



# CITRUS NEWSLETTER



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## ICAR- CENTRAL CITRUS RESEARCH INSTITUTE, NAGPUR

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*From the Director’s Desk.....*

*Dear Readers,*

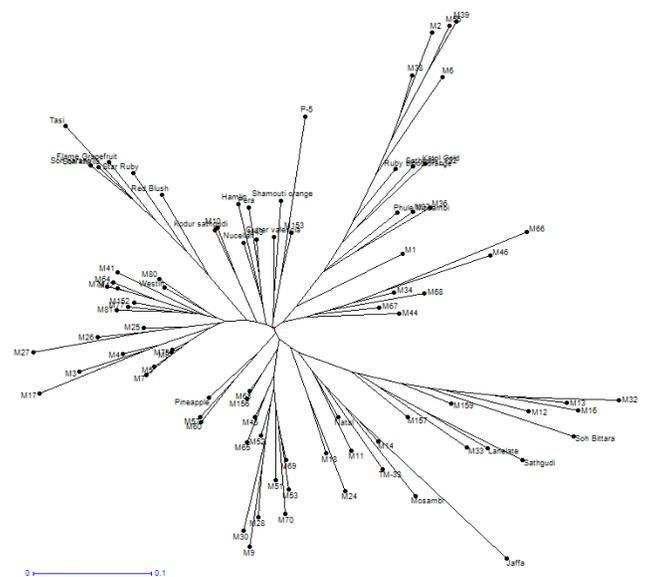
The institute has completed 35 glorious years of service to the citrus Industry of the Country and in this current pandemic situation, consumption of citrus fruits are the best option for increasing a person’s immunity. Citrus fruits are rich source of Vitamin C which is a powerful antioxidant and helps in boosting the immune system. During the reporting period Institute has signed MoU with M/s. Karunamaya Agrotech, Nagpur (as incubatee under ‘ABI’ Project) for “Production of disease-free planting material in Citrus”. Institute also conducted field visits to address the problem of fruit drop. The advisories on management of brown rot disease, lemon butterfly, snail and slugs, fruitfly, citrus leaf miner and bark eating caterpillar were issued through press release, WhatsApp groups, social media, institute website. The technology on raised bed planting system with drip and fertigation system was demonstrated and transferred to the farmers.

### FROM THE INSTITUTE

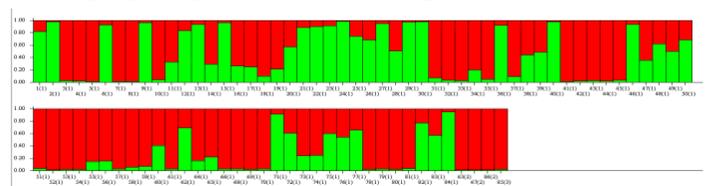
#### Research Highlight

Molecular characterization of 84 Sweet orange accessions was done using molecular markers. A total of 15 SSR and 14 InDel markers were taken based on the previous studies conducted in the lab. The markers selected for these characterizations were previously identified using 23 citrus accessions. The size of the DNA fragments was estimated by

using 100bp DNA ladder along with the PCR products. After screening all the 29 markers, data was analyzed based on the presence and absence of the bands. The same data was used to construct the dendrogram using Darwin software v.6.0 (Fig.1). Population structure analysis was done using the Structure Version 2.3.4. Multiple runs of Structure were performed by setting K (the number of populations) from 1 to 5. The burn-in time and replication number was set to 500,000 for each run and each run was replicated five times. Structure analysis identified two populations in our Sweet orange germplasm (Fig.2).



**Fig. 1 : Dendrogram constructed based on the scoring of polymorphic markers using DARWIN software**



**Fig. 2 : Assignment of 84 accessions of sweet orange to two populations by Structure**

### Institute Activities / Events Organized

**ICAR - CCRI celebrated 36<sup>th</sup> Foundation Day :** ICAR - Central Citrus Research Institute completed a glorious 35 years of service to the citrus industry of the country on 28<sup>th</sup> July, 2020 and celebrated its 36<sup>th</sup> Foundation Day. A tree plantation drive was conducted on 27<sup>th</sup> July, 2020 in the campus where all staff took part in plantation of trees like custard apple, aonla, neem, kadamb etc.

On 28<sup>th</sup> July, 2020 the Foundation Day programme was held by strictly following all precautions of COVID-19. The programme was conducted in video conference mode where dignitaries and participants joined the program virtually from all over India. Dr. C.D Mayee (Ex-Chairman, ASRB, New Delhi) graced the occasion as Chief Guest. Director congratulated the staff and all farmers connected virtually for successful completion of 35 years of the institute. It was followed by the virtual inaugural address of Dr. A.K. Singh, DDG, Horti. Sci., ICAR which was conveyed to the gathering through Dr. Vikramaditya Pandey. He applauded the institute's research activities and also highlighted how citrus has now become an essential food in the wake of the pandemic for its inherent immunity boosting capabilities.

CCRI Annual Report-2019 and an Extension Bulletin "Nagpuri santra ke kide makode aur unka prabandhan" in Hindi were released on the occasion. The prize distribution ceremony followed where 12 staff namely; Dr. Kiran Kumar Kommu, Scientist (Nematology), Ms. Lily Varghese, CTO, Sh. V.N. Dhengre, ACTO, Sh. V.P. Bhaladhare, TO, Sh. A.B. Gadge, TO, Sh. B.G. Awari, TO, Sh. S.W. Ambekar, AAO, Sh. P.M. Khobragade, Jr. Clerk, Sh. Namdeo Thakare, SSS, Sh. Sunil Kharche, SSS, Sh. Vinayak Khuspure, TSL and Sh. Dinkar Asatkar, TSL were honoured for their significant contribution towards the development of the institute. The institute also honoured five progressive citrus growers for contributing significantly to citrus industry of Central India through their scientific farming techniques, innovations and dissemination of knowledge to fellow farmers. Sh. Amol Tote (Hiwarkhed, Amravati), Sh. Sagar Chikte (Dawargaon, Warud, Amravati), Sh. Keshav Bhakte (Hetikundi, Wardha), Sh. Raju Vaidya (Mohgaon, Saunsar, Chhindwara) and Sh. Dadasaheb Keshawrao Kale (Katol, Nagpur) were recipients of the felicitation that included shawl, *shreephal*, certificate of honour and a cash prize.

While addressing the participants Chief Guest, Dr. C.D Mayee appreciated the institute for its concerted efforts in research and also in development of disease free planting materials which has proved as a milestone in the history of CCRI's achievements. Dr. K.B Patil (President, Jain Irrigation Systems, Jalgaon) emphasized on the need for research on citrus varieties for juice processing and how it can boost the nutritional security of Indian population. Mr. Amol Tote, Executive Secretary of Orange Growers Associations of India and the awardee farmer highlighted

how CCRI technologies had brought a revolution to citrus industry by boosting farmers' production multiple times. Dr. Prashant Tej Kumar, Scientist (Biotechnology) proposed vote of thanks and Ms. Sangeeta Bhattacharyya, Scientist, (Agri. Extension) was the moderator.



**CCRI staff honoured along with Chief Guest Dr. C.D. Mayee and Dr. M.S. Ladaniya, Director**

### Hindi Saptah

Hindi Saptah was celebrated during 14-21<sup>st</sup> September, 2020 during which various Hindi competitions like translations, word knowledge and essay competition were organized in which the staff participated enthusiastically and received awards. All competitions were conducted by committee under the guidance of Dr. Dinesh Kumar, Pr. Scientist and In-charge Rajbhasha. The Hindi saptaha closing ceremony was celebrated on 21<sup>st</sup> September, 2020. Dr. Veena Dadhe, Prof. Hindi Department, Nagpur University, was the Chief Guest. She talked about the development of Hindi bhasha and emphasized on the need of Hindi in the office. Programme was conducted by Dr. Dinesh Kumar, Pr. Sci. and Incharge Rajbhasha. Dr. Ashok Kumar, ACTO proposed vote of thanks.



**Dr. Veena Dadhe, Prof. addressing the staff**

### Training Programmes

- ICAR-CCRI organized training on e-Office Implementation for Scientists, technical and Administrative staff on 2<sup>nd</sup>, 4<sup>th</sup> and 6<sup>th</sup> July, 2020.

- National Webinar on “Management of *Ambia* and *Mrig* crops of Nagpur mandarin” for the citrus growers of Maharashtra, Madhya Pradesh and Rajasthan through Webex was organized on 31<sup>st</sup> August, 2020 which was attended by 100 farmers. The speakers were Dr. M.S. Ladaniya, Director, Dr. A. K. Srivastava, Pr. Scientist, Dr. A. D. Huchche, Pr. Scientist, Dr. A. K. Das, Pr. Scientist and Dr. G.T. Behere, Pr. Scientist. Dr. Prasanth Tej Kumar, J., Scientist coordinated and compared the programme while Ms. Sangeeta Bhattacharyya, Scientist proposed vote of thanks.

### Tribal Sub-Plan (TSP)

- Under TSP, 3000 acid lime seedlings were distributed among tribal farmers of KVK, Nandurbar; KVK, Dhar, KVK, Gadchiroli, KVK under IGKV, Raipur and all farmers were sensitized on production of disease-free planting material.

### Memorandum of Understanding (MoU)

Signed MoU between ICAR-CCRI, Nagpur and M/s Karunamaya Agrotech, Nagpur. (As incubate under ‘ABI’ Project) for High Tech Nursery Management for production of Disease-free planting material in Citrus” on 15<sup>th</sup> September, 2020.



**Signing agreement between ICAR-CCRI, Nagpur with M/s Karunamaya Agrotech, Nagpur**

### Skill development and Capacity Building of Institute Staff :

- Dr. Dinesh Kumar, Pr. Scientist (Hort.) : “Orientation workshop and training programme for ABI units” (virtual) during 17-19 August, 2020 organized by ICAR-NAARM, Hyderabad.
- Ms. Sangeeta Bhattacharyya, Scientist (Extension): “Research Methodology for Social Sciences” (virtual).
- organized by National Agricultural Higher Education Project-CAAST Agricultural Market Intelligence, AAU, Anand, Gujarat from 01<sup>st</sup> to 11<sup>th</sup> September, 2020.
- Dr. Dinesh Kumar, Pr. Scientist (Hort.) : Workshop cum Training on “Intellectual Property Rights in Agricultural Research & Education in India” (virtual) during 12-28 September, 2020 organized by NAHEP and IP&TM Unit, ICAR, New Delhi.

### Publications

#### Research Papers (In Peer Reviewed Journals)

- Kumar, P., Dalal, V., Kokane, A., Ghosh, D.K. and Kumar, A.S. (2020). Mutation studies and structure-based identification of potential inhibitor molecules against periplasmic amino acid binding protein of *Candidatus Liberibacter asiaticus* (CLasTcyA). *International Journal of Biological Macromolecules*, 147, 1228-1238. (NAAS rating : 11.16)
- Kokane, A., Kokane, Sunil, and Ghosh D. K. (2020). A rapid and sensitive reverse transcription-loop-mediated isothermal amplification (RT-LAMP) assay for the detection of Indian citrus ringspot virus. *Plant Disease*.doi:10.1094/pdis-06-20-1349-re. (NAAS rating : 9.81)
- Prabhukarthikeyan, S.R., Parameswaran, C., Keerthana, U., Teli, B., Jagannadham, P.T., Cayalvizhi, B., Panneerselvam, P., Senapati, A., Nagendran, K., Kumari, S. and Yadav, M.K., (2020). Understanding the Plant-microbe Interactions in CRISPR/Cas9 Era: Indeed a Sprinting Start in Marathon. *Current Genomics*, 21(6), 429-443 (NAAS rating : 8.17)
- Ladaniya, M.S., Marathe, R.A., Das, A.K., Rao, C.N., Huchche, A.D., Shirgure, P.S. and Murkute, A.A. (2020) High density planting studies in acid lime (*Citrus aurantifolia* Swingle). *Scientia Horticulturae*, 261: 108935. <https://doi.org/10.1016/j.scienta.2019.108935> (NAAS rating : 7.96)
- Kokane, S.B., Bhose, S., Kokane, A., Gubyad, M. and Ghosh, D.K. (2020). Molecular detection, identification, and sequence analysis of ‘*Candidatus Liberibacter asiaticus*’ associated with Huanglongbing disease of citrus in North India. *Biotech*, 10(8), 1-14. (NAAS rating : 7.8)
- Wu Q.S., Gao W.Q., Srivastava A.K., Zhang F. and Zou Y.N. (2020). Nutrient acquisition and fruit quality of Ponkan mandarin in response to AMF inoculation. *Indian Journal of Agricultural Sciences*. 90(8) : 1563-1567 (NAAS rating: 6.21)
- Burange P.S., Behere G.T. and Firake D.M. (2020). Cerambycidae from selected sites of North India. *Indian Journal of Entomology*, 82(3): 435-438. (NAAS 2020 rating : 5.89).
- Bardhan, T., Satyapriya, Singh, P., Sangeetha, V., Paul, S., Bhowmick, A., Venkatesh, P. and Bhattacharyya, S. (2020). A study on perception of urban consumers

regarding organic foods in Eastern India. *Indian Journal of Extension Education*, 56(2):13-17. (NAAS rating: 5.95)

- Som, S., Roy, A., Bhattacharya, S., Das, B.K., Pandit, A., Saha, A. and Das, A.K. (2020). Impact of ToT programmes on knowledge, attitude and skill level of trainees. *Journal of Community Mobilization and Sustainable Development*, 15(3): 668-674. (NAAS rating: 5.67)
- Murkute, A.A. (2020). *In-vitro* scape and bulb formation in garlic (*Allium sativum*). *Current Horticulture* 8(2): 44-46. (NAAS rating : 3.71)
- Kumar, D., Ladaniya, M.S., Gurjar, M., Mendke S. and Kumar, S. (2020). Hesperidin a major flavonoid with high antioxidant potential and nutraceutical source in dropped fruits of sweet orange (*C. sinensis* (L.) Osbeck). *International Journal of Innovative Horticulture*, 9 (1): 39-45. DOI: 10.5958/2582-2527.2020.00005.6 (NAAS rating : 2.21)

#### Papers Presented (Oral) in Seminar / Symposia / Conferences etc.

- Behere G.T., (2020) : Lead Talk on “*Insect pests management in organic agriculture: opportunities and challenges*” in the National Webinar on “Sustaining Organic Farming During and Post COVID-19” organized by Multi-Technology Testing Centre & Vocational Training Centre, College of Agricultural Engineering & Post-Harvest Technology, Central Agricultural University (Imphal), Ranipool, Sikkim, India, during 3-5 August, 2020.

#### Extension Bulletins/Folders

- George Anjitha and Rao C.N. (2020). *Nagpuri santrae ke kide makhode aur unka prabandan*. Revised Extension Bulletin No.32, 26 p.

#### Books / Book chapters

- Sridhar J., Kumar, K.K., Baskaran Murali, Senthil-Nathan R.K., Sharma S., Nagesh S., Kaushal M., P. and Kumar, J. (2020) Impact of climate change on communities, Response and migration of insects, nematodes, vectors and natural enemies in diverse ecosystems. In: Venkatramanan V., Shah S., Prasad R. (eds) *Global Climate Change : Resilient and Smart Agriculture*. Springer, Singapore. pp. 69-93. [https://doi.org/10.1007/978-981-32-9856-9\\_4](https://doi.org/10.1007/978-981-32-9856-9_4)
- Kumar K.K. (2020) Fungi: A Bio-resource for the Control of Plant Parasitic Nematodes. In: Yadav, A., Mishra, S., Kour, D., Yadav, N. and Kumar, A. (eds) *Agriculturally important fungi for sustainable agriculture*. Fungal Biology. Springer, Cham. [https://doi.org/10.1007/978-3-030-48474\\_3\\_10](https://doi.org/10.1007/978-3-030-48474_3_10)

#### Popular Articles

- George Anjitha and Dhengre V.N. (2020). *Santra bagaom mein keed nashakaom ke chhidkav, parivahan evam bhandaran ke dhoran barti jane wali saavdhaniyam*. *Rashtriya Krishi* 15(2):71-73.
- Bhattacharyya, S., Sonkar, R.K. and Pakhmode, P. (2020). *Santrachya Shetine Shetkaryanchya Utpannat Jhali vaadh: Vacha Amravatitil Yashogatha*. Online issue of *Krishi Jagran*, September, 2020.

#### Participation of Scientist in workshop / meeting etc.

- Dr. M.S. Ladaniya, Director
  - Agrovision advisory council meeting at MAFSU, University, Nagpur on 23<sup>rd</sup> July, 2020.
  - Meeting on review of research achievements for last five years with DDG (HS) on 23<sup>rd</sup> September, 2020.
- Dr. M.S. Ladaniya, Director and Scientists
  - 92<sup>nd</sup> Foundation Day and award ceremony of the ICAR on 16<sup>th</sup> July, 2020.
  - Launching of Integration of “Seed Portal” of ICAR- Indian Institute of Horticultural Research, Bengaluru with Yono Agriculture of State Bank of India on 26<sup>th</sup> August, 2020
- Dr. A.K. Srivastava, Pr. Scientist (Soil Science)
  - Webinar on “Innovations in horticulture for employment and prosperity” organised by Progressive Horticulture Journal through Facebook Live as Horticulture conclave, by Indian Society of Horticultural Research and Development, Uttarakhand on 3<sup>rd</sup> July, 2020.
  - “Temperate fruits challenges and opportunities” by Progressive Horticulture Journal through Facebook Live as Horticulture conclave, organised by Indian Society of Horticultural Research and Development, Uttarakhand on 8<sup>th</sup> July, 2020.
  - “Vegetable grafting” by Progressive Horticulture Journal through Facebook Live as Horticulture conclave, organised by Indian Society of Horticultural Research and Development, Uttarakhand on 15<sup>th</sup> July, 2020.
  - “Organic Banana production and certification the status and way forward” organised by ICAR- National Research Centre for Banana, Trichy, Tamil Nadu on 18<sup>th</sup> July, 2020.
  - “Precision farming in Banana” organised by ICAR- National Research Centre for Banana, Trichy, Tamil Nadu on 25<sup>th</sup> July, 2020.
  - Webinar on “Bio-enhancers for organic production” organised by Progressive Horticulture Journal through Facebook Live organised by Indian Society of Horticultural Research and Development, Uttarakhand on 26<sup>th</sup> July, 2020.
  - Webinar on “Integrated Disease management in Banana” organised by ICAR- National Research Centre for Banana, Trichy, Tamil Nadu on 29<sup>th</sup> July, 2020.

- Webinar on water soluble fertilizers in India-status and way forward, organised by FAI, New Delhi on 23<sup>rd</sup> September, 2020.
- Dr. G.T. Behere, Pr. Scientist (Ento.)
  - “National webinar on Biodiversity and Biological Diversity Act, 2002” jointly organized by National Biodiversity Authority (NBA) and UNDP India on 22<sup>nd</sup> July, 2020
  - “National Stakeholders Dialogue on Current challenges and way forward for pesticides management”, jointly organized by TAAS, New Delhi, Indian Society of Phytopathology, New Delhi, and Entomological Society of India on 24<sup>th</sup> July, 2020
- Dr. Kiran Kumar Kommu, Scientist (Nematology)
  - National webinar on “Boosting immunity through Horticulture” by Society for Horticulture Research and Development (SHRD), Ghaziabad, UP, India from 1-9 September, 2020.
  - Webinar on “Sustainable food production: Myths and Realities” by NMIMS on 26<sup>th</sup> September, 2020.
- Dr. Dinesh Kumar, Pr. Scientist (Hort.) : 20<sup>th</sup> Virtual meeting of Scientific Panel by FSSAI on 11<sup>th</sup> July, 2020.
- Dr. A.A. Murkute, Pr. Scientist (Hort.) : Management Board Meeting at RVSKVV, Gwalior on 22<sup>nd</sup> August, 2020
- Dr. Anjitha George, Scientist ‘SS’ (Ento.) : AGRICOLA CROP DATA for connecting farmers organized by DMCC on 26<sup>th</sup> August, 2020.
- Dr. M.S. Ladaniya, Director and Dr. A.K. Das, Pr. Scientist (Plant Pathology) : Inauguration of the College and Administration Building of Rani Lakshmi Bai Central Agricultural University, Jhansi, UP by The Prime Minister, Shri Narendra Modi-ji conducted by PIB, Delhi/ICAR-Directorate of Agricultural Knowledge Management on 29<sup>th</sup> August, 2020.
- Dr. M.S. Ladaniya, Director and Dr. A.K. Srivastava, Pr. Scientist (Soil Science) : 7<sup>th</sup> Dr. B.P. Ghildyal, Soil Physicist memorial lecture through a virtual platform organized by Society of Agrophysics and hosted by the Division of Agricultural Physics, ICAR-IARI, New Delhi on 10<sup>th</sup> September, 2020.
- Dr. A.D. Huchche : Management of *Ambia* Bahar in RAMETI on 4<sup>th</sup> July, 2020.
- Dr. Anjitha George : “Integrated Insect Pests and Nematodes Management in Banana” organized by NRC for Banana, Trichy on 4<sup>th</sup> July, 2020.
- Dr. Anjitha George : “Monitoring of insects pests and their management for HORTSAP Scouts', supervisors' and master trainers through online mode on 9<sup>th</sup> July, 2020
- Online training on citrus for farmers at RAMETI, Amravati.
  - ✓ Dr. A.D. Huchche: Management of *Ambia* bahar on 16<sup>th</sup> July, 2020 and 4<sup>th</sup> August, 2020
  - ✓ Dr. G.T. Behere: “Integrated Management of Citrus Pests” on 17<sup>th</sup> July, 2020
  - ✓ Dr. Anjitha George : Insect pest management in citrus on 7<sup>th</sup> August, 2020
- Online training program for farmers through webinar (on Citrus) at RAMETI, Nagpur Govt. of Maharashtra.
  - ✓ Dr. G.T. Behere: Integrated Management of Insect Pests of Citrus on 12<sup>th</sup> August, 2020
  - ✓ Dr. A.K. Das : Disease management in Nagpur mandarin on 13<sup>th</sup> and 27<sup>th</sup> August, 2020
- Online training program on “Management of Fruit Drop” organized by RAMETI, Amravati, Govt of Maharashtra for the farmers of Warud, Morshi and Tivsa Taluka on 17<sup>th</sup> August, 2020
  - ✓ Dr. A.K. Das : “Disease Management in Nagpur mandarin”
  - ✓ Dr. G.T. Behere : “Integrated Management of Citrus Pests”
- Online training program on “Management of Fruit Drops” organized by RAMETI, Amravati, Govt. of Maharashtra for the farmers of Achalpur, Anjangaon Surjee and Amravati Taluka on 19<sup>th</sup> August, 2020
  - ✓ Dr. A.D. Huchche : संत्रा बहार व्यवस्थापन
  - ✓ Dr. A.K. Das : संत्रा रोग व्यवस्थापन
  - ✓ Dr. G.T. Behere : संत्रा किड व्यवस्थापन
- Online training program on “Management of Fruit Drops” organized by RAMETI, Amravati, Govt. of Maharashtra for the farmers of Naandgaon, Dhamnagaon Railway, Chandur Bazar Taluka on 20<sup>th</sup> August, 2020
  - ✓ Dr. A.K. Das : “Disease Management in Nagpur mandarin.
  - ✓ Dr. G.T. Behere : Integrated Management of Citrus Pests
- Dr. A.K. Srivastava : “Post pandemic management in fruit crops” National Webinar organised by Confederation of Horticulture Association of India, Pusa, Bihar; ICAR-National Research Centre on Litchi, Muzaffarpur, Bihar, Lt. Amit Singh Memorial Foundation, Mahamada, Samastipur during 3<sup>rd</sup> September, 2020.
- Dr. A.K. Srivastava : “Integrated nutrient management” in an online training programme at RAMETI, Nagpur on 11<sup>th</sup> September, 2020.

### AICRP (Fruits) : Citrus research

- Dr. A.K. Das, Pr. Scientist and Nodal Officer (AICRP) participated in the meeting conducted by AICRP (Fruits), IIHR, Bengaluru held on 09.07.2020, 25.07.2020, 05.08.2020, 23.09.2020, 29.09.2020 related to various AICRP experiments and issues.

### Lectures delivered by CCRI Scientists in training at other Institute / Organisation

- Dr. A.K. Srivastava : “Soil fertility and nutrition management in citrus organised by Krishibodh (Kisan samwad)” on 2<sup>nd</sup> July, 2020.

- Dr. Dinesh Kumar : Citrus fruits processing and value addition in the webinar on Processing of Acid Fruits at College of Horticulture, SDAU, Mehsana, Gujarat, September, 2020.

### Other Extension Activities

#### Student visits

- Two RAWA students from Shivaji Agri. College, Amravati visited on 18<sup>th</sup> August, 2020.
- Four students from Shri Sant Shankar Maharaj Krishi Mahavidyalaya, Pimpalkhuda, Tah. Dhamangaon, Distt. Amravati visited on 24<sup>th</sup> August, 2020.

### Regional Research Centre for Citrus, Biswanath Chariali, Assam

**Infrastructure development :** The farm building and tractor shed constructed at the RRCC, Biswanath Chariali, Assam.



**Farm Building**



**Tractor Shed**

### Survey / Field day / Visit to citrus growers' orchard

- A team of ICAR-CCRI scientists comprising of Dr. A.D. Huchche, Pr. Scientist, Dr. A.K. Das, Pr. Scientist and Dr. G.T. Behere, Pr. Scientist alongwith Sh. Vijay Nimje, Sub-divisional Agriculture Officer (SDAO) visited Katol and adjoining areas of Nagpur district in response to the report / problem of severe fruit drop by the Sweet orange growers of those areas on 4<sup>th</sup> September, 2020 to assess the issues related to fruit drops in sweet orange orchards. All the affected Sweet orange orchards were found severely infected with *Phytophthora*-induced brown rot disease. Meeting was organized at Gram panchayat which attended by around 250-300 farmers, besides members of Zilla Parishad, Sh. Salil Deshmukh and Sh. Shekar Zade, Sh. Vijay Nimje (SDAO, Katol) Sh. Suresh Kannake (TAO, Katol) participated. The advisories and alerts issued by ICAR-CCRI, Nagpur on brown rot disease was shared with the farmers.
- A tour was undertaken by Dr. Ashok Kumar (ACTO), Sh.V.N. Dhengre (ACTO) and Sh. Anup Tatewar (YP-II) to Jarud, Warud, Bargoan and Gadegoan area of Amravati district to assess fruit drop problems of Sweet orange on 5<sup>th</sup> September, 2020. Sh. Ramesh Jichkar, Sh. Santosh Satdive, Mandal Krisihi Adhikari Warud and other Agriculture Officers of State Agriculture Department, Warud and 7-8 farmers from nearby area were also present during the visit and the staff of CCRI imparted Pathological and Entomologist recommendations.

- Dr. A.D. Huchche, Pr. Scientist, Dr. G.T. Behere, Pr. Scientist and Miss Aparna Sontakke, RA (HORTSAP) visited farmers fields to assess the issues related to fruit drop in sweet orange orchards at different villages of Narkhed Tehsil of Nagpur district on 5<sup>th</sup> September, 2020.



**Visit of CCRI staff to citrus orchards at Warud on 5<sup>th</sup> September, 2020**

### Celebration

- Independence Day was celebrated on 15<sup>th</sup> August, 2020.

### Distribution of disease-free planting material under CCRI

A total of 37,167 disease-free planting material of citrus rootstocks, fruits and seed distributed and revenue of Rs.17,67,952/- generated under Revolving fund Nursery Project.

### Award, Honours and Recognition

- Dr. A.K. Srivastava, Pr. Scientist (Soil Sci.) : "Outstanding Scientist Award" in 9<sup>th</sup> International Scientist Awards on Engineering, Science and Medicine, organised by VDGOD Association at Trichy, during 12-13 September, 2020.
- Dr. A. K. Das, Pr. Scientist (Pl. Pathology) has been nominated as a DBT representative for the Institutional Biosafety Committee (IBSC) constituted at CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur and also for the IBSC constituted at ICAR- Central Institute for Cotton Research (CICR), Nagpur.
- Dr. A.A. Murkute, Pr. Scientist (Hort.) : Member of Technical Committee for Himachal Pradesh Subtropical Irrigation and Value Addition (HPSHIVA) project funded by ADB.

### Distinguished Visitor

- Sh. Eknath Dawale, Secretary, Agriculture, Govt. of Maharashtra visited the nursery and farm and also had interaction meeting with the scientists on 11<sup>th</sup> September, 2020.



**Sh. Eknath Dawale, Secretary, Agriculture, Govt. of Maharashtra, interacted with the CCRI Scientists**

### Radio / TV talk / Advisories

- Advisory on lemon butterfly management published in Marathi newspapers. Bulk SMS through mobile sent to 1000 farmers on 24<sup>th</sup> July, 2020
- Advisory on Snail and Slug management communicated to SDO of Morshi taluka and also sent for press release on 24<sup>th</sup> July, 2020.
- Bulk SMS through mobile sent to 500 farmers on fruit fly management on 4<sup>th</sup> August, 2020
- Advisory issued on 18<sup>th</sup> August, 2020 in English and Marathi languages on Management of Citrus Leaf miner and bark eating caterpillar in Citrus orchards.
- Advisory on fruit sucking moth management in sweet orange sent as Bulk SMS to farmers and also shared in whatsapp groups of citrus growers on 27<sup>th</sup> August, 2020.
- Advisory on *Phytophthora* brown rot disease in Mosambi sweet orange and Nagpur Santra/Mandarin with its control measures was issued for the citrus growers/farmers of Vidarbha region of Maharashtra through various social media/ website, newspaper on 29<sup>th</sup> August, 2020.

- Advisory issued on 18<sup>th</sup> September, 2020 in Marathi language on Management of Fruit flies, Mites and Fruit sucking moths in Citrus orchards.
- Provided video on “Management of *Ambia bahar* of Nagpur Mandarin and Mosambi” prepared by Dr. A.D. Huchche to VANAMATI on 26<sup>th</sup> September, 2020 for uploading in their YouTube channel for disseminating CCRI technology to citrus growers all over India.

### Personnel

#### Appointment

- Sh. Sachin A. Mendke, Young Professional-II w.e.f. 1<sup>st</sup> July, 2020
- Ms. Shraddha D. Dahat, Young Professional-II w.e.f. 4<sup>th</sup> July, 2020
- Sh. Prafulla R. Jalamkar, Young Professional-II w.e.f. 6<sup>th</sup> July, 2020
- Sh. Amol D. Kokane, Senior Research Fellow w.e.f. 7<sup>th</sup> July, 2020
- Sh. Mrugendra G. Gubyad, Senior Research Fellow w.e.f. 27<sup>th</sup> July, 2020
- Sh. Datta M. Ingle, Young Professional-II w.e.f. 27<sup>th</sup> July, 2020
- Sh. Shailesh M. Zalke, Young Professional-I w.e.f. 25<sup>th</sup> September, 2020
- Sh. B.P. Mahalle, Young Professional-II w.e.f. 25<sup>th</sup> September, 2020
- Sh. Ashish S. Bambal, Young Professional-I w.e.f. 25<sup>th</sup> September, 2020
- Sh. Vaibhav U. Bhoose, Young Professional-I w.e.f. 26<sup>th</sup> September, 2020
- Sh. Sachin S. Wadhav, Young Professional-I w.e.f. 26<sup>th</sup> September, 2020
- Sh. Jitendra U. Kuthe, Young Professional-I w.e.f. 26<sup>th</sup> September, 2020.

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

**Compiled by :** Miss Lily Varghese, Chief Technical Officer

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

**Website :** <https://ccri.icar.gov.in>, **E-mail :** [director.ccri@icar.gov.in](mailto:director.ccri@icar.gov.in)

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