



## ICAR Sponsored Winter School

# Sustainable Exploitation of Genetic Resources of Neglected and Underutilized Tuber Crops for Enhancing Climate Resilience and Nutritional Security

29<sup>th</sup> November to 19<sup>th</sup> December, 2022



ICAR-Central Tuber Crops Research Institute,  
Thiruvananthapuram, Kerala, India

[www.ctcri.org](http://www.ctcri.org)

## **ICAR-CTCRI**

The ICAR-Central Tuber Crops Research Institute (ICAR-CTCRI), a constituent institute under the aegis of Indian Council of Agricultural Research (ICAR) is the only organisation in the entire world dedicated solely to the research on tropical tuber crops. The ICAR-CTCRI was established during the Third Five Year Plan for intensification of research on tropical tuber crops. The institute started functioning in July 1963 with its headquarters (HQ) at Sreekariyam, Thiruvananthapuram, Kerala in an area of 48.19 ha. ICAR-CTCRI has one Regional Center (RC) at Bhubaneswar functioning in area of 20 ha. ICAR-CTCRI has contributed immensely to the agricultural sector around the world with the introduction of 68 improved varieties in total, besides development of farmer-friendly production, protection and value addition technologies in tropical tuber crops.

## **VENUE**

The ICAR - CTCRI, Thiruvananthapuram is located at a panoramic location about 12 km north of the Thiruvananthapuram city. Thiruvananthapuram, the capital city of 'God's own Country' Kerala, is well connected by road, rail and air. The weather during October is pleasant with temperatures ranging from 22 to 29°C. The picturesque locales of Kanyakumari, Kovalam, Veli backwaters, and Varkala cliffs are at approachable distance from the Institute.

## **HOW TO REACH**

Thiruvananthapuram, Kerala is well connected through buses and trains. There are many trains daily reaching Thiruvananthapuram from different parts of the country. The Institute and guest house are well connected with bus and railway station.

## **WINTER SCHOOL BACKGROUND**

Climate change and blooming population demand to produce greater quantities of food feed and fuel on limited land resources. The inherent agronomic and ecological limitations of major staple crops may pose serious nutritional and economic risks and may turn unsustainable in the long run. Tuber crops are important staple food after cereals and pulses with various beneficial traits such as drought tolerance, prolonged in ground storability, varying crop duration, wider adaptability and climate resilience. They play important role in food, nutritional security and livelihood security as these are the most efficient transformers of solar energy into food energy. Apart from the major tropical tuber crops such as cassava, sweet potato, yams and aroids there are some underutilized tuber crops which are cultivated in small pockets in many parts of the world. Minor tuber crops are rich in functional food properties with nutritional potential and medicinal values. Sustainable exploitation of PGR of coleus potato, yam bean, canna, arrowroots etc. The underutilized root and tuber crops are hidden treasure of healthy nutritious food. They are rich in functional food properties with nutritional potential and medicinal values. This winter school is therefore, chiefly conceived to impart expertise on various underutilized tuber crops and their potential among faculty involved in teaching, research and extension activities in agriculture/horticulture and allied sciences. Sustainable exploitation of PGR of coleus potato, yam bean, canna, arrowroots etc., will be covered in winter school. The participants will gain knowledge on various aspects of PGR, genetic diversity, morphological, molecular characterisation, utilization including bioinformatics and Information Technology.

## COURSE COVERAGE

- The biodiversity act and forest regulations on PGR
- Trait discovery in tuber crops for nutrient security and climate resilience
- Importance, prospects and overview of neglected and underutilised tuber crops
- Minor Tubers in North Eastern, Andaman & Nicobar Islands and other hot spots
- Bioinformatics, biotechnology and IT for sustainable utilisation of PGR
- Sustainable exploitation of PGR of coleus potato, yam bean, canna, arrowroots etc.,
- Germplasm screening for tolerance/resistance to biotic/abiotic factors
- Breeder seed, quality regulations, genetic purity and international exchange
- Nutritive and bioactive phytochemicals in minor tuber crops
- Value addition and multipurpose of minor tuber crops

## DATE AND VENUE

The winter school will be organised by ICAR-CTCRI, Thiruvananthapuram, Kerala from 29<sup>th</sup> November to 19<sup>th</sup> December, 2022 for a period of 21 days.

## ELIGIBILITY

Master's degree in Agriculture/Horticulture/allied disciplines and working not below the rank of Assistant professor and equivalent in the concerned subject under ICAR Institutes/State AUs/CAU/Agri Faculty of AMU, BHU, Vishwa Bharti and Nagaland University. The participants should be working/associated in the R&D of Agricultural/Horticultural crops and allied aspects.

## TRAVEL AND ACCOMMODATION

The lodging, boarding and travel expenses of the selected participants will be reimbursed under the training programme budget as per the ICAR guidelines. Participants are required to produce money receipt/ tickets in support of their claim. The travel expenses will be restricted to maximum AC-II tier train or bus fare by the shortest route. **Air travel is not allowed.** Accommodation will be provided at the Institute's guest house.

## DATES TO REMEMBER

Last date of submission of application: 12.11.2022; Communication of acceptance: 13.11.2022

## CORRESPONDENCE TO COURSE DIRECTOR

**Dr. P. Murugesan, Principal Scientist, Division of Crop Improvement, ICAR-CTCRI, Thiruvananthapuram- 17, Mob: 8848898440, [P.Murugesan@icar.gov.in](mailto:P.Murugesan@icar.gov.in)/[gesan70@gmail.com](mailto:gesan70@gmail.com)**

## CONTACT CO-ORDINATORS

Dr. C. Mohan, Principal Scientist, [mohan.c@icar.gov.in](mailto:mohan.c@icar.gov.in), Mob: 9495201553,

Dr. K. M. Senthilkumar, Scientist (Sr. Scale), [senthilkumar.km@icar.gov.in](mailto:senthilkumar.km@icar.gov.in), Mob: 7048953759

Dr. N. Krishna Radhika, Senior Scientist, [krishnaradhikaicarctcri@gmail.com](mailto:krishnaradhikaicarctcri@gmail.com), Mob: 9447749002

Dr. C. Visalakshi Chandra, Scientist, [visalakshi.ctcri@gmail.com](mailto:visalakshi.ctcri@gmail.com), Mob: 7010036919

## HOW TO APPLY

Apply through online portal at the URL [https://cbp.icar.gov.in/participate\\_trainee.aspx](https://cbp.icar.gov.in/participate_trainee.aspx). Only 25 participants will be selected and all the selected participants have to pay Rs. 50/- (non refundable) as registration fee as demand draft of ₹. 50/- (non refundable), drawn in favour of Director, ICAR Unit, CTCRI payable at Thiruvananthapuram. The duly filled-in downloaded application form should be sent to the course Director before the closing date of **12.11.2022**. Please check <https://cbp.icar.gov.in> for updated information.