



Citrus, Coffee and Cane
Research Organization for Innovative Products

Newsletter
December/2022



Our DATERRA partner is the interviewee for this edition

Gabriel Agreli Moreira, Quality and Market Development Manager at Daterra Coffee. He is also runner-up in the Brazilian Coffee Brewers Championship



Daterra Coffee is proud to be a partner of the Agronomic Institute (IAC) at the CCD-CROP-IAC Research Consortium.

In this project, IAC studies the development of naturally caffeine-free arabica coffee, which could be a strong market trend in the future. Daterra is the only private company in the coffee sector, so far, to support coffee research at the CCD-CROP-IAC. This project also includes research in citrus and sugarcane, supported by other companies and institutions.

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IAC Herculândia - Multi-resistant rootstock to coffee nematodes.

Losses in coffee production in Brazilian plantations due to parasitism of phytonematodes are estimated at around 20%. Genetic control using resistant cultivars has become a priority, since the perennial nature of the crop reduces the effectiveness of chemical and biological methods in reducing the population of these parasites in the soil and roots.



Cultivar IAC 125 RN grafted onto IAC Herculândia rootstock

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IAC Sugarcane Center delivers transgenic sugarcane plants to Granbio for field trials



Transgenic plants of IACSP955094 variety containing proprietary technology for drought tolerance and increased productivity.

As part of the technological development of the NPOP project, on July 13, 2022, the IAC sugarcane team delivered to Granbio a total of 290 transgenic sugarcane plants, variety 'IACSP95-5094', containing proprietary technology capable of providing improved tolerance to drought stress and also, greater productivity.



IACSP95-5094 transgenic plants packaged for transport by the Granbioteam



IACSP95-5094 transgenic plants packaged for transport by the Granbio team

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Publication of a scientific article by the CCD-CROP-IAC group reporting new genes for drought tolerance in sugarcane

The CCD-CROP-IAC project team recently published the scientific article “Leaf transcriptome profiling of contrasting sugarcane genotypes for drought tolerance under field conditions”, in the international journal Scientific Reports, led by researcher Silvana Creste.

scientific reports

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OPEN **Leaf transcriptome profiling of contrasting sugarcane genotypes for drought tolerance under field conditions**

Danyel Fernandes Contiliani^{1,2}, João Felipe Carlos de Oliveira Nebó³, Rafael Vasconcelos Ribeiro⁴, Larissa Mara Andrade¹, Rafael Fávero Peixoto Júnior¹, Carolina Gimiliani Lembke⁵, Ricardo Silverio Machado⁶, Daniel Nunes Silva¹, Mariana Belloti³, Gláucia Mendes de Souza⁵, Dilermando Perecin⁷, Tiago Campos Pereira^{2,8}, Regina Célia de Matos Pires⁶, Patrícia Rezende Fontoura⁹, Marcos G. A. Landell¹, Antonio Figueira³ & Silvana Creste^{1,10}

Reference: Contiliani D.F., J.F.N.C. Oliveira, Ribeiro R.F., Andrade, L.M., Peixoto-Júnior R.F., Lembke, C.G., Machado R.S., Nunes D., Belloti M., Souza, G.M., Peressin, D., Pereira, T.C., Matos-Pires R.C., Rezende P., Landell M.G.A., Figueira A.V.O., Creste, S. Leaf transcriptome profiling of contrasting sugarcane genotypes for drought tolerance under field conditions. Scientific reports 12: 9153. 10.1038/s41598-022-13158-5

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GranBio makes alliance with Nuseed in sugarcane R&D

Nuseed and GranBio have entered into a long-term strategic alliance to accelerate R&D and global commercialization of energy cane. Nuseed acquired GranBio's energy cane assets and R&D program with the aim of fundamentally improving the value of renewable energy produced through energy cane innovation.



Visit of the Nuseed technical team to the center of Cana on 11/16/22. From right to left: Leon Streit, José Bressiani, Ricardo Bendzius, Silvana Creste, Paula Nobile, Simone Ferreira and Danyel Contiliani.

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CCD_CROP_IAC meeting: Interdependence of squads



CCD-CROP-IAC team that participated in the workshop at the Cane Center IAC in Ribeirão Preto

On August 12, 2022, took place the first agile meeting CCD_CROP_IAC at the Center of Cana- IAC in Ribeirão Preto/SP. The objective of the event was to implement specific agile management methodologies, assess the level of interdependence of the teams and identify the technological maturity (TRL) of the deliveries proposed in the project.

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First results are presented and awarded at the National Congress of Genetics



Participation of members of the CCD-CROP-IAC project at the 63rd Brazilian Congress of Genetics, Natal – RN.

From the 12th to the 15th of September 2022, researchers from the Agronomic Institute (IAC) participated in the 63rd Brazilian Congress of Genetics promoted by the Brazilian Society of Genetics in the city of Natal – RN. At the event, the first CROP-IAC results were presented to the scientific community in general.



Participation of members of the CCD-CROP-IAC project at the 63rd Brazilian Congress of Genetics, Natal – RN.

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Evaluation of experiments at Citrusuco

Participants of the CCD-CROP-IAC team in the experiment at Fazenda Entre Rios – Citrusuco, Oct./2022.



On October 13, 2022, the CCD-CROP-IAC project team was at the Entre Rios Farm, in the municipality of Gavião Peixoto - SP, to evaluate an experiment, whose objective is to verify the occurrence of incompatibility in combinations of Pera sweet Orange grafted on citrumelo and citrandarins rootstocks, with (I) and without (S) interstocking with Hamlin

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New transgenic lines with resistance to citrus bacterial disease are taken for field evaluations

As a result of a lot of scientific research work, researchers at the Citriculture Center found key genes, from the plant itself, that can confer “broad spectrum” resistance, that is, to various pathogens.



Orchard containing new planting of commercial sweet orange varieties with genes for resistance to citrus bacterial diseases.

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2nd Workshop of the Science Center for Development CROP-IAC

On November 25, 2022, the 2nd Workshop of the Center for Science for Development CROP-IAC was held at the Citriculture Center of the Agronomic Institute (IAC), in Cordeirópolis. The event was attended by researchers, students, and representatives of partner companies Agroterenas, CiaCamp, Citrosuco and Jacto.



Participants of the 2nd Workshop of the CCD-CROP-IAC, 11/25/2022.

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Learn more about the
CCD_CROP_IACAQUI project

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Partners



Christmas makes us approach distances, cross borders and form new bonds of peace and friendship. The CCD-CROP-IAC team wishes you all a merry Christmas and that the year 2023 will be full of health, achievements, and success!