



ICAR sponsored short course
Exploitation of Genetic Resources of
Underutilized Tuber Crops
February 02-11, 2022



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



About 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 tuber crops (other than potato). The institute started functioning in July 1963 with its headquarters (HQ) at Sreekariyam, Thiruvanthapuram, Kerala in an area of 21.5 ha. Later an area of 26.69 ha has been added. ICAR-CTCRI has one Regional Centre (RC) at Bhubaneswar, Odisha functioning in area of 20ha. In its 58 years of immense service and contribution to the nation, 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.

About the venue

The ICAR - Central Tuber Crops Research Institute, 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 February 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

ICAR-CTCRI is located at Sreekariyam 10 km away from Railway Station/and Bus Terminal (Thambanoor) of Thiruvananthapuram. One can reach the venue (CTCRI-Sreekariyam) by pre-paid taxi or public transportation.

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. They are rich in functional food properties with nutritional potential and medicinal values. Among those, Chinese potato and arrowroot are better utilized than rest of the minor tuber crops like yam bean, Queensland arrowroot, *Curcuma*, *Typhonium*, *Costus*, *Tacca*, *Vigna* species etc. The underutilized root and tuber crops are hidden treasure of healthy nutritious food. These crops being rich in food, nutrition and resilient to biotic and abiotic stresses can address the issues on malnutrition, Global Hunger Index and sustainable livelihood. This short course 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. The participants will gain knowledge on various underutilized tuber crops, their importance in terms of food, feed and nutritional security, genetic resource conservation, genetic diversity, morphological, molecular characterisation and utilization.

Course contents

The short course will broadly cover the following areas

- Horticultural crop diversity across the globe with special emphasis to minor tubers
- Genetic diversity and variability among genetic resources in unexploited tuber crops
- Wild species and wild relatives potential and utilization
- Characterisation, cataloguing and e-documentation of PGR and genetic stocks
- Molecular tools in characterization of underutilized tuber crops
- NGS and bioinformatics tools in underutilized tuber crops research
- Advanced techniques of conservation of PGR of underutilized tuber crops
- Exploitation of underutilised crops for food, nutrition and livelihood security

Date and venue

- The short course will be organised by Division of Crop Improvement, ICAR-CTCRI, Thiruvananthapuram, Kerala from 02nd February to 11th February 2022 for a period of 10 days.

Eligibility

- Master's degree in relevant discipline 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 horticultural crops and allied aspects.

How to apply

The interested participants have to apply through online Capacity Building Programme (CBP) portal at the URL 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/ Indian postal order drawn in favour of Director, ICAR Unit , CTCRI payable at Thiruvananthapuram. The candidates shall take print out of the online filled in application and get approval of the competent authority of the respective Institute/SAU. The duly filled-in application form along with the transaction details of registration fee should be sent to the course Director before the closing date of 02.01.2022.

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 tire train or bus fare by the shortest route. Air travel is not allowed. Accommodation will be provided at the Institute's guest house. Participants are requested not to bring any family members along with them.

Dates to remember

- Last date of submission of application: **02.01.2022**
- Communication of acceptance: **07.01.2022**

Programme Director

- **Dr. M. N. Sheela**, Director (Acting), ICAR-CTCRI, Sreekariyam, Thiruvananthapuram- 695017, India, e mail: director.ctcri@gmail.com, Institute's Phone: +91-471-2598551 to 2598554, Director (Per) : +91-471-2598431

All correspondence may be addressed to Course Director

- **Dr. P. Murugesan**, Principal Scientist (Hort.) & Course Director, Division of Crop Improvement, ICAR-CTCRI, Sreekariyam, Thiruvananthapuram- 695017, Kerala, India, email : P.Murugesan@icar.gov.in, gesan70@gmail.com , Mobile: 8848898440

Course Co-ordinators

- **Dr. Visalakshi Chandra C**, Scientist, Division of Crop Improvement, ICAR-CTCRI, Mobile: 9539397214, e mail: visalakshi.ctcri@gmail.com
- **Dr. AVV. Koundinya**, Scientist, Division of Crop Improvement, ICAR-CTCRI Mobile. 8336807978, email: koundi.hortco@gmail.com



Participants are requested to follow SOP for COVID19 and strictly adhered to state and central governments directives/guidelines