



CITRUS NEWSLETTER

ISO 9001 : 2015 CERTIFIED INSTITUTE



ICAR-CENTRAL CITRUS RESEARCH INSTITUTE, NAGPUR

Vol. 27

No. 1

January to March, 2021

CONTENTS

- From the Director's Desk 1
- From the Institute 1
- Regional Research Centre for Citrus, Assam 6

From the Director's Desk

Dr. B.S. Dwivedi takes over as Acting Director of ICAR-CCRI, Nagpur

Dr. B.S. Dwivedi, took over as Acting Director of ICAR-CCRI on 30th January, 2021. During his professional career of over 34 years, Dr. Dwivedi made research contributions mainly in the areas of diagnostics, restoration and improvement of soil health under different agro-ecologies. He has published over 150 research papers in reputed journals and guided several Ph.D. and M.Sc. students in the discipline of Soil Science and Agricultural Chemistry. Dr. Dwivedi worked closely with Government of India, fertilizer industry, Agricultural Universities and International Institutions. Received Rafi Ahmed Kidwai Award, Hari Krishna Shastri Memorial Award, S.S. Ranade Lifetime Achievement Award, ISSS- Platinum Jubilee Commemoration Award, ISSS-Dr. J.S.P. Yadav Memorial Award, FAI-Golden Jubilee Award, IPNI FAI Award, and TSI-FAI Award. He is the Fellow of National Academy of Agricultural Sciences, National Academy of Biological Sciences and Indian Society of Soil Science.

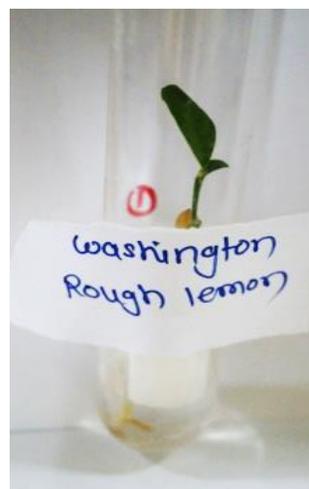
FROM THE INSTITUTE

Research Highlight

Establishment of clean certified nucleus stock of promising sweet orange cultivars

Citrus orchards in general are facing the serious problem of decline and one of the major cause attributed is prevalence of virus and virus like diseases which have a significant impact and other have major constraint in citrus production leading to shorter productivity life, lower yield and deterioration in fruit quality. The production of virus

free / disease free, certified clean nucleus stock through STG, could help in restricting the spread of graft transferable pathogen through budwood by inadvertent propagation. A study was conducted in completely randomized block design with 6 exotic and indigenous Sweet orange cultivars using 2 different rootstocks Rough lemon (*Citrus jambhiri* Lush.) and Alemow (*Citrus macrophylla*). Shoot tips from field grown Sweet orange cultivars, containing meristematic and 2-3 leaves primordial was excised and grafted on *in vitro* grown two different rootstocks in contact with the vascular ring. Grafted seedlings were transferred on liquid media and incubated at 27°C and 16 hrs photoperiod with 1000 lux illumination. Successful grafted plants were transferred from lab to land by double grafting.



STG of Washington navel Sweet orange



STG of Westin Sweet orange

Institute Activities / Events Organized

International Women's Day

Institute celebrated International Women's Day on the theme "Women Leadership in Agriculture: Entrepreneurship, Equity and Empowerment (3E's)" on 8th March, 2021. On this occasion lecture by renowned Obstetrician and Gynecologist of Nagpur, Dr. Meena Patil was organized. Dr. (Mrs.) N. Vijayakumari, Pr. Scientist (Hort.) conducted the programme

and highlighted the significant contributions of women in various fields. Dr. B. S. Dwivedi, Director, welcomed the Chief Guest and emphasized the importance of the day and contribution of women in the society. Dr. Meena Patil delivered a lecture on Women's health issues and overall health issues of mankind where she deliberated on proper nutrition, exercise and mental health which are fundamental to the well-being of the people and society. Dr. J. P. Tej Kumar, Scientist proposed vote of thanks. A total of 74 participants (54 staff and 20 students) attended the programme.



Dr. Meena Patil addressing the staff & students



A view of the participants

World Water Day - 2021

Institute celebrated World Water Day on the theme "Valuing Water" on 22nd March, 2021 in hybrid mode. Dr. D. T. Meshram, Pr. Scientist highlighted the importance of water in agriculture. Dr. B. S. Dwivedi, Director, welcomed the Chief Guest and farmers and emphasized the importance of the day and availability and role of water in agriculture. Chief Guest Dr. S. N. Das, Former Director, MRSAC, Nagpur, delivered a lecture on technologies for assessment of water resources and focused on water management related technologies, importance and role of RS and GIS in agriculture. Two progressive farmers Shri. Shyam Agrawal, Progressive Farmer from Paratwada and Shri. Dadasheb Kale, Progressive Farmer from Katol talked on importance of drip irrigation system in citrus crops and also importance of surface and subsurface drip irrigation system in citrus crops. Dr. D. T. Meshram, Pr. Scientist (L&WME) Co-ordinated the programme and also proposed vote of thanks. A total of 74 participants (24 farmers, 41 staff and 9 students) attended the programme.



Dr. S. N. Das, Ex-Director, MRSAC delivering a lecture on World Water Day

Farm Kit Distribution Programme for Farmers under Schedule Caste Sub Plan (SCSP) Scheme

Institute organized kit distribution programme at two villages under Ta. Katol, Dist. Nagpur on 24th February, 2021. Firstly at Metpanjara, in presence of Mrs. P. D. Zode, Sarpanch of Metpanjara Grampanchayat and secondly at Wadhvihira in presence of Mrs. S.N. Kharbate, Sarpanch of Wadhvihira Grampanchayat. The farm related Kit comprising of "Nagpur Santryachi Sudharit Lagwad" (CCRI Extension Bulletin), Carbendazim (500 gm), COC (500 gm), Metalaxyl (500 gm), Secateur, Magnifying Glass, Mask, Sanitizer Bottle, Notepad and Pen were distributed to more than 30 farmers in each villages. The programme was Co-ordinated by Dr. R. K. Sonkar, Pr. Scientist and Nodal Officer, SCSP.

- On the occasion of International Women's Day a training programme under TSP on Citrus Cultivation Practices at KVK, Dhar, M.P. was organized on 8th March, 2021 in which a total of 160 tribal women were benefited.
- Institute organized online Hindi Workshop on "Sarkari Karyalayan me Hindi ko protsahan" in which Dr. Renu Bali, Director, Hindi Department, Vasantnao Naik Government Institute of Arts College, Nagpur, delivered a lecture on 24th March, 2021 in which all Institute staff were participated.

Meeting organized

- Following four technologies were approved for commercialization by the ITMU and ITMC of the Institute.
 - ✓ Nagpur mandarin Ice-cream
 - ✓ Nagpur mandarin Santra Burfi
 - ✓ Nagpur mandarin Candy
 - ✓ Sweet orange Candy
- The Rajbhasha meeting was held on 9th March, 2021.

Memorandum of Understanding (MoU)

- A Contract Research Project entitled “Evaluation of scholar 230SC (Fludioxonil w/v 23% SC) for post-harvest disease management in Nagpur mandarin” signed with M/s Syngenta India Pvt. Ltd. Pune on 16th January, 2021 for a period of 2 years.



MoU with Syngenta India Pvt. Ltd., Pune

Skill development and Capacity Building

- Dr. D.T. Meshram, Pr. Scientist : “Enhanced Research Skills and Refinement of Technology by a Scientist”, by IIHR, Bengaluru, 18-20 January, 2021 (virtual).
- Dr. J. P. Tej Kumar, Scientist: “Hands on laboratory course on CRISPR-Cas Gene Editing” by SGT University, New Delhi, 23-27 March, 2021 (virtual).

Academic / Educational collaboration with other organisation

Student Name	Examine/ Co-guide from CCRI, Nagpur	Title of the thesis / dissertation	Collaborating organization/ SAUs/College	Type of collaboration /viva-voce examiner/ Research at CCRI
Mr. Vikram Dadasaheb Kapse	Dr. A.K. Srivastava, Pr. Sci.(Soil Sci.)	Effect of seaweed extract on yield, Quality, Nutrient uptake, soil properties and growth performance of chilli (<i>Capsicum annum</i> L.) in Alfisols of Konkan	College of Agriculture, Dapoli, Ratnagiri, Maharashtra	Evaluated Ph.D. thesis (21 st Jan., 2021)

Student Name	Examine /Co-guide from CCRI, Nagpur	Title of the thesis / dissertation	Collaborating organization/ SAUs/ College	Type of collaboration / viva-voce examiner/ Research at CCRI
Mr. Abhik Patra	Dr. A.K. Srivastava, Pr. Sci. (Soil Sci.)	--	Banaras Hindu University	External Examiner for oral comprehensive examination of Ph.D Scholar (3 rd Feb., 2021)
Ms. Vrunda Shrihari Thakare	Dr. G.T. Behere, Pr. Sci. (Ento.)	Exploration of resistance sources in brinjal to <i>Leucinodes orbonalis</i> Guenne	Dr. PDKV, Akola	External Examiner for Final thesis viva voce examination of Ph.D (Ento.) student online (23 rd Feb., 2021)
Ms. Ruchira Chilbule and Ms. Gunjan Mahajan	Dr. J.P. Tej Kumar, Scientist (Biotech.)	Genetic diversity analysis of Acid lime (<i>Citrus aurantifolia</i>) using SSR & InDel markers	Rajiv Gandhi Institute of Information Technology & Biotechnology, Pune	M.Sc. Dissertation Research at ICAR-CCRI, Nagpur (Feb - Jun, 2021)

Linkage with other organization

Following research projects approved with DBT Funding

- Phytochemical characterization and nutritional profiling of germplasm diversity of citrus species existing in North East Region - Dr. Dinesh Kumar (PI)
- Collection, Conservation and Morpho-Phenological Characterization of citrus germplasm of North East Region - Dr. A.A. Murkute (PI), Dr. A. Thiruganavel and Dr. J. Prasanth Tejkumar (Co-PI)
- Utilization of citrus Microbiome in Rejuvenating khasi mandarin plants affected by important citrus diseases - Dr. A.K. Srivastava (PI), Dr A.K. Das and Dr. J. P. Tej Kumar (Co-PI)

Publications

Research Papers (In peer Reviewed Journals)

- Zou, Y.N., Zhang, F., Srivastava, A.K., Wu, Q.S. and Kuća, K. (2021). Arbuscular mycorrhizal fungi regulate polyamine homeostasis in roots of trifoliate orange for improved adaptation to soil moisture deficit stress. *Frontiers in Plant Science* 11, 2046 (NAAS rating : 10.40).
- Kumar, K. K. and Arthurs, S. (2021). Recent advances in the biological control of citrus nematodes: a review. *Biological Control* 104593 (NAAS rating : 8.75).

- Shao, Y.D., Hu, X.C., Wu, Q.S., Yang, T.Y., Srivastava, A.K., Zhang, D.J., Gao, X.B. and Kuča, K. (2021). Mycorrhizas promote P acquisition of tea plants through changes in root morphology and P transporter gene expression. *South African Journal of Botany* 137, 455-462 (NAAS rating : 7.79).
- Srivastava, A.K., Wu, Q.S., Mousavi, S.M. and Hota, D. (2021). Integrated soil fertility management in fruit crops: An Overview. *International Journal of Fruit Science* 21 (1), 413-439 (NAAS rating : 7.35).
- Meng, Lu., Lu, Srivastava, A.K., Kuča K., Giri, B., Rahman, M. M. and Wu, Q.S. (2021). Interaction between earthworms and arbuscular mycorrhizal fungi in plants: A review. *Phyton-International Journal of Experimental Botany* 90 (3), 687-699 (NAAS rating : 7.03).
- Roy, A., Som, S., Bhattacharyya, S., Das, B.K., Pandit, A. and Yadav, A.K. (2021). Impact of trainings in increasing farmers income: Evidence from Bihar, India. *Journal of Environmental Biology* 42, 499-504 (NAAS rating: 6.78).
- Bhattacharyya, S., Burman, R.R., Padaria, R.N., Sharma, J.P., Paul, S. and Roy, P. (2021). Model Villages as a Pathway towards Inclusive Development. *Indian Journal of Agricultural Sciences* 91(3): 486-489 (NAAS rating: 6.21).
- Kumar, D., Ladaniya, M. S., Gurjar, M., Mendke, S. and Kumar, S. (2021). Efficacy of fungicides with edible coatings on quality of Nagpur mandarin fruits. *Indian Journal of Horticulture* 78 (3): 319-324. DOI: 10.5958/0974-0112.2021.00046.3 (NAAS rating : 6.16).
- Firake D. M. and Behere, G.T. (2021). Molecular approaches in insect pest management: relevance and reality. *Indian Journal of Entomology* 83: e201805 (NAAS rating : 5.08).
- Jeyabaskaran, K.J., Shirgure, P.S., Pandey V., Srivastava, A.K. and Uma S. (2021). Fertigation in Horticulture: A Guarantee to Economized Quality Production. *Indian Journal of Fertilisers* 17 (4), 364-383 (NAAS rating : 4.76).
- ✓ Tej Kumar, J.P., Thirugnanavel, A. and Murkute, A.A. (2021). “CRISPR as a tool for citrus crop improvement”.
- Murkute, A.A. : “Organic Farming Practices in India” during workshop on herbal garden at NCERT, New Delhi on 16th February, 2021.
- Srivastava A.K. : “Decision support for soil test based fertilizers recommendation in citrus”, International Agriculture and Horticulture Conference organised by Madridge Journal of Agriculture and Environmental Sciences on 3rd March, 2021(Virtual).
- Bhattacharyya, S., Burman, R.R., Padaria, R., Paul, S., Sharma, J.P. and Roy, P. (2021). “Comparative analysis of status of rural health and sanitation in model villages of Maharashtra and Telangana” in National Conference on Techno-Scientific Challenges and Sustainable Solutions for Living beings during Changing Environment (TCSE-2021) held during 29-30, January, 2021, organized by National Environmental Science Academy and ICAR-Indian Agricultural Statistics Research Institute, New Delhi pp-40 (Virtual).
- Kumar Dinesh : “Value Chain Management in Fruits and Vegetables for Enhancing the Availability and Consumption of Fruit and Vegetables” in Webinar on “New Paradigms in Production and Utilisation of Fruits and Vegetables for Health and Livelihood” organized by Confederation of Horticulture Association of India, New Delhi in collaboration with Tamil Nadu Agricultural University, Coimbatore and Horticulture Department, Directorate of Horticulture, Haryana on 11th February, 2021.
- Kumar Dinesh : “Role of Value Addition in Citrus on Secondary Agriculture” during National Webinar on “Novel Product Development Opportunities from Horticultural Crops during COVID Era” under NAHEP-CAAST sub project to PG students organized by Navsari Agricultural University, Gujarat on 20th February, 2021.

Oral Papers Presented in Seminar/ Symposia/ Conferences etc.

- National seminar on “Conservation and Commercialization of Citrus Biodiversity in NEH Region” organized by Central Agricultural University Imphal, Manipur during 18-19 February, 2021
 - ✓ Srivastava A.K.: “Soil Health Care of Citrus: Concept to Commerce”
 - ✓ Huchche, A.D. : ‘Climate change and Citrus’
 - ✓ Murkute, A.A., Tej Kumar, J.P. and Thirugnanavel, A.: Citrus germplasm and improvement paradigms in India.
 - ✓ Thirugnanavel, A., Tej Kumar, J.P. and Murkute, A.A. : Citrus rootstock breeding for biotic and abiotic stress tolerance in India.

Abstracts/Poster Paper presented in Proceedings/ Souvenir of Seminar/ Symposia/conferences etc.

- Meshram, D.T., Babu, D., Sharma J. and Wadane, S.S. (2021). “Efficacy of water harvesting structures and its utilization for optimum pomegranate production in micro-watershed” 2nd Asian Web-Conference at CAU, Imphal during 12-13 February, 2021.
- Tej Kumar J.P., Thirugnanavel, A. and Murkute, A.A. (2021). “Genetic diversity comparison among introduced and indigenous sweet orange cultivars using SSR and InDels” In: Souvenir cum abstract book, National Seminar on “Conservation and commercialization of citrus biodiversity in NEH region” organized by Central Agricultural University, Imphal, Manipur during 18-19th February, 2021.

Extension Bulletins and Folder

- Ladaniya, M.S., Sonkar, R.K., Das, A.K., Murkute, A.A., Behere, G.T., Thirugnanavel, A., George, A. and Kommu, K.K. (2021). Management of Khasi Mandarin in Assam and other North-Eastern States - Extension Bulletin No. 66, pp-29. Published by ICAR-CCRI, Nagpur.
- Ladaniya, M.S., Huchche, A.D., Das, A.K., Marathe, R.A., Behere G.T., Rao C.N. and George, A. (2021). High density cultivation of Nagpur mandarin. Extension Bulletin No: 67, pp-32. Published by ICAR-CCRI, Nagpur.
- Ladaniya, M.S., Sonkar, R.K., Das, A.K., Murkute, A.A., Behere, G.T., Thirugnanavel, A., George A. and Kommu, K.K. (2021) : Management Practices of Assam Lemon – Extension Folder No. 29. Published by ICAR-CCRI, Nagpur.

Book Chapters

- Jagannadham, P. T. K., Siddanna Savadi, and Senthil kumar, K. M. (2021). “Plant Genome Editing in Basic Research to Understand Molecular Functions” in *Genome Editing in Plants*, CRC Press, pp. 187-202.
- Kumar, K. K., Sridhar, J., Choudhary, V.K., Singh, H.K., Parameshwari, B., Senthil Kumar, K.M., Sahu, B., Narasimham, D. and Sivalingam, P.N. (2021). New innovations and approaches for biotic stress management of crops. In: Ghosh, P.K., Kumar, P., Chakraborty, D., Mandal, D., Sivalingam, P.N. (Eds.), *Innovations in agriculture for a self-reliant India*. NIPA publishers, New Delhi, India, pp. 265-291.
- Kumar, J., Sivalingam, P.N., Mallikarjuna, J., Jain, S.K., Sridhar, J., Kumar, K.K., Anand, S. and Ghosh, P.K. (2021). *Innovations in Agriculture: An Overview*. In: Ghosh, P.K., Kumar, P., Chakraborty, D., Mandal, D., Sivalingam, P.N. (Eds.), *Innovations in agriculture for a self-reliant India*. NIPA publishers, New Delhi pp. 15-31.

Popular Articles

- Bhagat Arun and Meshram, D.T. (2021). “*Dalimb bagansathi panyache vevasthapan*”, *Agrowon* 18th January, 2021.
- Shirgure, P.S., Meshram, D.T. and Vadane Saurabh (2021). “*Dalimbachya baget aachadnacha vapar*”, *Agrowon* 22nd March, 2021.
- Jagannadham, P. T. K., Thirugnanavel, A., George Anjitha, and Kumar, K.K. (2021). Citrus Genomes: Enigma Code Breaker. *Agro Science Today*, 2(3): 101-103.
- Thirugnanavel, A., Jagannadham, P. T. K., George A. and Kumar, K.K., (2021). A snapshot of citrus in India. *Agro Science Today*, 2(2): 77-80.

Participation of Scientist in workshop/ Conference / meeting etc.

- Dr. A.D. Huchche, Pr. Scientist (Hort.) :
 - ✓ Annual Review Meeting of CHAMAN and FASAL Project on 15th January, 2021 (Virtual).
 - ✓ National level Technical Committee meeting for standardization of term sheet weather triggers etc under RWBCIS, MAFW, GoI on 22nd February, 2021.
- Dr. A.K. Das, Pr. Scientist (Plant Pathology):
 - ✓ Annual Review Meeting of the CGIAR Centres on 3rd February, 2021 (Virtual).
 - ✓ Mid-term Review meeting of ICAR Regional Committee No. VII on 25th March, 2021 (Virtual).
- Dr. Dinesh Kumar, Pr. Scientist (Hort.) :
 - ✓ II meeting of National Steering Committee under NetSCoFAN (Network of Scientific Co-operation for Food Safety and Applied Nutrition) organized by Food Safety and Standards Authority of India, New Delhi on 20th January, 2021.
 - ✓ XXII meeting of Scientific Panel on Fruits & Vegetables and their Products (Including dried fruits and nuts), FSSAI, New Delhi on 3rd February, 2021 (Virtual).
 - ✓ Meeting for “Mandarin juice processing and pulp production” in Warud, Amravati on 25th March, 2021 (Virtual).
- Dr. G.T. Behere, Pr. Scientist (Ento.) :
 - “National webinar on ESI Young Entomologist Award Lectures 2020” organized by The Entomological Society of India on 9th January, 2021 (Virtual).
 - International webinar on “Insect Systematic: Importance, Challenges and Way Forward” organized by ICAR-National Bureau of Agricultural Insect Resources (NBAIR), Bengaluru on 29th January, 2021 (Virtual).
- Sh. Venkatraman Bansode, Scientist (Food Tech.): International Workshop on “Root Architecture Imaging and Analysis for Tropical Tuber Crops” organized by ICAR-CTCRI, Trivandrum in collaboration with Sweet Potato Research Station, Louisiana Research Station, Louisiana State University Agcentre, LSU, USA during 20-22 January, 2021 (Virtual).
- Dr. A.A. Murkute, Pr. Scientist (Hort.) : Workshop on herbal gardens during 15-17 February, 2021 at NCERT, New Delhi.
- Dr. A.K. Srivastava, Pr. Scientist (Soil Science), Dr. A.D. Huchche Pr. Scientist (Hort.), Dr. A.A. Murkute, Pr. Scientist (Hort.); Dr. A. Thirugnanavel, Scientist ‘SS’ and Dr. J. P. Tej Kumar, Scientist (Biotech.) : National

Seminar on “Conservation and commercialization of citrus biodiversity in NEH region” at Central Agricultural University, Imphal during 18-19th February, 2021.

AICRP (Fruits) : Citrus research

Institute scientists involved in AICRP activities participated in the 8th Group Discussion on All India Coordinated Research Project (Fruits), during 3-6 March, 2021 (Virtual).

Lectures delivered in training at other Institute/ Organization

- Dr. A.D. Hucheche, Pr. Scientist (Hort.) : ‘Citrus Production Technology’ in the farmers’ training programme at Rajgarh, MP on 16th January, 2021 organized by Madhya Pradesh Agriculture Department.
- Dr. A. Thirugnanavel, Scientist ‘SS’ (Hort.) : “How does ICAR-CCRI help and guide farmers”. Organized by Agriculture Information, Bengaluru on 16th February, 2021 (Virtual).
- Dr. G.T. Behere, Pr. Scientist (Ento.) : Identification and Management of Major Insect Pests of Citrus on 24th February, 2021 in Five Days Orientation Training Programme organized by Regional Central Integrated Pest Management Centre, Nagpur.
- Ms. Sangeeta Bhattacharyya, Scientist Resource person for Preparation of Agricultural Extension Subject in Social Science Group of ICAR-JRF Examination to the students of college of Horticulture & Forestry, CAU, Pasighat in the programme of “JRF Coaching for JRF Aspirants” under IDP-NAHEP on 26th March, 2021 (Virtual).

Other Extension Activities

Exhibition

- “National Horticulture Fair-2021” at ICAR-IIHR, Bengaluru during 8-12th February, 2021 wherein Institute disseminated its technologies to more than 90 visiting farmers / stakeholders / students etc.



Farmer’s visit to CCRI

State	District	No. of Famers and Date
Madhya Pradesh	Khargon	5 8 th Jan., 2021
	Harda	8 14 th Jan., 2021
	Chhindwara	13 15 th Feb., 2021
Maharashtra	Mugala, Washim	4 25 th Jan., 2021
	Gadchiroli	52 (SHG female farmers) 2 nd Feb., 2021
	Hoshangabad	13 17 th Feb., 2021

Trainees / Officers visit

- Project Director and Nodal Officer, HPSHIVA, Directorate of Horticulture, Himachal Pradesh (4th January, 2021).
- Seven Agri./Horti. Officers from Collector Office (Hort.), Chhindwara, M.P., under Aatmanirbhar, Madhya Pradesh (15th January, 2021).

Advisories issued

- Advisories issued on 24th March, 2021 in Marathi language on
 - ✓ Management of Fungal disease-*Phytophthora* Gummosis, Foot rot, Root rot, Brown rot.
 - ✓ Management of Blackfly and Whitefly.

Regional Research Centre for Citrus (RRCC), Biswanath Chariali, Assam

- Training programme on “Production Technology of Citrus” organized at RRCC, Biswanath Chariali, Assam on 10th January, 2021 under NEH Plan in which around 100 farmers from Biswanath, Sonitpur, Tezpur, Lakhimpur, Dhemaji and Tinsukia districts alongwith KVK officials attended. Dr. B.K. Pandey, ADG, Hort. (I), ICAR was the Chief Guest. Shri. Pranav Kumar Sharma, District Commissioner, Biswanath, Dr R.N. Barman, Associate Dean and Dr. A.C. Barbora, Ex Head, Citrus Research Centre, Tinsukia, Assam were the guests of honour. Dr. M. S. Ladaniya, Director, presided over the function. Dr. A.K. Singh, DDG (Hort), ICAR inaugurated the programme and addressed the farmers virtually from New Delhi. Experts and CCRI Scientists viz. Dr. R.K. Sonkar, Pr. Scientist (Hort.); Dr. A.A. Murkute, Pr. Scientist (Hort.); Dr. G.T. Behere, Pr. Scientist (Ento.); Dr. Thirugnanavel, Scientist ‘SS’ (Hort.) and Dr. Kiran Kumar Kommu, Scientist (Nematology) delivered lectures with presentation other issues during training included.
 - ✓ A documentary on “Progress of Regional Research Centre for Citrus, Biswanath Chariali” was released.

- ✓ Publications (1) Management of Khasi Mandarin in Assam and other North-Eastern States (2) High density cultivation of Nagpur mandarin (3) Management Practices of Assam Lemon were released.



Dignitaries releasing the Publications

- ✓ Two progressive citrus growers namely Sh. Bhaben Saikia, Narayanpur (Lakhimpur) and Sh. Jyoti Das, Maralgaon, Dist. Biswanath, were felicitated on the occasion.
- ✓ Citrus Expert Dr. A.C. Barbora, Head- Citrus Res. Station, Tinsukia has been felicitated for his long service to citrus industry.
- ICAR-CCRI and RRCC organized a training programme under NEH plan on “Production technology of citrus” in collaboration with HRS, Kahikuchi and KVK, Kamrup, Assam on 12th January, 2021. Member of Parliament from Guwahati Mrs. Queen Oja joined virtually and guided the farmers. The training programme was conducted at KVK, Kamrup which was attended by 25 citrus growers. Later during technical sessions, Dr. M. S. Ladaniya, Director Dr. R. K. Sonkar, Pr. Scientist (Hort.); Dr. A. A. Murkute, Pr. Scientist (Hort.); Dr. G. T. Behere, Pr. Scientist (Ento.); Dr. A. Thirugnanavel, Scientist ‘SS’ (Hort.) and Dr. Kiran Kumar Kommu, Scientist (Nematology) from ICAR-CCRI, Nagpur delivered technical presentations on "Overview of Citrus cultivation and its management practices".



Dignitaries during the training programme

Infrastructure

- New Building of Farm Office and Tractor Shed at RRCC was inaugurated by Dr. A.K. Singh, DDG, Hort. Science ICAR and Dr. B.K. Pandey, ADG, Hort. Science (I), ICAR on 10th January, 2021.



Dignitaries during the inauguration of Farm House

Good Governance / Swachh Bharat Mission

- Cleanliness was observed at the office, farm and residential campus.

Survey

- Dr. A. K. Srivastava, Pr. Scientist (Soil Science) and Dr. A.K. Das, Pr. Scientist (Plant Path.) visited Zilpa village, Katol tehsil, Nagpur district in response to the report/ problem of severe decline and incidence of fungal infection in the Nagpur mandarin grower orchard of Mr. Dadasaheb Kale on 8th January, 2021.

Celebration

- Republic day on 26th January, 2021 and Martyrs day on 30th January, 2021.

Distribution of disease-free planting material under CCRI

- ✓ A total of 8,476 disease free planting material of citrus rootstocks, fruits and seed distributed and revenue of Rs. 6,95,077/- generated under Revolving Fund Project.

Awards Honours and Recognition

- Dr. A.K. Srivastava, Pr. Scientist (Soil Science) :
 - ✓ Member, Organizing Committee, International Agriculture and Horticulture Conference organized by Madridge Journal of Agriculture and Environmental Sciences at Madridge, USA on 3rd March, 2021(Virtual).
 - ✓ Chairman of the session under theme: Production and Rejuvenation technology in the National seminar on “Conservation and Commercialization of Citrus Biodiversity in NEH Region” Organized by Central Agricultural University Imphal, Manipur during 18-19 February, 2021.

- ✓ Guest editor of Special Issue (PLANTS by MDPI) on “Factor-specific Nutrient Modeling and Management of Agricultural and Forest Crops”. MDPI Academic Open Access Publishing, Basel, Switzerland (NAAS: 8.76).
- ✓ Guest Editor of Special Issue: Mycorrhizal fungi and sustainable Development of Agriculture. Qiang-sheng, Wu; Yue-Jun, He; Srivastava, A.K.; Ortas, I and Bo Shu (2021). Phyton-International Journal of Botany Vol.90
- ✓ Associate-Editor-in-Chief in International Journal of Agricultural and Applied Sciences. Agricultural & Environmental Technology Development Society, Uttarakhand, India.
- ✓ Member, Re-constitution of Technical Advisory Committee at Central Institute of Horticulture, Nagaland, 18-19 February, 2021.
- Dr. A. A. Murkute, Pr. Scientist (Hort.) : Technical guidance for implementation of ADB funded Himachal Pradesh Sub-tropical Horticulture, Irrigation and Value Addition (HPSHIVA) Project w.e.f. January, 2021 for 3 years.
- Dr. A. K. Das, Pr. Scientist (Plant Patho.) and Dr G. T. Behere, Pr. Scientist (Ento.) nominated as an Experts for National Network of Plant Health Management of National Institute of Plant Health Management, GOI, Hyderabad, Telangana, India on dated 16th February, 2021.
- Tej Kumar, J.P, Thirugnanavel, A. and Murkute, A.A. (2021). Best poster award for “Genetic diversity comparison among introduced and indigenous sweet orange cultivars using SSR and InDels” at National Seminar on “Conservation and commercialization of citrus biodiversity in NEH region” at Central Agricultural University, Imphal during 18-19th February, 2021.
- Dr. A. Thirugnanavel, Scientist ‘SS’ (Hort.) : Co-Chairman for Exhibition Stall evaluation in the National Seminar on “Conservation and Commercialization of Citrus Biodiversity in NEH Region” organized by Central Agricultural University, Imphal in collaboration with ICAR-CCRI, Nagpur, Maharashtra from 18th to 19th February, 2021.
- Dr. G.T. Behere, Pr. Scientist (Ento.) : Convenor of National Symposium on “Probing Beneficial Microorganism for Next generation Green Revolution” jointly organized by Association of Plant Pathologists, Dr PDKV, Akola and Indian Phytopathological Society (West Zone), New Delhi during 25-26th February, 2021 (Virtual).

Personnel

Appointment/Joining

Permanent Staff

- Sh. Venkatraman Vishwanath Bansode, Scientist (Food Technology) joined on 27th January, 2021 on transfer from ICAR- Central Tuber Crops Research Institute, Thiruvananthapuram, Kerala

Contractual Staff

- Sh. Shailesh M. Zalke, Young Professional - II w.e.f. 3rd March, 2021.

Edited by : Dr. A. K. Das, Pr. Scientist (Pl.Patho.), Dr. Dinesh Kumar, Pr. Scientist (Hort.), Dr. A. A. Murkute, Pr. Scientist (Hort.), Dr. G.T. Behere, Pr. Scientist (Ento.), Dr. Kiran Kumar Kommu, Scientist (Nematology) and Dr. Dilip Ghosh, Director

Compiled by : Miss Lily Varghese, Chief Technical Officer

E-published by : Dr. Dilip Ghosh, Director, ICAR-Central Citrus Research Institute, Nagpur, Maharashtra
Citrus Newsletter is an official document of the Central Citrus Research Institute,
Amravati Road, Nagpur – 440033 (Maharashtra)

Phone No. : 0712-2500249, 2500615, 2500813 **FAX :** 0712-2500813

Website : <https://ccri.icar.gov.in> **E-mail :** director.ccri@icar.gov.in