



Minutes of the Board of Directors Meeting Tuesday, July 23, 2024

A meeting of the Board of Directors of the Citrus Research and Development Foundation, Inc. was held on Tuesday, July 23, 2024, at 10:00 AM, at the UF-IFAS, Citrus Research and Education Center, 700 Experiment Station Rd, Lake Alfred, FL 33850, in the Ben Hill Griffin The meeting was properly noticed and recorded. President Morgan Porter called the meeting to order at 10:05 AM. Roll was called, and a quorum was present. Board members present were Chris Gunter, George Hamner, Aaron Himrod, Deeley Hunt, Matt Machata, Ron Mahan, Jeanna Mastrodicasa, Morgan Porter, Joby Sherrod, Taylor Smith, Sarah Spinosa, and Matt Story.

Ms. Porter noted that the minutes from the June 12, 2024, Board meeting were available in their packet for review. Mr. Himrod moved to accept the minutes as written. The motion was seconded by Mr. Hamner and passed unanimously.

There were no public comments.

Ms. Porter introduced Steven Hall who is Tamara Wood's replacement for CRAFT. He previously served as Deputy Commissioner with the Department of Agriculture.

The Executive Committee did not meet.

Audrey Nowicki summarized the June 30, 2024, Financial Report, and outlined the revenues anticipated in the 2024-25 budget that was approved, the Legislative and Box Tax amounts, and budget allocation for new research.

For research expenses, ongoing projects are 25% behind in expenses, primarily because of how late in the fiscal year the projects started. Operational costs were pretty much in line with what was expected. An additional \$10,000 overage was the Citrus Show sponsorship from last year that was not in the budget when passed; that sponsorship expense is included in this year's budget.

Bunting, Tripp and Ingley, LLC was on site Tuesday through Friday, July 9th through the 12th. We anticipate having the audit presented to you for approval in September.

The Conflict-of-Interest forms will go out during the month of August and will then be reviewed by the Governance Committee. In addition, the Governance Committee will be considering a few changes to committee memberships and bylaws changes.

Mr. Hamner made a motion to accept the financial summary as presented. It was seconded by Mr. Himrod and passed unanimously.

The Governance Committee did not meet.

Mr. Sherrod gave an update on the Plant Improvement Committee meeting held on July 15. First reviewed was the 3-Year Grand Plan from Drs. Chater and Mattia. One of the concerns was Intellectual Property issues related to materials that would be produced, as well as the speed or the availability of that material to the growers. The PIC did not have a quorum, so no vote was taken, but the consensus was they were in support of the proposal.

The other item was the report on next selections for mass propagation given by Justin Ezell, FDACS, Budwood Chief. They are ready to address the needs of the industry when that variety becomes available.

Mr. Dantzler noted that one of the questions that came up during the Plant Improvement Committee meeting was raised by Pete Spyke, an East Coast grower. He mentioned that there were a number of varieties that had not been released by the USDA that he thought were perfectly tolerant. That raised a lot of eyebrows and received a lot of discussion. Mr. Dantzler followed up with Erin Roskopf and Scott Adkins after the meeting and was told that they did not feel as though they had as much information as they needed in order to be able to release them and there had been some administrative delays because of turnovers. Mr. Himrod asked if the varieties surveyed in the drone survey were those that we utilize. Mr. Dantzler stated that if they are on USDA property then they were part of the drone survey, but a number of these varieties are being grown by Pete Spyke commercially. In fact, he sent CRDF a carton to sample. Dr. Mattia noted that they flew everything in the drone study. They are planted at a lot of different locations. These are mandarin varieties. We have looked at their potential for use in orange juice, and they are too soft for juice. The priority was put on some of the group to move forward into the pipeline first and is part of the drone information. The completeness of the gathering of the data will help support these varieties that Pete is talking about for release. The policy from administrators has been that they want to see justified data for release.

Mr. Himrod noted that the Research Management Committee had another very robust meeting with the primary topic being the 3-Year Grand Plan. There seemed to be broad support for objective 3, which is the use of bioinformatics. There was considerable support for objective 1 which is the evaluation of material. There was less broad support for objective 2, which was a breeding effort. There was a lot of discussion and back and forth between committee members and Drs. Chater and Mattia, but in the end, a motion was passed to support the project in its entirety. Mr. Himrod put that forward as a motion from RMC to support the 3-Year Grand Plan. It was seconded by Mr. Hamner and passed unanimously.

Mr. Hamner posed the question as to what an exit would be if we have not gotten far enough, or it does not look like it is materially beneficial. How would we terminate this? Mr. Dantzler shared that it has been our policy from the very beginning that we will find a way to fund what growers want us to fund. We could go to Tallahassee in the spring and seek more funding for this, or we could fund this in one-year increments instead of the three-year commitment. We could also try to terminate the project due to lack of funds, a provision in our contracts.

Next up was the continuation funding of projects:

22-002 S. Santra, 'Management of tree health and huanglongbing disease pressure using advanced Zn formulations.' Both of the formulations Dr. Santra is testing are currently available. His results seem to be positive, and it was recommended for funding year 3. Mr. Himrod brought that forward as a motion to the board from RMC. It was seconded by Mr. Machata and passed unanimously.

22-003 F. Alferez, 'Determining Best Timing for Brassinosteroid (Brs) Application to Achieve Maximum Beneficial Effects on Citrus Tree Health and Fruit Yield and Quality.' Year 3 funding. Dr. Alferez gave a presentation about his brassinosteroid work. He showed 45 days of an enhanced, immune response to the activation of the Brassinosteroids in mature trees. With

increased tree health from injections, this could be a viable therapy. RMC recommended this for approval, so Mr. Himrod brought it forward as a motion. It was seconded by Mr. Machata and passed unanimously.

Mr. Dantzer noted that in many of these projects, there are significant, unspent funds going into the next year, so he has asked the researchers to provide a revised budget that takes into account what they anticipate having left over so that we can begin making plans to redirect those funds. Dr. Alferez gave us a revised budget, and to his credit he has been able to reduce his ask significantly, from \$51,000 down to \$11,000.

22-17 Levy, 'Improving the Systemic Uptake of Therapeutic Compounds by Trunk Injections.' Dr. Levy is seeking year 2 funding. He was not available to attend or make a presentation; nonetheless, there was significant discussion. He had sent in a presentation, and year one results are quite encouraging. Mr. Himrod brought forward a motion to support from RMC with those compounds. It was seconded by Mr. Hamner and passed unanimously.

23-021 R. Brlansky, 'Using Improved Diagnostics to Determine Citrus Blight Prevalence.' Dr. Brlansky had a 1-year project of which they did quite well meeting their objectives. The two primary objectives were to develop an assay to determine the blight status of trees. Objective 2 was to use CRISPR to neutralize the virus. At this point, RMC had lost their quorum, so no action was taken. After discussion with Daniel Stanton and Bill Schreider, the board decided that this proposal should go back to the Scientific Advisory Board.

23-005 U. Albrecht years 2 & 3 funding of directed research project 'Use of CRDF Rootstock Trial Locations for Testing Bactericides Inserted into Trees Through Systemic Delivery Devices.' Dr. Albrecht is looking for funding to continue the use of rootstock trials for testing bactericides. Brandon noted that this is the largest injection trial that is going on right now. He noted that this project was the basis for most of the presentation material that she has had at her different grower groups. Mr. Himrod brought forward a motion to support. It was seconded by Mr. Machata and passed unanimously.

Next was consideration of inviting full proposals from the following revised preproposals:

Y. Ampatzidis, 'AI-enabled automated needle-based trunk injection system.' Dr. Ampatzidis has withdrawn his project from consideration as he is seeking funding elsewhere.

H. Cheng, 'Determine the inhibition efficiency of *Candidatus Liberibacter asiaticus* (CLAs) in free living culture and in citrus tree-trunk by a novel antimicrobial from *Sinorhizobium meliloti* for the control of citrus Huanglongbing.' While RMC did not take any action, most of the discussion centered around the thought that there needed to be more baseline research done before coming to CRDF for funding. No action was brought forward from RMC, and there was also no support at the board level.

T. Minter/H. Yonce, 'Evaluation of TPR 1, a new bactericide, and PT 150, a new pesticide, for control of HLB in Florida Citrus.' Dr. Yonce presented their Year 1 results. Mr. Himrod noted that the use rates were not high enough. There was concern that if there was success, it was still going to have to go through the entire regulatory pathway which is long, expensive, and onerous. Mr. Dantzer noted that he got a call from Tom Minter who made a final pitch for TPR 1. He thought we needed to continue searching for replacements for OTC. He commented that he was

seeing more trunk damage with OTC than he anticipated. He did not see that the regulatory pathway was going to be quick for either one of these, but he felt as though TPR 1 was especially important. Still, RMC and the board chose not to fund this further.

J. Qureshi, 'Abatement of Asian citrus psyllid and HLB through treatments of OTC and systemic insecticides.' Originally, there were concerns of overlap between this project and the Stelinski project. He addressed those duplications. There was relatively broad support for the project. Since the committee had no quorum and could not recommend its funding, Mr. Himrod moved approval in his capacity as a board member, not as chair of RMC. The motion was seconded by Mr. Hamner and passed unanimously.

F. Zambon, 'Delivery of Mn and micronutrients to HLB-affected trees via standalone injection or mixed with OTC.' There was a concern over so many molecules/nutrients being in the same mixture. Dr. Scully noted that the EDTA did not require registration, but if you are using other formulations of those nutritional materials, then registration for injection may be an issue. There was also an issue with the rates. We took those concerns back to Dr. Zambon, and she has said that she would focus on manganese.

Mr. Dantzer noted that in the RFP, we asked for a proposal just like this, and that we are in the process of meeting with State and Federal regulators about getting micronutrients and other fertilizer-like products approved for injections, and that he suspects it will be approved. It is a good point that with all these different micronutrients it will be difficult to determine what is working or not, but the project was responding to a request in the RFP. The project was not advanced.

F. Alferez, et al., 'Assessing blending strategies with different Satsuma juice to boost orange juice quality.' Mr. Himrod reported that there is a significant amount of good fruit not being used in North Florida and Georgia, and that a processor is looking into this. Most of the concern about the project has less to do with the project, and more to do about the perceived logistical hurdles with getting fruit from North Florida down to our processors. There was not a quorum at that point, but Mr. Himrod brought it forward as an individual for approval to seek a full proposal. Mr. Himrod's motion was seconded by Ms. Spinosa, but the project was not advanced.

2024 RFP for Large-Scale Field Trials:

It was anticipated to approve the large-scale field trial RFP for the \$15 million legislative funding, but without a quorum no action was taken by RMC. So, Mr. Himrod brought it forward as an individual to approve. It was seconded by Mr. Hamner and passed unanimously.

T. Minter reported on GLP requirements and a timeline for registering streptomycin as a standalone injectable or in combination with OTC. There was also a presentation from Tom Minter about the regulatory pathway for streptomycin for a section 3. It seemed like it was going to be extensive.

Dr. J. Syvertsen gave his report on Kasugamycin as a standalone injectable or in combination with OTC. In general, there was support for looking at this. It is already used in some agricultural commodities. The only situation that would be difficult would be the efficacy. It has been registered for bacterial spot control.

Mr. Dantzler talked to Tom Minter and a group is going to be meeting with State Regulators on a 24C for hydrochlorous acid. He has trials that go back as far as 9 years, and he believes that hydrochlorous acid can be used in concert with OTC to minimize reinfection. He thinks that they might be able to get it approved for as many as four sprays a year, so it could be used during that 180-day period OTC preharvest interval. They intend to pursue a section 18. Dr. Graham mentioned the concern about chlorine phytotoxic toxicity. Minter said that the percentage solution is only .048, so he believes that with that small amount it should not be toxic to the roots.

Mr. Dantzler introduced Dave Gerrard of Invaio to report on the injection devices Invaio is working on. Gerrard noted that their efforts are focused mainly on getting the cost of the application down. Also, they have concentrated on small trees because the tips they are using are the only ones that can effectively go into smaller trees.

COO Report: Mr. Dantzler noted that we should expect a project from Dr. Manjul Dutt on gene-edited Parson Brown trees.

Partnership Updates: Dr. Mastrodicasa from IFAS stated that they always accept sponsored research from industry if the gentleman from Invaio would like to connect with any of their faculty.

There was no one from USDA.

There was no New Business or Public Comments.

Future Meeting: The next Board of Directors meeting will be held Tuesday, September 24, 2024, at the USDA-ARS, 2001 South Rock Road, Fort Pierce, FL 34945.

With no further business, the meeting adjourned at 12:29 PM.

Minutes submitted by George Hamner, Secretary.