



# ICAR-CTCRI Newsletter



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July- September 2024

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## FORTHCOMING EVENTS

- AGRIUDAAN – Food and Agribusiness Accelerator 7.0 Road show/Start-up – Hunt, ICAR-NAARM, Hyderabad and ICAR-CTCRI, Thiruvananthapuram, 01 October 2024.
- First Meeting of Quinquennial Review Team (QRT-VIII), 08-09 October 2024



**Dr. G. Byju**  
Director

## निदेशक की कलम से

बड़ी खुशी और गर्व के साथ, मैं जुलाई-सितंबर 2024 के समाचार पत्र प्रस्तुत कर रहा हूँ, जो हमारे संगठन की उपलब्धियों को सटीक तरीके से समेटे हुए है। हमारा अनुसंधान लगातार नई और आशाजनक किस्मों और नवीन कृषि पद्धतियों के निर्माण के माध्यम से किसानों के कल्याण में सुधार लाने पर केंद्रित है। दो नई अरारोट किस्मों, श्री नक्षत्रा और श्री कार्ती, जो हमारे देश में पहली अरारोट किस्में हैं, जो बागवानी फसलों के लिए फसल मानक, अधिसूचना और किस्मों के विमोचन पर केंद्रीय उप-समिति द्वारा जारी करने की सिफारिश की गई थी। पहली बार, 'उष्णकटिबंधीय कंद फसलों के सुधार के लिए जंगली किस्मों का उपयोग' विषय पर विचार-मंथन सत्र आयोजित किया गया। संस्थान ने अपना स्थापना दिवस 09 जुलाई 2024 को मनाया, जिसमें केरल के मानवीय राज्यपाल श्री आरिफ मोहम्मद खान मुख्य अतिथि थे। केरल के अट्टपाडी में शकरकंद कृषि-खाद्य प्रणाली परियोजना शुरू की गई। क्षेत्रीय स्टेशन आईसीएआर-सीटीसीआरआई, भुवनेश्वर ने आरकेवीआई के अंतर्गत बायोएजेंट्स बड़े पैमाने पर विनिर्माण इकाई के लिए आधारशिला रखने का कार्यक्रम आयोजित किया। इसके अलावा, अनेक प्रौद्योगिकी हस्तांतरण पहल की गई, जैसे कि हितधारकों के साथ बातचीत, प्रदर्शन, जागरूकता अभियान और प्रशिक्षण, जिससे किसानों का समर्थन और आत्मविश्वास मजबूत हुआ। आईसीएआर-सीटीसीआरआई की आठ प्रौद्योगिकियों, और इस संस्थान के सहयोगी डेवलपर्स के साथ अन्य तीन प्रौद्योगिकियों को आईसीएआर द्वारा प्रमाणित किया गया और इनमें से एक प्रौद्योगिकी, 'कसावा और शकरकंद प्रतिरोधी स्टार्च आरएस4 प्रकार (रासायनिक रूप से संशोधित)' को बागवानी विज्ञान प्रभाग में शीर्ष 10 में से एक के रूप में चुना गया। हिंदी पखवाड़ा और स्वच्छता ही सेवा-2024 के तहत कई कार्यक्रम आयोजित किए गए। मैं पूरे स्टाफ का आभारी हूँ कि उन्होंने अपनी असाधारण क्षमताओं और ज्ञान का उपयोग करके कृषक समुदाय को बेहतर बनाने के हमारे प्रयासों का समर्थन किया।

## From the Director

With great pleasure and pride, I am presenting the newsletter for July-September 2024 which wraps up the achievements of our organization in a precise way. Our research is consistently focusing on improving farmers welfare by creating new and promising varieties and innovative farming methods. Two new arrowroot varieties, Sree Nakshatra and Sree Karthi, the first arrowroot varieties in our country, were recommended for release by Central Sub-Committee on Crop Standards, Notification and Release of varieties for Horticultural Crops. For the first time, a brainstorming session on 'Harnessing crop wild varieties for tropical tuber crops improvement' was held. The Institute celebrated its 61<sup>st</sup> foundation day on 09 July 2024, with Hon'ble Governor of Kerala, Shri. Arif Mohammed Khan, as the chief guest. Sweet potato agri-food system project was launched in Attappadi, Kerala. The Regional Station ICAR-CTCRI, Bhubaneswar hosted the foundation stone laying event for the bioagents mass manufacturing unit under RKVY. In addition, a number of technology transfer initiatives were done, such as stakeholder interactions, demonstrations, awareness campaigns, and trainings which helped to strengthen farmer's handholding support and confidence. Eight technologies from ICAR-CTCRI and other three technologies with Associate Developers from this Institute were certified by ICAR and one of the technologies, 'Cassava and Sweet potato Resistant Starch RS4 type (Chemically modified)' was selected as one of the top 10 in Horticultural Sciences Division. The Hindi Fortnight and Swachhata Hi Seva-2024 were observed with a range of events. I am grateful to the entire staff for utilizing their exceptional abilities and knowledge to support our endeavors in improving the farming community.

G. Byju

**भाकृअनुप - केन्द्रीय कन्द फसल अनुसंधान संस्थान**  
श्रीकार्यम, तिरुवनन्तपुरम 695 017, केरल, भारत  
**ICAR-Central Tuber Crops Research Institute**  
Sreekariyam, Thiruvananthapuram 695 017, Kerala, India

## Research Highlights

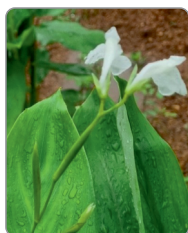
### Arrowroot genetic stock with precocious germination and genetic vigour

P. Murugesan

One arrowroot genetic stock (CTCRI-AR-PM-9) with precocious growth and genetic vigour was identified from the evaluation conducted for 12 germplasm accessions. The preliminary results revealed that the rhizome of identified stock recorded early germination, shoot with first leaf and abnormally lengthy root compared to other accessions in laboratory germination test. The identified stock reached flower spike maturity within 4 months with a significantly higher height increment, leaf and side sucker production.



Germinated sprouts of Arrowroot (CTCRI-AR-PM-9)



Initial growth of main plant



Leaves and sucker production



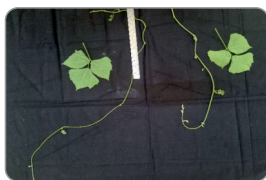
Flower spike

Phenological growth of selected genetic stock (CTCRI-AR-PM-9) with precocious maturity and genetic vigour

### Unique yam bean germplasm (IC635945) from Havelock (A&N) island

P. Murugesan

The phenotypic and nutritional traits of yam bean germplasm accessions including new collection namely Havelock germplasm (IC IC635945) were characterized and compared with variety-RM-1. The results revealed that germplasm from Havelock Island (A&N island) possessed distinct novel character of lengthy vines (108.5 to 111.5cm), long pedicel (4.1 to 4.4 cm), distinct globose seed and cylindrical tuber shapes, whereas RM-1 had short vine growth (78cm to 82.5cm), pedicel (2.1 to 2.3 cm), square shape seeds and fusiform tubers.



Havelock germplasm and RM-1 variety



Havelock germplasm and RM-1 variety



Tuber shape of Havelock germplasm



Seed shape of Havelock germplasm



Seed shape of RM-1 variety



Tuber shape of RM-1 variety

Phenotypic comparison of Havelock germplasm and RM-1 variety

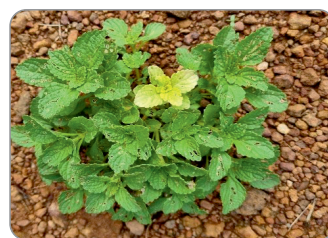
### Albino and variegated leaf mutant identified from gamma irradiated Coleus potato

P. Murugesan, T.P. Sujatha and L.K. Bharathi

An individual plant with albino and variegated leaf mutant was identified from the progeny population of coleus potato which received 30Gy dose of gamma irradiation. The treated tubers had 68% of germination and all the germinated gamma irradiated plants were planted in the field. The mutant plant exhibited variegated and albino leaves in the one stem out of 15 normal stems emerged. Mutant leaves remained stable even after one pruning and it is being monitored for stability in the next generation.



30 Gy irradiated tuber sprouts



Albino and variegated leaf mutant

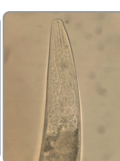
### Isolation of entomopathogenic nematode and its endosymbiotic bacteria

H. Kesava Kumar, K.M. Senthilkumar, V. Ramesh, J. Asheefa, S.U. Shilpa, M.L. Jeeva and T. Makesh Kumar

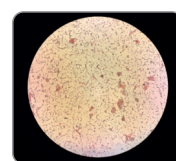
An isolate of entomopathogenic nematode (EPN) designated as CTCRIS2 was identified from a soil sample in Thiruvananthapuram district as *Steinernema siamkayai* based on morphological and molecular characterization. The ITS region based sequence has been deposited in the NCBI database under the Genbank accession number PP141117. The primary endosymbiont associated with EPN, *S. siamkayai* CTCRIS2 was identified as *Xenorhabdus stockiae* based on morphological and biochemical characterization.



*Steinernema siamkayai*



*Xenorhabdus stockiae*





## Development of beta carotene and anthocyanin rich gummy confections incorporated with biofortified sweet potatoes puree concentrates

C. Pradeepika

Gummy confections were prepared from orange and purple sweet potato puree (OSPC and PSPC), in which the puree concentration ranged from 5 to 20%, gelatin from 10 to 16%, and pectin from 0.5 to 2.5%. The gummies prepared with pectin had higher anthocyanin and beta carotene content than those made with gelatin. Pectin gummies containing higher PSPC (20%) exhibited an anthocyanin concentration of 4.05 mg 100g<sup>-1</sup>, whereas lower anthocyanin content was in gelatin gummies (1.02 to 1.42 mg 100g<sup>-1</sup>). The OSPC incorporated (20%) pectin gummy formulation had the highest beta carotene concentration of 3.28 mg 100g<sup>-1</sup>. The PSPC incorporated pectin gummies showed greater antioxidant potential (1.08 mg GAE 100g<sup>-1</sup> FW) than gummies made with OSPC. The sensory analysis revealed that pectin gummies had a higher score for color and taste whereas the gelatin gummies scored high for texture.



Sweet potato puree concentrate incorporated pectin gummy confections

### Extension

#### FLDs/OFTs

- ICAR-CTCRI scientists visited and monitored the seed villages in Chinese potato at Ambur, Tenkasi, Tamil Nadu on 26 July 2024 the seed village demonstration plots for quality planting materials production of cassava varieties Sree Reksha, Sree Kaveri and Sree Athulya at Koonavalampatti village, Rasipuram, Namakkal, Tamil Nadu on 19 September 2024



Visit of scientists to seed village demonstration plots at Namakkal, Tamil Nadu

- A team of scientists along with Director, Dr. G. Byju,

visited the establishment of seed village demonstration plots for quality planting material production of cassava variety Sree Reksha at Chennampatti village, Gobichettipalayam, Erode, Tamil Nadu on 07 August 2024.



Visit of Director and team to seed village demonstration at Erode

- A field visit was made by a team of scientists to Kannamkode, Sadanandapuram, Kollam, Kerala during 29 August -03 September 2024 to survey, lay out and provide agro advisory to cassava stem and root rot affected areas. They have interacted with DD, SHM, Kollam and distributed inputs like phosphogypsum, polyhalites and cassava planting materials to the farmers.
- On-farm trials of five cassava breeding lines with post-harvest physiological deterioration (PPD) tolerance were established at Pathanamthitta and Mavelikara in Kerala.
- Officials of International Potato Center (CIP) visited the on farm trials on sweet potato at Thiruvananthapuram.
- As part of ICAR-Farmer First programme organized by ICAR-CPCRI, Kayamkulam, scientists of ICAR-CTCRI visited the on farm trials at Arattupuzha, Thrissur, Kerala and took classes on the varieties and planting methods in sweet potato.

### Training programmes

#### On campus programmes

- A paid training programme on 'Soil, plant and water analysis for efficient nutrient management' was organized during 22-26 July 2024 with the participation of 26 officials from different parts of the country.
- A collaborative training programme was organized during 29-30 July 2024 for 33 women Self-Help Group (SHG) members from Joida Taluk, Karnataka, who are engaged in cultivation of tubers under ICAR-CTCRI ABI and M/s Spudnik Farms Collaborative Entrepreneurship Development Programme 'Competency Building of Agripreneurs for Creating and Managing Tuber Crops Based Businesses with Special Reference to Taro'.



Competency Building Training Programme of women farmers

- The institute organized a five-day training program on 'Advances in Integrated Plant Health Management' from 05-09 August 2024 which was attended by nine participants representing state agricultural universities, industry, technical staff, and students. The training was inaugurated by Dr. G. Byju, Director, ICAR-CTCRI. It provided comprehensive knowledge on various aspects of integrated plant health management, including advanced diagnostics for detecting plant viruses, bacteria, and fungi, as well as their prevention and control. Other topics covered were plant nematode detection and management, smart sensors and IoT for precision agriculture, organic and regenerative agriculture, nutrient management for crop health, resistance breeding, and protected cultivation for plant health management.



Inaugural session of the training program



Trainees along with Director and resource persons

- A paid training programme on 'Advances in quality planting material production of tropical tuber crops' was organised during 23-27 September 2024 and 14 participants attended.
- An Internship training programme was organized for B.Tech. Biotechnology students of College of Agriculture, Vellayani, Thiruvananthapuram during 01 to 31 August 2024.

### Off campus training programmes

- A training programme was organized for 16 Administrative and Accounts Staff of ICAR-CTCRI in collaboration with Institute of Management in Government (IMG), Thiruvananthapuram during 10-12 July 2024 at IMG and ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram.
- A training on 'Prospects of arrowroot cultivation and quality planting material production in tropical tuber crops' was organized on 05 August 2024 in

collaboration with Manjali Service Cooperative Bank, Manjali, Kalamasseri, Ernakulam, Kerala with the participation of 105 farmers.

- ICAR-Central Tuber Crops Research Institute and the State Kudumbashree Mission, Government of Kerala jointly launched 'Punarjeevanam', an innovative sweet potato agri-food system project in Attappadi, Palakkad during 12-13 August 2024. Shri. M.B. Rajesh, Hon'ble Minister for Local Governments, Rural Development, and Excise, Govt. of Kerala inaugurated the program online. The event also marked the beginning of a three day livelihood improvement training programme, designed to harness the potential of sweet potatoes and tuber crops in transforming rural livelihoods. Dr. G. Byju, Director, ICAR-CTCRI delivered the keynote address, highlighting the significance of tuber crops, particularly sweet potato in agri-food systems. Scientists from ICAR-CTCRI conducted insightful sessions on tuber crops.



Launch of "Punarjeevanam"

- A training on 'Cassava scientific cultivation and prospects of diversification and marketing' was conducted for the benefit of cassava and banana growing farmers of Kunnukara, Kalamasseri, Ernakulam, Kerala on 16 August 2024. Shri. C. Raveendranath, Former Education Minister of Kerala inaugurated the training and 150 farmers under SCB, Kunnukara participated.
- Under NEH programme, a training on 'Improved varieties, technologies and value addition in tuber crops' was organized on 03 September 2024 at Jaidoh village, West Khasi Hills in collaboration with ICAR Research Complex for North Eastern Hill Region.



NEH programme at Jaidoh village



- A farmers training and district level inauguration of Scheduled Castes Sub-Project was organized at Karimannur Grama Panchayat Community Hall on 03 September 2024 by ICAR-CTCRI in collaboration with the Department of Agriculture, Elamdesam Block Panchayat and Karimannur Grama Panchayat. The training was inaugurated by Mr. Tommy Thomas, President, Block Panchayat. Officials from Grama Panchayat, Block Panchayat and Department of Agriculture, Govt. of Kerala participated in the meeting. Scientists from ICAR-CTCRI handled technical sessions on tuber crop varieties, pests and disease management, and value added products and entrepreneurial possibilities. This was followed by the farmer-scientist interactive session. Planting materials, organic formulations and micronol were distributed to the farmers.
- ICAR-CTCRI organized a farmers' training programme on production of quality planting material on 04 September 2024 in collaboration with Ollur Block Panchayat, Department of Agriculture, Ollur Krishi Samridhi FPC and Ollur Scheduled Castes Cooperative Society. Officials from Grama Panchayat, Block Panchayat and Department of Agriculture, Govt. of Kerala participated in the meeting. Scientists from ICAR-CTCRI handled classes in the training. Project beneficiaries were also selected in the programme.
- An awareness cum farmers training program on

'Biofortified tuber crops for food and nutritional security' was organised jointly by ICAR-CTCRI and Institute of Life Sciences (ILS), DBT, Bhubaneswar, Odisha at Borigumma block, Koraput district, Odisha on 11 September 2024 under the DBT funded project.



Awareness cum farmers training program on 'Biofortified tuber crops for food and nutritional security'

SGA farmers training on 'Tuber crops-based farming system' under the Tribal sub plan was organized during 13-15 September 2024 at Regional Station, ICAR-CTCRI, Bhubaneswar. Dr. Sudhakar Pandey, Assistant Director General (FVS&MP) inaugurated the training on 13 September 2024 in presence of Dr. G. Byju, Director, ICAR-CTCRI. Dr. Sudhanshu K.K. Mishra, Chief General Manager, NABARD, Bhubaneswar and Dr. M.K. Mishra, Professor and Head, Department of Plant Pathology, OUAT, Bhubaneswar were Guests of Honour in the programme.



Farmers training Tribal Sub Plan at Regional Station

The following off campus training programmes were conducted by Regional Station during the period.

Sl. No.	Title of programme	Date(s)	Panchayat, District, State	No. of beneficiaries
1	Production and value addition in tuber crops	25 July 2024	Nathma village, Tadama G.P., Rayagada block, Rayagada	50
2	Production and value addition in tuber crops	26 July 2024	Korapadi village, Sahada G.P., Bissamcuttack block, Rayagada	50
3	Production and value addition in tuber crops	26 July 2024	Saragchhida vill & G.P., Kuliana block, Mayurbhanj	50
4	Production and value addition in tuber crops	02 August 2024	Baskitala village, Brahmanagaon G.P., Bangriposi block, Mayurbhanj	50
5	Crop diversification with tuber crops	16 August 2024	Dolapada, Khajuripada, Kandhamal	50
6	Crop diversification with tuber crops	17 August 2024	Khariguda, Mohana, Gajapati	50
7	Crop diversification with tuber crops	12 September 2024	Haldibasanta, Tangi, Cuttack	60
8	Tuber crops-based farming system	30 September 2024	Sukhilambha, Mohana, Gajapati	50

## Resource person in off campus training/stakeholders interface programmes

Sl. No.	Particulars	Resource person
1	Stakeholders interface programme on Improved technologies of tuber crops for sustainable income at Ambasamudram, Tirunelveli, Tamil Nadu 26 July 2024	Dr. G. Byju Dr. R. Muthuraj Dr. D. Jaganathan
2	Importance of plant nutrition in tuber crops in Ananthapuri Jaiva Patana Kalari 01 August 2024	Dr. K. Susan John
3	Seminar on Arecanut based cropping system at ICAR-KVK, MYRADA, Gobi, Erode, Tamil Nadu 06 August 2024	Dr. G. Byju Dr. R. Muthuraj Dr. D. Jaganathan
4	Stakeholders interface programme on Improved varieties and technologies of cassava at Namagiripettai, Namakkal 07 August 2024	Dr. G. Byju Dr. R. Muthuraj Dr. D. Jaganathan
5	Punarjeevanam' programme organized conjointly by ICAR-CTCRI & Kudumbhashree, Attapadi, Palakkad 12-14 August	Dr. G. Suja Dr. M.S. Sajeev Dr. P.S. Sivakumar Dr. H. Kesava Kumar
6	Training on Cassava scientific cultivation and prospects of diversification and marketing, Kunnukara, Kalamasseri 16 August 2024	Dr. S. Sunitha
7	Seminar on Coconut and Tuber Crops based Agrifood Systems for Resilience and Sustainable Income sponsored by CDB, Kochi at Perumanallur, Avinashi, Tiruppur, Tamil Nadu 29 August 2024	Dr. G. Byju Dr. D. Jaganathan Mr. B. Satheesan
8	Training on Improved varieties, technologies and value addition in tuber crops at Jaidoh Village West Khasi Hills, Meghalaya 03 September 2024	Dr. M. R. Sahoo Dr. R. Muthuraj Dr. D. Jaganathan
9	Training on Improved varieties, technologies and value addition in tuber crops at Sohphoh village, West Jaintia Hills, Meghalaya 04 September 2024	Dr. M. R. Sahoo Dr. R. Muthuraj Dr. D. Jaganathan
10	Training on Scientific cultivation practices of tropical tuber crops under the AICRP TC SCSP project, Cherthala South Block, Alappuzha, Kerala 07 September 2024	Dr. K. Susan John Dr. H. Kesava Kumar
11	Training on Scientific methods of tuber crop cultivation for farmers and Kudumbasree workers from Palakkad and nearby districts, Velliankallu, Thrithala, Palakkad, Kerala 12 September 2024	Dr. S. Sunitha
12	Stakeholders Interface programme on Improved varieties and technologies of cassava at BDO office, Namagiripettai, Namakkal 19 September 2024	Dr. R. Muthuraj Dr. D. Jaganathan Dr. P. Prakash
13	Training on Prospects of arrowroot cultivation and quality planting material production in tropical tuber crops, Manjali, Kalamasseri, Ernakulam, Kerala 05 August 2024	Dr. K. Sunilkumar

## Seminars/Workshops/Interface Meetings Organized

### Stakeholders interface meeting at Tirunelveli

ICAR-CTCRI organised a Stakeholders interface meeting on 'Improved technologies of tuber crops for sustainable income' at Assistant Director of Horticulture Office, Ambasamudram, Tirunelveli, Tamil Nadu on 26 July 2024. Mr. Elangovan, Deputy Director of Horticulture, Tirunelveli was the Chief Guest and inaugurated the interface. In his inaugural address, he spoke about the technological interventions by ICAR-CTCRI for the development of major tuber crops in Tirunelveli and

Tenkasi districts. Dr. G. Byju, Director, ICAR-CTCRI presided over the function, and he spoke about the contributions of ICAR-CTCRI for tuber crops development through seed villages and demonstrations. Micronol developed for taro is being on farm validated in twelve taro fields in Tirunelveli and Tenkasi districts. Dr. Sukumar, Head and Mr. Elavarasan, SMS, KVK, Tirunelveli, Smt. Pandiyammal, ADH, Ambasamudram, Mr. Ibrahim, Development Officer, Linga Chemicals, Madurai, a team of scientists of ICAR-CTCRI and 30 progressive farmers from Tenkasi and Tirunelveli participated.





Presidential address by Dr. G. Byju,  
Director, ICAR-CTCRI



Distribution of planting materials  
of improved varieties of sweet potato  
viz., Bhu Sona, Bhu Krishna



Distribution of 'Micronol for Taro' for on  
farm validation in Tirunelveli and Tenkasi districts



Glimpses of Stakeholders' Interface meeting

### Brainstorming workshop on 'Harnessing Crop Wild Relatives for Tuber Crops Improvement'

A one day Brainstorming workshop on 'Harnessing Crop Wild Relatives for Tuber Crops Improvement' was organized on 29 July 2024. The workshop aimed to shed light on exploring genetic diversity and innovative collaborations, address conservation, breeding, and policy frameworks, and provide a roadmap for actionable strategies and research agenda for their safe utilization. It was inaugurated by Dr. Trilochan Mohapatra, Chairman, PPV&FR Authority, New Delhi and former Secretary DARE and DG, ICAR. He highlighted the importance of CWRs and the role of PPV&FRA in shaping future agriculture. Dr. G. Byju, Director underlined the ICAR-CTCRI initiatives on tuber crop development using CWRs. Dr. T.K. Behera, Director, ICAR-IIHR, Dr. K.U.K. Nampoothiri, Former Director, ICAR-CPCRI, and Dr. J. Rajangam, Dean, HC&RI, Periyakulam, TNAU also expressed the need for CWRs in agriculture and development. Dr. Manas R. Sahoo, Head, Division of Crop Improvement, welcomed the gathering and Dr. P. Murugesan, Principal Scientist and Co-organising Secretary, delivered the vote of thanks. Dr. K. Joseph John, Dr. K. Pradeep, Dr. V. Arunachalam, and Dr. Manas R. Sahoo, delivered talks on research and development on CWRs. About 100 participants attended.



Inaugural session of  
Brainstorming workshop



Tuber crops diversity  
exhibition

Glimpses of Brainstorming workshop

- An awareness class on 'Landraces and varieties of tuber crops and their conservation' was conducted to the farmers of Thoovayoor at Shila Museum, Thuvayoor, Pathanamthitta, Kerala and VFPC Thalir Farmer's Market, Erathu (SKS, Erath), Pathanamthitta on 31 July 2024 in which 35 farmers got benefitted. Planting material of Sree Reksha was distributed to the farmers.

### Stakeholders' consultation meeting

A Stakeholders consultation meeting was organised in hybrid mode on 31 July 2024, which was inaugurated by Dr. Roy Stephen, Dean, College of Agriculture, Vellayani and presided by Dr. G. Byju, Director, ICAR-CTCRI. Dr. S.K. Sharma, ADG (HRM), ICAR was the Guest of Honour and Dr. N. Ravisankar, Project Coordinator, AICRP (IFS) & National PI, AINPOF gave special addresses. A total of 75 participants including scientists, farmers and extension personnel attended the meeting.

### Stakeholders interface on Improved varieties and technologies of cassava

Stakeholders interface on Improved varieties and technologies of cassava was organized on 07 August 2024 at Namagiripettai, Namakkal. Dr. G. Byju, Director was the Chief Guest and delivered the inaugural address. Director explained the varieties and technologies of cassava for enhancing productivity and profitability from cassava in Tamil Nadu. Farmers and other stakeholders shared their experiences and challenges in cassava farming in Tamil Nadu. About 40 farmers and other stakeholders participated in the event. Director also monitored FLDs on cassava 'Sree Reksha' in Namakkal and Erode districts of Tamil Nadu.



Stakeholders interface at Namagiripettai, Namakkal



Monitoring of FLDs on improved variety of cassava 'Sree Reksha'  
in Namakkal and Erode districts of Tamil Nadu by Director,  
ICAR-CTCRI

## Farmers' seminar organized under AICRP TC SCSP project

A Farmers' seminar and distribution of planting materials was organized under All India Co-ordinated Research Project on Tuber Crops Scheduled Caste Subplan, in association with Department of Agriculture Development and Farmers Welfare, Govt. of Kerala on 07 September 2024 at Cherthala, Alappuzha, Kerala. Mr. P. Prasad, Hon'ble Minister of Agriculture Development and Farmers Welfare, Govt. of Kerala inaugurated the seminar. He appreciated the sincere efforts of ICAR-CTCRI in improving tuber crops agri-food systems. On the occasion, Mr. P. Prasad brought out Sree Annam and Sree Manna, two new NPK use efficient cassava varieties for Kerala state. Dr. G. Byju, Director explained about the programme and Shri. V.G. Mohanan, Block Panchayat President presided over the function. Training classes were conducted by scientists of ICAR-CTCRI. Chinese potato, arrowroot and lesser yam planting materials and organic inputs were distributed to the beneficiary farmers.



Glimpses of Farmers' Seminar organized at Cherthala

## Seminar on 'Coconut and tuber crops based agrifood systems for resilience & sustainable income'

ICAR-CTCRI organized a seminar on 'Coconut and tuber crops based agrifood systems for resilience & sustainable income' in Tiruppur, Tamil Nadu on 29 September 2024 under a project funded by the Coconut Development Board (CDB) and supported by ICAR-CPCRI; KVK, Tiruppur; TNAU, Department of Agriculture, Tamil Nadu; Department of Horticulture, Tamil Nadu; Global Coconut Farmers Producer Company and M/s Linga Chemicals. Dr. G. Byju, Director, ICAR-CTCRI was the Chief Guest and delivered inaugural address. He emphasized the importance of adopting cropping and farming systems in coconut for enhancing productivity and sustainability. He also distributed improved varieties of coconut and tuber crops, Micronol for cassava and elephant foot yam and value added products of coconut and tuber crops to the farmers. Two publications on 'Schemes and developmental programmes of Coconut Development Board, Kochi' and 'Pest and disease management in coconut' were released during the occasion. Ten innovative coconut farmers were also felicitated.

Dr. H. Hameed Khan, Former Project Coordinator, AICRP on Palms and Shri. E. Aravazhi, Director, CDB, Regional Office, Chennai delivered special addresses. Smt. V. Krishnaveni, Joint Director of Agriculture, Tiruppur; Smt. Sheela Poosa Lakshmi, Deputy Director of Agriculture, Tiruppur; Dr. P. Subramanian, Head, CPCRI, Kasaragod; Shri. K. Bala Subramanian, Managing Director, Global Coconut Farmers Producer Company and Shri. Mohamed Ibrahim, Manager, Linga Chemicals, Madurai, offered felicitations.

Technical sessions and stakeholders interface were organized for promoting coconut and tuber crops based agrifood systems in Tamil Nadu. Nine exhibition stalls from CTCRI, CPCRI, CDB, KVK, Department of Agriculture, Department of Horticulture, Linga Chemicals, Global Coconut FPC and Makilam coconut were arranged. About 300 farmers and other stakeholders attended the seminar.



Inaugural address by Dr. G. Byju, Director, ICAR-CTCRI



Distribution of planting materials

## Field Diagnostic Visits

Scientists from ICAR-CTCRI visited farmers' fields during 29-30 August 2024 to analyse problem of cassava stem and root rot disease (CSRR) and leaf and pseudostem rot of elephant foot yam at Sadananadapuram (Kollam), Nedumkunnam (Kottayam), Kothamangalam and Palakuzha (Ernakulam), and Adimali (Idukki), and for giving awareness on CSSR. Planting materials which showed resistance in the initial studies to CSRR were handed over to farmers. An awareness seminar was organised at a Jyothi Special school, Machiplav, Adimali jointly by ICAR-CTCRI, KVK, Idukki and Indian Potash Limited, Ernakulam to make the farmers aware of the disease, pre-disposing factors and the management. About 62 farmers attended the seminar. Leaflet of cassava stem and root rot management were distributed to the farmers.



Advisory for cassava stem and root rot disease (CSRR) management



Cassava stem and root rot disease awareness seminar at Adimali, Idukki

Field diagnostic visits by CTCRI scientists



## Exhibitions

ICAR-CTCRI participated in the following exhibitions during this period:

- Exhibition in connection with ICAR Foundation Day and Technology Day during 15-16 July 2024 at NASC, New Delhi.
- Exhibition of tuber crops varieties and technologies at Attapadi, Palakkad, Kerala as part of the 'Punarjeevanam' during 12-14 August 2024.
- Exhibition in connection with state level seminar on 'Coconut and tuber crops based agrifood systems for resilience and sustainable income' on 29 August 2024 at Perumanallur, Tiruppur, Tamil Nadu.
- ICAR-CTCRI Agri-Business Incubator set up a technology display stall at the Bioconnect 2.0 Kerala 2024, themed I2I (Innovation to Industry), organized by Kerala Life Sciences Industries Park (KLIP) with the support of the Kerala State Industrial Development Corporation (KSIDC) and the Industries Department, Govt. of Kerala during 27-28 September 2024.



Exhibition at NASC, New Delhi



Exhibition at Perumanallur, Tiruppur



Exhibition at Attapadi, Palakkad



Technology display stall at the Bioconnect 2.0 Kerala 2024

## Exposure visits to ICAR-CTCRI

- One day exposure visit cum training on 'Improved technologies of tuber crops' was organized for the benefit of 100 farmers, 745 students and 47 officials during this period at ICAR-CTCRI, Sreekariyam, Thiruvananthapuram.



Exposure visit of school children

## Mera Gaon Mera Gaurav programme

- Under the MGMG programme, farmers in Vellar, Thiruvananthapuram under Thiruvallam Krishn Bhavan were given the planting materials of cassava variety, Sree Reksha.

## Swachh Bharat Abhiyan

- Cleaning drives were conducted at the premises of the Hindi Cell in July and at farm office premises in August 2024. During the drive, all trash materials (paper wastes) were disposed of, covering a total area of 3140 sq. ft. and 140 kg of waste was collected



Swachhata activities at ICAR-CTCRI, Thiruvananthapuram

## Swachhata Hi Seva- 2024

The Swachhata Hi Seva- 2024 programme at ICAR-CTCRI was started on 15 September. The programme was organized on day-to-day activities basis under two sections i.e., Swachhata ki Bhaagidari (regular Swachhata programs during 15-25 September 2024, including identification and cleaning of black spots and Safai Mitra Suraksha Shivris (recognition programs for safai workers). The daily activity conducted included Banner displays, Swachhata pledge, door-to-door campaigns etc. At HQ, online Swachhata pledge was administered on 17 September 2024. At Regional Station, a Swachhata run/motor cycle rally was organized to create awareness among society/community for cleanliness. Other events organized included awareness notice to teaching staff, Pledge and Quiz programme for school children at Thiruvananthapuram and for staff at Regional Station, wastes to art competition for promoting community pride, the farm waste into organic fertilizer to create awareness in mass public, human chain, mega cleanliness drive at the

office and institutional building premises of HQ and RS, cleanliness drive at tourist places and interactions with the local body and the Karma Sena group, a prominent Swachhata group in Thiruvananthapuram directly integrating citizens in collection of wastes. Identification of Cleanliness Target Unit (CTU) was initiated for its transformation into a clean site by a mega cleanliness drive nearby institute in an area of 40 sq. meter at HQ and 800 sq. meter at RS. The RS staff visited the village panchayat of Pubusahi in Khurda district of Odisha for cleanliness drive. Access was given to health facility and services for the welfare of Safai Mita at HQ. Cleanliness drive was organized at Veli Tourist village on World Maritime Day on 28 September. Created awareness among the sanitation workers of the institute at RS about various government social schemes and conducted cleanliness drives at religious place at Thiruvananthapuram and Bhubaneswar on 30 September 2024. Four outdoor cleanliness campaign

programmes were organized at HQ to promote awareness among society/community for cleanliness and sanitation.



Staff of ICAR-CTCRI taking Swachhata pledge



CTU site at RS, Bhubaneswar



Swachha Bharat Programme at Madhupur Village, Cuttack District on 25 September 2024

## Activities of Agribusiness Incubator

### Incubatee enrollment: 2

Sl. No.	Name of Incubatee	Name of organisation/ business	Address of the company	Date of enrolment
1.	Mrs. Rajasree M.	M/s Harithalekshmy Krishikootam	Harithalekshmy Krishikootam Kollam Krishi Bhavan, Padma Vilasom, Medayil Mukku, Kollam- 691012	24 July 2024
2.	Mr. Amaresh Mahato	M/s Aati Pual Mushroom (OPC) Private Ltd.	Villa+ P.O- Bandwan, District- Purulia, West Bengal Pincode- 723129	14 August 2024

## Inauguration of Seed Production Unit of TANUVAS-ICAR-CTCRI ABI Satellite Incubation Centre

A Central Tuber Crops Seed Production Unit was established at the TANUVAS-ICAR-CTCRI-ABI Satellite Incubation Centre, KVK, Kallakurichi, Tamil Nadu for multiplication and distribution of new varieties of tuber crops for strengthening industrial cassava value chain. It was inaugurated on 16 August 2024 by Dr. Shaik N. Meera, Director of ICAR-ATARI, Zone-X, Hyderabad in the presence of Dr. U.S. Gautam, DDG (Extension), ICAR; Dr. K.N. Selvakumar, Vice Chancellor, TANUVAS; Dr. V. Appa Rao, Director Extension TANUVAS; Dr. P.P. Murugan, Director Extension TNAU and other dignitaries from TANUVAS and State departments.



Inauguration of Central Tuber Crops Seed Production Unit at KVK, Kallakurichi, Tamil Nadu

## Planting material distribution through ICAR-CTCRI ABI

In this quarter, ICAR-CTCRI ABI has distributed biofortified sweet potato vine cuttings (200 cuttings each) to 3 farmers in Tamil Nadu.

### ICAR-CTCRI ABI Sales Counter

The ICAR-CTCRI ABI sales counter, 'RootsMart' was taken over by the startup M/s J.J. Agencies on 27 July 2024. This outlet is now the sole sales point in India offering products from seven ICAR Institutes across the country.



ICAR-CTCRI ABI sales counter



## Technology Commercialization/Linkages/ Collaborations

- Varieties recommended for central release:** Two high yielding arrowroot (a high value starch crop for processing (Industrial/Medicinal/Culinary purpose) varieties, Sree Nakshathra (TA 18-12) for Chhattisgarh and Jharkhand and Sree Karti (TA 18-14) for Kerala, Tamil Nadu and Manipur was recommended for release during 24<sup>th</sup> Annual Group Meeting of All India Coordinated Research Project on Tuber Crops held during 25-27 June 2024. These were accepted for release during the 31<sup>st</sup> meeting of the Central Sub-Committee on Crop Standards, Notification and Release of varieties for Horticultural Crops held on 19 July 2024.



Sree Nakshathra

Sree Karti

Arrowroot varieties for central release

- The Cassava custard production technology developed under the contract research project funded by M/s KCM Agri clinic, Tamil Nadu has been transferred to the company.



Cassava custard powder

- ICAR-CTCRI signed an MoU with Aati Pual Mushroom (opc) Pvt. Ltd. on 13 September 2024. Amaresh Mahato, Director of Aati Pual Mushroom (opc) Pvt. Ltd. and Dr. G. Byju, Director, ICAR-CTCRI, Thiruvananthapuram exchanged the MoU.

## Technology certification by ICAR

A total of 8 technologies from ICAR-CTCRI and other three technologies with ICAR-CTCRI scientists as Associate Developers, were certified by ICAR, New Delhi during 2024. The technology certificate for 'Cassava and Sweet potato Resistant Starch RS4 type (Chemically modified)' was given on 16 July 2024 during ICAR Foundation day at New Delhi and other 7 technology certificates were given to technology developers by Dr. Trilochan Mohapatra, Chairman, PPV&FR Authority, New Delhi and former Secretary DARE and DG, ICAR

during the inaugural function of Brainstorming workshop on 'Harnessing Crop Wild Relatives for Tuber Crops Improvement' on 29 July 2024. The list of technologies and technology developers are given below.

- 1. Cassava and Sweet potato Resistant Starch RS4 type (Chemically modified)** (Lead Developer: A.N. Jyothi; Associate Developers: R. Remya and J. Sreekumar) UID: ICAR-HS-CTCRI-Product-2024-020.

The technology on 'Cassava and Sweet potato Resistant Starch RS4 type (Chemically modified)' was selected as one of the best ten technologies from Horticulture Sciences division of ICAR, New Delhi during 2024. The lead developer of the technology, Dr. A.N. Jyothi, Principal Scientist received the certificate during 96<sup>th</sup> Foundation Day of ICAR and Technology Day on 16 July 2024 at New Delhi.



Dr. A.N. Jyothi receiving technology certificate



- 2. Secondary and micronutrients inclusive customised fertilizers for taro** (Lead Developer: Dr. G. Byju; Associate Developers: Ms. Jinimol Raju, Dr. M. Nedunchezhiyan, Dr. Kalidas Pati, Dr. Sheriful Alam, Dr. Sanjib Sharma, Dr. D. Veera Suresh, Dr. R.S. Singh, Dr. Ashish Narayan, Dr. K. Mamatha, Dr. Jayanta Tarafdar, Dr. Surajit Mitra, Dr. J. Suresh Kumar and Dr. J. Sreekumar) UID: ICAR-HS-CTCRI-Technology-2024-016.

- 3. Agronomic strategy to mitigate high temperature stress in sweet potato** (Lead Developer: Dr. V. Ravi; Associate Developers: Sanket J. More, Saravanan Raju, J. Sreekumar and J. Suresh Kumar) UID: ICAR-HS-CTCRI-Technology-2024-017.

- 4. Integrated management package for postharvest rot in elephant foot yam** (Lead Developer: Dr. S.S. Veena; Associate Developers: Dr. M.L. Jeeva, Dr. G. Byju, Dr. J. Sreekumar, Dr. S. Sunitha, Dr. Sheriful Alam, Dr. S. Sengupta, Dr. J. Tarafdar, Dr. D. Veera Suresh, Dr. Ashish Narayan, Dr. Himani Patel, Dr. K. Mamatha and Dr. Biswajith Das) UID: ICAR-HS-CTCRI-Technology-2024-018.

- 5. Organic management package for postharvest rot in elephant foot yam** (Lead Developer: Dr. S.S. Veena; Associate Developers: Dr. M.L. Jeeva, Dr. G. Byju, Dr. J.

Sreekumar, Dr. S. Sunitha, Dr. Sheriful Alam, Dr. S. Sengupta and Dr. J. Tarafdar, Dr. D. Veera Suresh, Dr. Ashish Narayan, Dr. Himani Patel, Dr. K. Mamatha and Dr. Biswajith Das) UID: ICAR-HS-CTCRI-Technology-2024-019.

**6. Method for assessing the impact of field interventions in Chinese potato** (Lead Developer: P. Prakash; Associate Developers: D. Jaganathan, Sheela Immanuel, R. Muthuraj and P.S. Sivakumar) UID:

**7. Price forecasting model for sweet potato** (Lead Developer: P. Prakash; Pradeep Sharma, D. Jaganathan, Sheela Immanuel, Achal Lama, J. Sreekumar and P. S. Sivakumar)

**8. Seed villages for scaling up of improved varieties of cassava in Tamil Nadu** (Lead Developer: R. Muthuraj; Associate Developers: D. Jaganathan, P. Prakash and G. Byju)

#### Technologies certified as Associate developers

**1. Novel salt responsive SSR markers in Wheat** (Lead

Developer: Pradeep Sharma; Associate Developers: Geetika Mehta, Senthilkumar, K.M., O. P. Ahlawat, G.P. Singh and G. Singh)

**2. Micro RNA-SSR markers for heat tolerance in wheat** (Lead Developer: Pradeep Sharma; Associate Developers: Senthilkumar, K.M., Geetika Mehta, S.K. Singh, Satish Kumar, Arun Gupta, Rajender Singh, G.P. Singh and G. Singh)

**3. Integrated Organic Farming System (IOFS) models for Chhattisgarh, Gujarat, Kerala, Meghalaya, Rajasthan, Sikkim and Tamil Nadu** (Lead Developer: N. Ravishankar; Associate Developers: Amit Kumar, P.C. Jat, M. Shamim, Meraj Alam Ansari, Debashis Dutta, Suresh malik, Poonam Kashyap, Chandra Bhanu, Latit Kumar, Anup das, Jayanta layak, C.K. Thankamani, E. Somasundaram, R. Krishnan, S.K. Sharma. Ravikant Sharma, Ravikant Avasthe, Shaon Kumar Das, Raghavendra Singh, G. Suja, L.J. Desai, M.C. Bhambri, Adikjant Pradhan, A.K. Prusty, Raghuvveer Singh, Raghavendra K.J., A.S. Panwar, S. Bhaskar, Sunil Kumar, Rajbir Singh)



Technology certificates received from Dr. Trilochan Mohapatra, Chairman, PPV&FR Authority, New Delhi and former Secretary DARE and DG, ICAR

### Capacity building

#### Trainings attended by staff

Sl. No.	Name	Particulars of the training	Period
1	Dr. J. Suresh Kumar	Training programme on 'Developing winning research proposals' funded by NAHEP at ICAR-NAARM, Hyderabad	15-19 July 2024
2	Dr. Senthilkumar K.M. Dr. Sujatha, T.P. Dr. Harish E.R. Dr. B.G. Sangeetha	1 <sup>st</sup> International Workshop-cum Webinar on "CRISPR Genome Editing" by Glosem, New Delhi	22-26 July 2024



3	Dr. Sujatha, T.P.	Webinar Next Generation Sequencing- Optimizing Sample Preparation Techniques organised by MP Biomedicals Microsoft teams	25 July 2024
4	Dr. T. Krishnakumar	FSSAI regulations & registrations, conducted by Kerala Startup Mission place	19 June 2024
5	Dr. A. Asha Devi Dr. C. Visalakashi Chandra Dr. P. Murugesan	IP awareness programme for five days in virtual mode organized by ICAR-Indian Institute of Spices Research, Calicut	16-23 August 2024

#### Staff Participation in Scientific Events/Seminars/Symposia/Conference/Workshop/Meetings

Sl.No.	Name of the participant	Programme	Particulars of the programme
1	Dr. T. Makesh Kumar	Collaborative research meeting on tuber crops between ICAR-CTCRI and WASSAN Hyderabad	05-19 July 2024
2	Dr. K. Laxminarayana	23 <sup>rd</sup> Foundation Day of ICAR-National Institute on Foot and Mouth Disease (NIFMD)	Arugal, Bhubaneswar, 05 July 2024
3	All staff	61 <sup>st</sup> Foundation Day celebrations of ICAR-CTCRI, Thiruvananthapuram	ICAR-CTCRI, Thiruvananthapuram 09 July 2024
4	Dr. Sujatha T.P.	AAB-Plant Webinar: I Seminar Genome editing	09 July 2024
5	Dr. K. Laxminarayana	National Fish Farmers' Day	ICAR-CIFA, Bhubaneswar 13 July 2024
6	Dr. K. Laxminarayana	6 <sup>th</sup> Prof. N. Panda Memorial Lecture on 'Digital Innovation: Transforming agri-food System',	OUAT, Bhubaneswar 13 July 2024
7	Dr. G. Byju Dr. A.N. Jyothi Dr. J. Sreekumar	ICAR Foundation Day and Technology Day	NASC, New Delhi 15-16 July 2024
8	Dr. K. Laxminarayana	2 <sup>nd</sup> State Level Technical Committee Meeting on 'Pilot project on forgotten foods collection, Conservation for meeting food & Nutrition climate and Livelihood related challenges among farming communities of Malkangiri and Nuapada District of Odisha'	Bhubaneswar, Odisha 16 July 2024
9	Dr. Asha, K. I.	Review meeting held at KSBB, Kailasom, Belhaven Gardens, Kowdiar and made a presentation on the progress of the work done under KSBB project titled "Collection and Database creation of important named landraces of tuber crops from Southern districts of Kerala".	KSBB, Thiruvananthapuram 18 July 2024
10	Dr. Asha, K. I.	31 <sup>st</sup> Meeting of the Central Sub- Committee on Crop Standards, Notification and Release of varieties for Horticultural Crops	19 July 2024
11	All scientists	First Quarterly Review meeting of scientists	ICAR-CTCRI, Thiruvananthapuram 22-23 July 2024
12	All scientists	Brainstorming workshop on Harnessing Crop Wild Relatives for Tuber Crops Improvement	ICAR-CTCRI, Thiruvananthapuram 29 July 2024
13	All scientists	Stakeholders interface meeting on Natural farming	ICAR-CTCRI, Thiruvananthapuram 31 July 2024
14	Dr. P. Prakash	32 <sup>nd</sup> International Conference of Agricultural Economists on the theme Transformation Towards Sustainable Agri-Food Systems	NASC, New Delhi 02-07 August 2024
15	Dr. K. Laxminarayana	Workshop on 'Gender and Social Analysis of Seed Systems and Promoting Women's Entrepreneurship'	07 August 2024

16	Dr. Sujatha T.P.	Online Intellectual Property Rights (IPR) awareness seminar on Lab to Market: Leveraging IP, organized by ICAR-National Research Centre for Grapes as part of National IPR Awareness Mission (NIPAM 2.0)	09 August 2024
17	Dr. K. Laxminarayana	Workshop on Identification of State policy dialogues/Studies under the project 'Biodiversity, Sustainable Land Forest Management and Climate Change Medication pro various conservation and Agro ecological practices under UNFAO-Green -Agriculture Project	Krushi Bhavan, Bhubaneswar, Odisha 13 August 2024
18	Dr. G. Byju Dr. G. Suja Dr. T. Makeshkumar Dr. P. Murugesan Dr.M. S. Sajeew Dr. Sheela Immanuel Dr. K. Laxminarayana Dr. S. Sunitha Dr. Santhosh Mithra Dr. D. Jaganathan Shri. Bhadrakumar Shri. M. Kuriakose Shri. S. Sreekumar	20 <sup>th</sup> Institute Management Committee	ICAR-CTCRI, Thiruvananthapuram 14 August 2024
19	Dr. S. S. Veena Dr. P. Murugesan Dr. Sujatha T.P.	IP Awareness week organised by IP&TM Unit, ICAR	16, 20 and 21 August 2024
20	Dr. A. Asha Devi	First half yearly meeting of the Town Official Language Implementation Committee (Office-I), Thiruvananthapuram as Liaison Officer, OL	20 August 2024
21	Dr. P. Murugesan Dr. K. Sunilkumar	International Conference on Precision Horticulture - 2024 at Horticultural College and Research Institute (TNAU), Periyakulam, Theni district, Tamil Nadu, India	22-24 August 2024
22	Dr. K. Laxminarayana	27 <sup>th</sup> Meeting of ICAR Regional Committee-II	ICAR-National Rice Research Institute, Cuttack 23 August 2024
23	Dr. K. Laxminarayana	63 <sup>th</sup> Foundation Day of OUAT, Bhubaneswar	OUAT, Bhubaneswar 24 August 2024
24	Dr. S.S. Veena Dr. H. Kesava Kumar	Seminar on 'Advances in Artificial Intelligence and Sensor based smart precision farming'	ICAR-CPCRI, Kasaragod 28 August 2024
25	Dr. K. Laxminarayana	Odisha Balabhadra Jaibika Chasa Mission	Krushi Bhavan, Bhubaneswar 28 August 2024
26	All scientists	Online session on 'Transforming Agriculture Research - Enhancing role of Private sector' organized by Ministry of Agriculture and Farmers Welfare Chaired by Shri Bhagirath Choudhary, MOS for Agriculture and Farmers Welfare	03 September 2024
27	Dr. G. Suja	Meeting chaired by DDG to review the utilization of budget & target & achievements of 100 days programme (online). International Yoga Day celebration	21 June 2024
28	Dr. K.M. Senthilkumar	International Webinar on Synthetic Biology: Technological Developments and Policy Discussions and Risk Assessment and Risk Management: Looking Ahead to CP-MOP 11 by KIPABiC, Korea	13 September 2024 and 27 September 2024
29	All Scientists	Panel discussion on IPRs in Horticultural Sciences	13 September 2024
30	Dr. K. Laxminarayana	Inaugural Function of the International Conference on 'Building Small Holder Climate Resilience for Achieving Sustainable Food System'	OUAT, Bhubaneswar 17 September 2024



31	Dr. G. Byju Dr. G. Suja	Preliminary meeting of QRT with DDG, Dr. S.K. Singh and Chairman, QRT, Dr. S.D. Shikhamany	19 September 2024
32	Dr. Asha K. I.	2 <sup>nd</sup> Annual work presentation of the Ph.D. student, Department of Botany, University of Kerala	University of Kerala, Thiruvananthapuram 23 September 2024
33	Dr. G. Suja Dr. K. Susan John Dr. V. Ramesh Dr. R. Muthuraj Dr. J. Suresh Kumar	Interactive Meeting with Dr. Kuldeep K. Lal, Director, ICAR-CIBA	25 September 2024
34	Dr. G. Suja.	Executive Committee Meeting of Indian Society of Agronomy as Councillor, Kerala.	25 September 2024
35	All scientists	Awareness programme on 'Diversity, Equity, Inclusion and Belonging'	ICAR-CTCRI, Thiruvananthapuram 27 September 2024

## Publications

### Research papers

1. Murthy, J.S.V., Chellappan, M., Ranjith, M.T., Revi, S., Harish, E.R. and Kiran, A.G., 2024. Biology and morphometrics of cassava mealybug, *Phenacoccus manihoti* Matile-Ferrero, 1977 (Hemiptera: Pseudococcidae). *Animal Biology*, 1-13. (NAAS score: 7.20)
2. Prakash M. Patel, Veena, S.S., Karthikeyan, S., Sreekumar, J. and M.L. Jeeva. 2023. *In vitro* evaluation of twelve fungicides against three major fungal pathogens of tropical tuber crops, *J. Root Crops* 49 (2): 45-52.
3. Thangamuniyandi, M., Nageswari, K., Murugesan, P. Rajangam, J., Gnanasekaran, M. and Suganya Kanna, S. 2024. Food, nutrients and phytochemical composition of country potato, *Plectranthus rotundifolius* (Poir) spreng.: A review, *Annals of Phytomedicine* 13(2): 1-10.

### Books

1. ICAR-CTCRI. 2024. *The 3A's of the Division of Crop Production-Achievements, Aspirations and Action Plan*, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, India,
2. The 3A's of Division of Crop Protection, ICAR-CTCRI Achievements, Aspirations and Action Plan. ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, 24p.
3. ICAR-CTCRI. 2024. *The 3A's of the Section of Crop Utilization-Achievements, Aspirations and Action Plan*, ICAR-Central Tuber Crops Research Institute,

Sreekariyam, Thiruvananthapuram, Kerala, India, 24p.

### Book Chapters

1. Arutselvan, R. and Laxminarayana, K. 2024. Revolutionizing tuber crops production through biotechnological approaches and precision farming. In: *Futuristic Trends in Biotechnology*, Volume 3, Book 19, Part 5, Chapter 6, pp. 240-248. IIP series.
2. Jaganathan, D., Muthuraj, R., Sunilkumar, K., Sheela Immanuel, Prakash, P. and Byju, G. 2024. Seed villages and DSMs for rapid area expansion of tuber crops varieties: Achievements, success stories and way forward. Training Manual on Advances in quality planting material production of tropical tuber crops held during 23-27 September 2024, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala.
3. Parvathy, S.T. 2024. Genome Editing: A Safe Alternative to Genetic Engineering of Crops. In: *Genetic Engineering of Crop Plants for Food and Health Security*, Tiwari, S. and Koul, B. (Eds.), Springer, Singapore. DOI:10.1007/978-981-97-3119-0\_14.
4. Parvathy, S.T., Sheela, M.N. 2024. Genetic Modification of Tropical Root and Tuber Crops: Prospects and Perspectives. In: *Genetic Engineering of Crop Plants for Food and Health Security*, Tiwari, S. and Koul, B. (Eds.), Springer, Singapore. DOI:10.1007/978-981-97-3119-0\_6.

### Technical bulletins

1. Jyothi, A.N. 2024. Tropical Root and Tuber Crops in

Human Nutrition, Technical Bulletin No. TB-102/2024, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, India, 34p.

2. Nedunchezhiyan, M., Laxminarayana, K., Pati, K., Chauhan, V.B.S., Gowda, K.H. Arutselvan, R., Jata, S.K. and Byju, G. 2024. Sustainable livelihoods through tuber crops-based agri-food systems. Biennial Report of Tribal Sub-Plan 2022-24. Technical Bulletin No. TB-103/2024, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, India, 116p.

### Popular Articles

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2. Krishnakumar, T., Sajeev, M.S., Jyothi, A.N., Pradeepika, C., Prakash, P., Jaganathan, D. and Velmurugan, M. 2024. Hydroclone technology for tapioca starch and sago industry. *Food and Beverage News*, July 2024.
3. Lopamudra Sarangi, Arutselvan, R., Disha Baishnabi, Sulekha Pradhan, Sushree Sandhya Pradhan, Chauhan, V.B.S., Hanume Gowda, K., Kalidas Pati, Nedunchezhiyan, M. and Laxminarayana, K. The Health Benefits of Arrowroot: A Nutrient packed super food. September 2024. *Sabujeema-An International Multidisciplinary e-Magazine*, 4(9):1-5
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5. Suja, G., Jaganathan, D. and Byju, G. 2024. Arrowroot – An ideal intercrop in coconut gardens (in Malayalam). *Indian Coconut Journal*, 16(8): 16-17.
6. Suja, G., Jaganathan, D. and Satheesan, B. 2024. Chinese potato and arrowroot: Opportunities and agro-techniques. *Kerala Karshakan*, 69(09): 38-41.
7. Sureshkumar, J., Raju, S., Kumar, H.K. and Krishnakumar, T. 2024. IMEC film farming: A game changer for modern farming. *Agritech*, 1(3): 1-2.
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taro: A nutrient rich root vegetable. *The Agriculture Magazine*, 3(11):123-126. E-ISSN: 2583-1755.

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1. Lopamudra Sarangi, Arutselvan, R., Disha Baishnabi, Sulekha Pradhan, Sushree Sandhya Pradhan. 2024. Greater yam anthracnose disease and its management. In: *International Conference on Emerging Technologies in Agriculture and Allied Sciences (ETAAS-2024)* organized by Society for Agriculture, Allied Sciences & Technology (SAAST), Odisha, School of Agriculture, SR University, Warangal & Meadow Agriculture Pvt. Ltd., UP, 10-11 August 2024. pp. 25.
2. Murugesan, P. and Thangamuniyandi, M. 2024. Climate change mitigation and adaptation efforts through plant genetic resources of neglected and underutilised tuber crops. In *Souvenir International Conference on Precision Horticulture 2024* held at HC&RI (TNAU), Periyakulam, Tamil Nadu, India, pp. 181-188.
3. Prakash P, Jaganathan D. and Sheela Immanuel. 2024. Sustainable cassava farming in Southern India: Insights into production systems, economic evaluations and farmer perspectives. Accepted for presentations in the 32<sup>nd</sup> International Conference of Agricultural Economists (ICAE 2024), 02-07 August, NASC Complex, New Delhi.
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## Technical/Extension Folders/Leaflets

1. Nedunchezhiyan, M., Pati, K., Chauhan, V.B.S., Gowda, K.H. Arutselvan, R., Laxminarayana, K., and Jata, S.K. 2024. *Deep Fertigation in Elephant foot yam*. Technical Folder TF-4/2024/TSP, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, India.
2. Nedunchezhiyan, M., Pati, K., Chauhan, V.B.S., Gowda, K.H. Arutselvan, R., Laxminarayana, K., and Jata, S.K. 2024. *Deep Fertigation in greater yam+maize intercropping system*. Technical Folder TF-5/2024/TSP, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, India.
3. Nedunchezhiyan, M., Pati, K., Chauhan, V.B.S., Gowda, K.H. Arutselvan, R., Laxminarayana, K., and Jata, S.K. 2024. *Taro intercropping with vegetables for higher income, food and nutrition security*. Technical Folder TF-9/2024/TSP, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, India.

## TV Programme

1. Byju, G., Jaganathan, D. and Muthuraj, R. 2024. Improved varieties and technologies of cassava for higher income. DD Podhigai News on 08 August 2024 in Doordarshan, Chennai, Tamil Nadu.
2. Jaganathan, D. and Muthuraj, R. 2024. Stakeholders interface on cassava farming in Tamil Nadu. DD Podhigai News on 19 September 2024 in Doordarshan, Chennai, Tamil Nadu.

## Radio talk

1. Byju, G., Jaganathan, D. and Muthuraj, R. 2024. Improved varieties and technologies of cassava for higher income. News on 07 August 2024 in All India Radio, Chennai, Tamil Nadu.
2. Byju, G. and Jaganathan, D. 2024. Coconut and Tuber Crops based Agrifood Systems for Resilience and Sustainable Income. Oorpurathile on 02 September 2024 in All India Radio, Coimbatore, Tamil Nadu.
3. Jaganathan, D. and Muthuraj, R. 2024. Stakeholders interface on cassava farming in Tamil Nadu. News on 19 September 2024 in All India Radio, Chennai, Tamil Nadu.

## Institute Publications

1. ICAR-CTCRI. 2024. Quarterly review meeting of

scientists: Progress Report (April-June 2024), ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, 188 p.

2. Jaganathan, D., Prakash, P., Suresh Kumar, J., Visalakshi Chandra, C., Krishnakumar, T. and Sangeetha, B.G. 2024. 50<sup>th</sup> Annual IRC Meeting: Proceedings and Project Milestones (2024-2025), ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram, Kerala, 131p.

## Major Institute Events

### 61<sup>st</sup> Foundation Day of ICAR-CTCRI

ICAR-Central Tuber Crops Research Institute celebrated 61<sup>st</sup> Foundation Day on 09 July 2024 at ICAR-CTCRI campus in Thiruvananthapuram. Shri. Arif Mohammed Khan, Hon'ble Governor of Kerala, inaugurated the programme. In his inaugural address, he congratulated CTCRI for 'the silent revolution' in tune with nation's goal of achieving food and nutritional security. He was eloquent in stating that through the CTCRI's present research on bio-fortification, this poor man's crop can become part of everyman's healthy diet. According to Governor, the institute is a national asset, empowering farming community and provides immense contributions in national food security. He released new technologies and publications, honoured progressive tuber crop farmers, meritorious staff and students of ICAR-CTCRI. Dr. G. Byju, Director, ICAR-CTCRI, in his presidential address detailed about importance of the institute and its research activities. According to him, the multipurpose, climate resilient, future crops are popularised in different parts of the country and are included in 'Rainbow Diet Campaign' for the nutritional security of the nation. ICAR-CTCRI, the designated national repository for tuber crops in the country, is focusing specially in product diversification, livelihood security of tuber crop dependent farmers, women friendly technologies and biofortification. Prof. Chandrabhas Narayana, Director, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram offered a special address on the occasion and highlighted the innovations and discoveries made in tuber crops sector by the institute. He emphasised the need of concerted efforts in making the tuber crop based foods into children's diet plan. Dr. G. Suja, Head, Division of Crop Production, ICAR-CTCRI delivered the welcome address. During the occasion, an exhibition stall showcasing the technologies of ICAR-CTCRI was also arranged.



Glimpses of Foundation Day celebration of ICAR-CTCRI

### Launching of sweet potato agri-food system project in Attappadi

ICAR-CTCRI launched sweet potato agri-food system project in Attappadi: Christened 'Punarjeevanam' and jointly launched with State Kudumbashree Mission, Government of Kerala on 12 August 2024. Sri. M.B. Rajesh, Minister for local self-governments, rural development and excise, Government of Kerala inaugurated the programme online. Dr. G. Byju, Director, ICAR-CTCRI delivered a keynote address. Scientists of ICAR-CTCRI handled classes during the three days livelihood improvement training programme.



### Institute Management Committee Meeting

The 20<sup>th</sup> Institute Management Committee Meeting of ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram was held on 14 August 2024 in hybrid mode. The meeting was chaired by Dr. G Byju, Director, ICAR-CTCRI who delivered the Chairman's speech followed by a PowerPoint presentation by Dr. D. Jaganathan, briefing the history, mandate, staff strength, activities, achievements and action plan of the institute. This was followed by a presentation of minutes of the previous meeting held on 12 January 2024 by the Member Secretary. The action taken on each item was also

reviewed. The Senior Administrative Officer presented the report of Establishment and Personnel Section. The Senior Finance & Accounts Officer presented the Progressive Expenditure of 2023-2024. Proposals for the consideration and approval of the IMC were discussed.

### Independence Day Celebrations

ICAR-CTCRI celebrated 78<sup>th</sup> Independence Day of India on 15 August 2024. Dr. G. Byju, Director delivered Independence Day speech after hoisting the national flag. All staff members including contractual staff and students participated in the celebration.

### Foundation stone laying ceremony of Bioagents Mass Production Unit under RKVY at RS ICAR-CTCRI, Bhubaneswar

Dr. Sudhakar Pandey, Assistant Director General (FVS&MP) has laid the foundation stone for a Bioagents Mass Production Unit under the RKVY funded project titled 'Establishment of Mass Production Unit of Bioagents for Ecofriendly Disease Management in Vegetable Crops of Odisha' on 13 September 2024. Dr. G. Byju, Director, ICAR-CTCRI graced the occasion. Dr. Sudhanshu K.K. Mishra, Chief General Manager, NABARD, Bhubaneswar and Dr. M.K. Mishra, Professor and Head, Department of Plant Pathology, OUAT, Bhubaneswar were Guests of Honour in the programme.



Preliminary Meeting of QRT

- The preliminary meeting of QRT of ICAR-CTCRI and AICRP on Tuber Crops was held with DDG Hort (Sci.) Dr. S.K. Singh and Chairman, QRT, Dr. S.D. Shikhamany in the chamber of DDG Hort (Sci.), New Delhi on 19 September 2024.



### Hindi Corner

A one day Hindi workshop cum Hindi class was conducted for the employees of the Institute on 02 August 2024 and a class on 'Simple Hindi Grammar and Official Language Rules' was conducted by the Hindi Cell. The workshop was inaugurated by Dr. G. Byju, Director. Twenty participants comprising 7 officers, and 13 other staff attended.



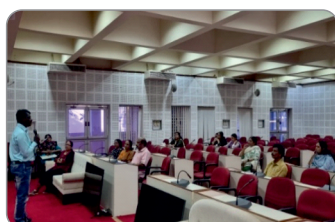


Hindi Workshop conducted by the Hindi Cell on 02 August 2024  
**Hindi Fortnight 2024**

The Hindi Cell of ICAR-CTCRI celebrated the Hindi Fortnight 2024 during 14 to 28 September 2024 with various competitions. The event was inaugurated on 18 September 2024 by Dr. T. Makeshkumar, Director (i/c). Five competitions were organized and 10 kids of the staff of ICAR-CTCRI participated. Apart from that, 11 competitions were organized for the staff. A total of 36 staff participated in the events.



Inauguration of the Hindi Fortnight



Elocution competition



Kids' program @ ICAR-CTCRI



Hindi Pakhwada celebration at ICAR-CTCRI Regional Station, Bhubaneswar

### Director's Visits

- Dr. G. Byju, Director inaugurated the seminar on 'Areca nut cultivation, post-harvest technology and marketing' organized by ICAR-KVK, Erode, Tamil Nadu. Dr. P. Alagesan, Head, KVK; Dr. M.R. Manikantan, Dr. N.R. Nagaraja, Dr. S. Sumitha, scientist of ICAR-CPCRI; Mrs. Haseena, Asst. Director of Horticulture; Mr. Ashok Kumar, DDM, NABARD; Mr. P. Raghavendra, AGM, CAMPCO and Dr. R. Muthuraj and Dr. D. Jaganathan, scientists of ICAR-CTCRI attended the programme. About 500 farmers attended the training.
- Dr. G. Byju, Director inaugurated the Refresher Course for Faculties (DBT Skill Vigyan State Partnership Programme) at KSCSTE-Jawaharlal

Nehru Tropical Botanical Garden and Research Institute, Palode, Thiruvananthapuram, Kerala on 22 August 2024.

- Dr. G. Byju, Director visited AICRP TC centre at SG College of Agriculture and Research Station, Jagdalpur, Chhattisgarh on 10 September 2024 and reviewed the ongoing programmes.



Dr. G. Byju visiting the AICRP TC centre at Jagdalpur



- Dr. G. Byju, Director visited the AICRPTC SCSP demonstration fields and interacted with the beneficiary farmers in Tangi block, Cuttack district, Odisha on 12 September 2024.



Visit of Dr. G. Byju to AICRPTC SCSP demonstration fields



- Dr. G. Byju, Director inaugurated L-Spectra, the science and arts exhibition of students at Loyola School, Thiruvananthapuram on 28 September 2024.
- Dr. G. Byju, Director delivered the 34<sup>th</sup> Dr. S.P. Raychaudhuri Memorial Lecture on the topic 'Role of plant nutrition in food security: achievements, aspirations and action plan' at College of Agriculture, Vellanikkara, Thrissur organised by The Indian Society of Soil Science, Thrissur chapter on 25 September 2024. Dr. Mani Chellappan, Dean inaugurated the programme.



Dr. G. Byju attending the Dr. S.P. Raychaudhuri Memorial Lecture



### Distinguished Visitors

#### Headquarters, Thiruvananthapuram, Kerala

- Dr. Trilochan Mohapatra, Chairman, PPV&FR Authority, New Delhi and Former Secretary, DARE and DG, ICAR, New Delhi
- Dr. S.K. Sharma, ADG (HRM), ICAR, New Delhi

- Dr. Kuldeep K. Lal, Director, ICAR-CIBA Chennai
- Dr. Ch. Sreenivasa Rao, Director, ICAR-NAARM, Hyderabad
- Dr. S.N. Sushil, Director, ICAR-NBAIR, Bengaluru
- Dr. T.K. Behera, Director, ICAR-IIHR, Bengaluru
- Dr. K.U.K. Nampoothiri, Former Director, ICAR-CPCRI
- Dr. J. Rajangam, Dean, HC&RI, Periyakulam, TNAU
- Dr. Roy Stephen, Dean, College of Agriculture, Vellayani, Thiruvananthapuram
- Dr. N. Ravisankar, Project Coordinator, AICRP (IFS) & National PI, AINPOF, Modipuram

#### **Regional Station, Bhubaneswar, Odisha**

- Dr. Sudhakar Pandey, Assistant Director General (FVSMP), ICAR, New Delhi
- Dr. Sudhanshu K.K. Mishra, Chief General Manager, NABARD, Odisha

#### **Honours, Awards and Recognitions**

- Dr. T. Makesh Kumar acted as external examiner for conducting qualifying viva of eleven M.Sc. (Ag.) & two Ph.D. students of Department of Plant Pathology, College of Agriculture, KAU, Vellayani during 17-19 July 2024.
- Dr. T. Makesh Kumar participated as Guest of honour in two day National conference on Plant active bioenergy and sustainable bioproducts organized by Department of Botany, Bishop Heber College, Trichy during 02-03 August 2024 and delivered talk on Genome editing as future tools for food security.
- Dr. T. Makesh Kumar attended meeting at ICAR-NRCB, Trichy as DBT nominee of IBSC in connection with harvest of transgenic events on 30 August 2024.
- Dr. T. Makesh Kumar acted as Chairman for the committee to visit Oil Palm India Ltd (OPIL) nursery near Kulathupuzha on 26 July 2024 to study the suitability of oil palm seedlings available with OPIL to transport to other states.
- Dr. S.S. Veena and Dr. Kesava Kumar acted as Panel members in the Plant Genetic Resources Management (Group I) in the Brainstorming Workshop on 'Harnessing Crop Wild Relatives for Tuber Crops Improvement' at ICAR-CTCRI on 29 July 2024.
- Dr. S.S. Veena acted as Convenor, Stakeholders interface meeting on Natural farming at ICAR- CTCRI on 31 July 2024.
- Dr. P. Murugesan acted as Member of Board of

Examiners for adjudication of one Ph.D. programme of University of Calicut and as external examiner of one Ph.D. thesis of HC & RI (TNAU), Coimbatore, Tamil Nadu.

- Dr. P. Murugesan acted as co-chairman for one PG Scholar of AC & RI, Madurai, TNAU and two Ph.D. scholars of HC&RI, Coimbatore and HC&RI, Periyakulam, Tamil Nadu.
- Dr. P. Murugesan chaired a session and delivered a lead talk in International Conference on Precision Horticulture (ICPH-2024) held during 22-24 August 2024 at Horticultural College and Research Institute (TNAU), Periyakulam, Theni, Tamil Nadu.
- Dr. A. Asha Devi acted as Member, Expert Committee for the selection of awardees for the Prof. A. Abraham Endowment Oration and Endowment award programme on 14 August 2024.
- Dr. A. Asha Devi has been recognized as Ph.D. Research Guide in Botany by the University of Kerala.
- Dr. C. Mohan acted as external examiner for evaluating a Ph.D. thesis of Department of Botany, University of Calicut, Kerala.
- Dr. K. Laxminarayana visited Kapurtala and Jalandhar districts of Punjab on 24 September 2024 for the verification of certified potato seed stock to be supplied through Odisha State Seeds Corporation Limited (OSSC), Bhubaneswar and submitted the verification report to the Director, Horticulture Department.
- Dr. S. Sivakumar delivered an invited talk at MANAGE Agricultural Extension Evening4Learning Webinar organised by MANAGE, Hyderabad on 27 August 2024.
- Dr. S. Sivakumar delivered two invited talks on 22 July 2024 and 26 July 2024 at the National Young Professional Development programme on new competencies, career opportunities and research priorities in Agricultural Extension at Shiksha O Anusandhan deemed to be University, Bhubaneswar, Orissa.
- Dr. E.R. Harish was inducted as Faculty/Research Guide in IARI under IARI-IIHR Bengaluru Hub.
- Dr. H. Kesava Kumar acted as external examiner and conducted qualifying viva voce of two M.Sc. Nematology students of College of Agriculture, Vellayani, Kerala Agricultural University on 09 August 2024.
- Dr. H. Kesava Kumar acted as external examiner for setting the theory question paper for End term 2<sup>nd</sup> examination 2023-2024 of NEMA 510: Nematode



Management (2+1) for B.Sc. (Agriculture) students of College of Post Graduate Studies in Agricultural Sciences, Central Agricultural University, Imphal, Umiam during July 2024. Dr. S. Sivakumar delivered an invited talk at the National Young Professionals

- Dr. Senthilkumar, K.M. acted as Member, selection committee for requirement of SRF at ICAR-IIOPR, RC, Palode on 03 July 2024.
- Dr. D. Jaganathan was awarded Certificate of Excellence from Arecanut growers association, Gobi, Erode, Tamil Nadu on 06 August 2024 for his contributions for the development of arecanut and tuber crops in Tamil Nadu.
- Dr. N. Krishna Radhika acted as member for the qualifying viva of one M.Sc. student at College of Agriculture, Vellayani, Thiruvananthapuram.
- Dr. D. Jaganathan was nominated as visiting scientist to KVK, Idukki, Kerala for providing technological and methodological support for strengthening the activities of KVK.
- Dr. D. Jaganathan was the question paper setter for the course titled 'EXT 505: Capacity Development 3(2+1)' for the final theory examination of M.Sc. (Ag.), Institute of Agriculture Research & Technology (IART), NMV University, Aruppukottai, Virudhunagar, Tamil Nadu. Scientist of the year 2024 was conferred to
- Dr. K. Sunilkumar, Principal Scientist, ICAR-CTCRI, during the International Conference on Precision Horticulture held during 22-24 August 2024, organized

by Horticulture College and Research Institute, Periyakulam TNAU in association with Indian Pomological Society.

- Shri. B. Satheesan, Technical Assistant was awarded the Best Employee Award 2024 (among Technical staff category) during 61<sup>st</sup> foundation day of ICAR-CTCRI on 09 July 2024.
- Hanume Gowda, K., Chauhan, V.B.S., Nedunchezhiyan, M., Pati, K., Arutselvan, R. and Hegde, V. received Best Research Paper Award for Scientist in recognition of the research paper titled 'Yield evaluation and identification of drought tolerant lines based on stress tolerant indices, ranking method and multivariate analysis in sweet potato (*Ipomoea batatas* Lam)' published in *Scientia Horticulturae*, 326: 112781 during ICAR-CTCRI foundation day celebration on 09 July 2024.
- Behera, S., Chauhan, V.B.S., Monalisa, K., Meher, R.K., Kar, S. K., Pati, K., Bansode, V.V., Nedunchezhiyan, M., Verma, A.K., Naik, P.K., and Naik, S. K. received Best Research Paper Award for students in recognition of the research paper titled '*In vitro* plant regeneration, genetic fidelity, biochemical analysis and anticancer activity of anthocyanin-rich purple flesh sweet potato var. Bhu Krishna' published in *South African Journal of Botany*, 166: 332-343 during ICAR-CTCRI foundation day celebration on 09 July 2024.
- Dr. R. Arutselvan received Best Scientist for Resource Mobilization (Externally Aided Project) during 61<sup>st</sup> Foundation Day of ICAR-CTCRI on 09 July 2024.

## Media Coverage

- The germplasm collection trip to Mannar, Alappuzha, Kerala by Dr. Asha, K.I. on 06 August 2024 was forecasted in 'Haritha Gadha', an online agri-based video series by Mannar Krishi Bhavan.

Sl.No.	Date	News Title	Name of news paper/ Magazine/e-paper
1	10.07. 2024	ICAR- CTCRI celebrates foundation day	The Hindu
2	10.07. 2024	Kizhanguvilakal bhakshanathinte bhagamaakum: Governor	Kerala Kaumudi
3	10.07. 2024	Kendra Kizhanguvila Gaveshana Kendram:Sthaapaka Dinam Aakhoshichu	Malayala Manorama
4	10.07. 2024	Guvernor opens CTCRI's 61 <sup>st</sup> foundation day	Times of India
5	12.07. 2024	Prathirodhasheshiyulla Maracheeniyumaayi kendra kizhanguvila gaveshanakendram	Mathrubhumi
6	27.07. 2024	Bodhavalkkarana class	Kerala Kaumudi
7	27.7.2024	KSUM to tap commercial potential of food tech	Indian Express
8	27.07.2024	Extension officers and farmers meeting on sustainable improved technologies in tuber crops	Thina Boomi
9	27.07.2024	Seminar on New Varieties of Tubers at Ambai	Tamil Murasu

10	30.07.2024	Farmers exposed to high-yielding varieties of Chinese potato, elephant foot yam, cassava	The Hindu
11	01.08.2024	Ctcriyil shilpashaala sangadippichu	Janmabhumi
12	06.08.2024	Koova karshakarude mandalathala sangamam	Malayala Manorama
13	06.08.2024	Kalamasheri kaarshikolsavam seminar	Mathrubhumi
14	07.08.2024	Byju, Director of Central Tuber Crops Research Insitute, spoke at the training held at Gobi Agricultural Science Institute	Kalai Kathir
15	09.08.2024	Maravalli new variety introduced and food festival	Thina Thendral
16	09.08.2024	Discussion for cassava farmers in Namakrippet	Thinamani
17	12.08.2024	'Punarjeevanam' shilppashaalaykku innu thudakkam	Desabhimani
18	13.08.2024	Kudumbashree launches Punarjeevanam livelihood revival scheme in agri sector	The Hindu
19	13.08.2024	'Revival' Entrepreneurship Development Training: First workshop started at Attapadi	Malayala Manorama
20	13.08.2024	Punarjeevanam padhathi samsthaanathala udghaadanam	Maadyamam
21	13.08.2024	Punarjeevanam samrambhakathwa vikasana parisheelana paripaadi thudangi	Desabhimani
22	14.08.2024	Kudumbasreeyum kendra kizhanguvila gaveshana kendravum samyukthamaayi attappadiyil sangadippicha moolyavardhitha ulpanangalude nirmaana parisheelanam.	Malayala Manorama
23	14.08.2024	Samrambhakarkkoru Prachodana Geetham	Desabhimani
24	01.09.2024	Kerakarshakarkku keralathile gaveshana sthaapanangalude maarganirdesham varumaanam tharum edavilakal	Mathrubhumi
25	03.09.2024	Training programme on improved tuber crops technologies	Mathrubhumi
26	03.09.2024	Agricultural Training and Inauguration of Scheduled Castes Sub-Plan	PIB
27	05.09.2024	Farmers trained on improved tuber crops at Sohphoh village	Syllad, Shillong
28	08.09.2024	CTCRIyude kizhanguvila padhathikku thudakkamaayi puthiya maracheeni enangal purathirakki	PIB
29	08.09.2024	Kizhangu varga vila gaveshana padhathikku thudakkamaayi	Mathrubhumi
30	08.09.2024	The scientific cultivation practices of tropical tuber crops	Mathrubhumi
31	14.09.2024	Bioagents production unit to come up in the city	Orissa Post
32	23.09.2024	Foundation stone laying ceremony of bioagents mass production unit under RKVY at ICAR-CTCRI, Bhubaneswar	Bhokila Peta Newspaper (Weekly)





## Personalia

### New appointments

Sl.No.	Name	Position held	Date of Appointment
1	Shri. V. Ashish	Assistant	06 August 2024





## ***Tuber Crops for Food, Health, Wealth and Prosperity***

**ICAR-CTCRI Newsletter : July- September 2024 (Quarterly)**  
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