra, North Goa of the Institute.

MISSION

Introduction and improvement of all potential crops and various species / breeds of livestock and scientific exploitation of various aquatic resources for improving fish production.

MANDATE

- Researches on field and horticultural crops, livestock, and fisheries relevant to natural resource base of coastal India for sustainable productivity.
- Develop climate resilient land use and farming systems for improved and sustainable livelihood through coastal agriculture.
- Act as a centre of agro-eco-tourism.

Major crops under research:

Fruits: Mango, Cashew, Coconut, Banana, Pineapple, Jackfruit, Arecanut etc.

Field Crops: Paddy, Cowpea, Green gram (Moong) etc.

Vegetables: Brinjal, Okra, Chilly, Cucumber, Gourds, Watermelons, Muskmelons, Red Amaranthus, etc.

Flowers: Jasmine, Crossandra, Dahlia, Heliconia, Marigold, Orchids, Gerbera, Anthurium, Gladiolus etc.

Spices: Black Pepper, Nutmeg, Kokum, Turmeric, Cinnamon, Ginger, etc.

Tubers: Colocasia, Yam, Elephant foot, Sweet Potato, etc.

Livestock: Dairy Cattle & Buffalo, Rabbit, Pig, Goat, Duck, Poultry, etc.

Fisheries: Pelagic fish, Demersal fish, Crustacean and Molluscan species

Sections

- Agriculture Technology Dissemination Center (ATDC)/ Agro-ecotourism Center demonstrates technologies
- Intellectual Property Right (IPR) / Institute Technology Management Unit (ITMU) facilitates patenting and commercialization of technologies
- Prioritization, Monitoring & Evaluation (PME) section to prioritize, evaluate and monitor the research projects
- Agricultural Knowledge Management Unit (AKMU) with video conferencing facility and maintains Institute website, Facebook and Twitter accounts to disseminate technologies
- Human Resource Development (HRD) section for improving the Academia-Institution relationship which provide re-orientation in our approach to Innovation, Research and Entrepreneurship.
- Farm section coordinates maintenance of the Institute campus, produce and sale of planting materials and farm produce



Major Research Achievements

Production Technologies

- Artificial Insemination in pigs was standardized and popularized for the production of cross breed pigs
- Technology for production of bypass fat indigenously for feeding of dairy animals was developed and commercialized.
- Technology for production and feeding of hydroponics fodder to dairy animals was introduced and feeding strategies were standardized.
- Heliconia flower Production Technology as inter-crop in coconut was commercialized for profitability and sustainability in Goa
- Developed Artificial Fish Habitat (AFH) technology to manage and harvest fishery resources from coastal waters of Goa
- Developed and validated Integrated Farming Systems (IFS) models for lowland and upland situation of west coast region
- Developed and validated Pheromone trap technology for the management of coconut, mango and cucumber
- Standardized management of bacterial wilt in brinjal using talc formulation of bio-control bacteria
- Developed technology in grafting of cultivated species of brinjal and tomato on wild brinjal to manage bacterial wilt



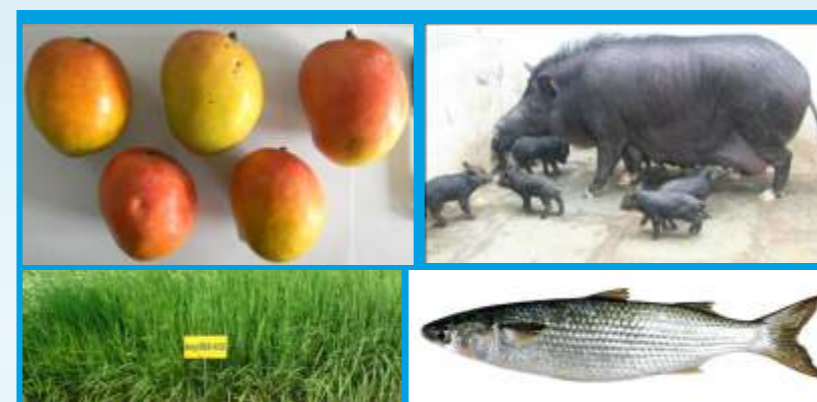
Varieties released

- **Goa cowpea 3:** A high yielding grain type cowpea variety released in the year 2015 for cultivation in the rice fallow areas of Goa state with yield of 16 q to 18 q per ha.
- **Goa Dhan - 1 (KS-12):** a high yielding salt tolerant rice variety released on 23rd Jan 2017 for coastal saline soils of Goa with yield potential of 23-26 q/ha.
- **Goa Dhan - 2 (KS-17):** a high yielding salt tolerant rice variety released on 23rd Jan 2017 for coastal saline soils of Goa with yield potential of 26-28 q/ha.
- **Goa Cashew 1 (Balli-2):** High yielding cashew variety released with 8-10kg/tree of raw nut yield.
- **Goa Cashew -2 (Tiswadi -3):** Early season high yielding and jumbo nut cashew variety released on 23rd Jan 2017, with higher kernel recovery and bigger apple size and average nut yield of 8-10 kg per tree.
- **Goa cashew-3 (Ganje -2):** Mid season high yielding and bold nut cashew variety released on 23rd Jan 2017 with nut yield of 12-15 kg/tree of raw nut.
- **Goa Cashew- 4 (KN2/98) :** Long season high yielding and bold nut cashew variety released on 23rd Jan 2017 with nut yield of 12-15 kg/tree of raw nut.
- **Goa Tambdi Bhaji-1:** A variety of Red *Amaranthus* with rust tolerance released in August 2017 for the state of Goa



Conservation of coastal genetic resources

- Registered **Cardozo Mankurad** Mango as genetic stock, with yield of 75 -90kg /tree and 75-78% pulp
- Registered **Agonda goan** pig breed (INDIA_PIG_3500_AGONDA GOAN_09003) from Goa
- Registered **Korgut**, a rice landrace, as unique germplasm, for tolerance to salinity stress at seedling stage, with yield of 14-15 q /ha
- The stripped **grey mullet**, *Mugil cephalus* is declared as the state fish for Goa by the Fisheries department, Govt. of Goa based on recommendations of the institute.



Intellectual Property Rights

Patent Filed

- Patent application on "Extender for preservation of boar semen" was filed at Indian Patent Office on 10th August 2016 with Sl.No.3037/MUM/2015 which was subsequently published on 17/02/2017 in Patent Journal of India.
- Process for preparing Cashew Apple Crunch and resultant food product thereof" filed on 08th April, 2016 ("Priority Date")
- Process for preparing nutmeg taffy and resultant food product thereof filed on 08th April, 2016 ("Priority Date")

Germplasm Registration

- An application for the registration of the microbial germplasm viz. *Bacillus methylotrophicus* strain RCh6-2b was submitted to NBAIM, Mau as on 15-04-2016.
- An application for the registration of the Red Amaranth Genetic Stock AtR18(IC-0598190) has been submitted to NBPGR, New Delhi on 6th August, 2016 and was assigned with IC No: IC0598190.
- Application for registration of "Khola Chilli" as farmer's variety with PPF&FR Authority, New Delhi is under process.

ICT tools developed

- **Decision support system** (DSS) provide complete information regarding cultivation of major and important crops and livestock of Goa region
- **WASP:** The first Web Based Agricultural Statistics Software Package this package is developed for easy to use features to the researchers in analysing their own data. It is divided into two topics viz. Basic Statistics and Experimental Designs
- **Fertilizer calculator** Goa-Mobile application (App) developed for computing soil test based fertilizer recommendations for important crops of Goa
- **Soil Test Based Fertilizer Recommendations (STFR)**-The information is given on parameters like soil pH, electrical conductivity, soil organic carbon, soil available nitrogen, phosphorus, potassium and micronutrients.



Awards

- 1998: Fakhruddin Ali Ahmed Award by ICAR
- 2008: Best Krishi Vigyan Kendra Award
- 2009: Vasanttrao Naik Award
- 2013: ICAR Research Complex for Goa awarded with ISO 9001: 2008
- 2013: ICAR Jawaharlal Nehru Outstanding doctoral research award
- 2017: Prestigious Young Scientist Award by Indian Science Congress.
- 2017: IARI Inovative Farmer Award 2017
- 2017: Plant Genome Saviour Community Award
- 2017: ICAR-CCARI, Goa awarded with ISO 9001: 2015

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