

A meeting of the Board of Directors of the Citrus Research and Development Foundation, Inc. was held on Tuesday, December 13, 2022, at Ben Hill Griffin Jr. Citrus Hall. The meeting was properly noticed and recorded. President Rob Atchley called the meeting to order at 10:00 a.m. Roll was called and a quorum was present. Board members present were Rob Atchley, Chris Gunter, George Hamner, Aaron Himrod, Greg Hodges, David Howard, Deeley Hunt, Ron Mahan, Jeanna Mastrodicasa, Morgan McKenna-Porter, Joby Sherrod, Matt Story and John Updike. Also participating were Ute Albrecht, Tina B., Kim Bowman, Rick Dantzler, Bill Dawson, Steve Futch, Fred Gmitter, Jim Graham, Audrey Nowicki, Brandon Page, Shannon Shepp, Steve Smith, James Syvertsen, Barbara Thompson, Callie Walker, Rosa Walsh and Tamara Wood.

President Rob Atchley noted the minutes from the September 27, 2022 board meeting were included in the materials for review and approval. Mr. Himrod made a motion to accept the minutes as presented. The motion was seconded by Ms. McKenna-Porter and passed unanimously.

Public Comments: There were no Public Comments.

Executive Committee: Mr. Dantzler gave a report on the October 25, 2022 Executive Committee. Due to the impact of the recent hurricane and the low crop estimate, the Executive Committee met in lieu of the Board of Directors meeting that was previously scheduled. The Executive Committee took a look at where CRDF was from the budgetary standpoint, and to see what funds were available going forward. The committee also measured that against the Pathway to a Sustainable Florida Citrus Industry document. All research topics but one (micronutrients) were provided funding, but there had been several projects on that topic funded in the past. The focus now was to address how CRDF should dedicate available funds moving forward given the context of where the industry was. The thought was that, to the extent that funds were available, we should assist growers in getting oxytetracycline (OTC) in the trees. There was additional discussion about whether funding that was available should go to CRAFT to assist growers in getting this product in their trees and/or whether CRDF should try to adopt its own program to assist in that regard. Whatever funding CRDF contributed to that effort, there needed to be a robust scientific component that surrounded the use of that money.

The CRDF staff met a couple of days after the executive board meeting to discuss research questions involving injecting OTC. A document was created that was shared at the next RMC meeting. Dr. Futch was requested to calculate how much it might cost to do this work. He (Futch) thinks the funding needed for what we're advocating is approximately \$300,000. This funding topic was discussed with RMC, and that was essentially the motion that was that passed out of RMC; that maybe we could do both, in-house projects and assist CRAFT with funding. A significant portion could be spent on CRAFT-like projects from a scientific data gathering standpoint, and then retain whatever funding needed for the kind of robust research that CRDF outlined that is needed related to OTC.

Finance and Audit Committee: Ms. Nowicki presented the November 2022 financial summary that was included in the materials packet. The current balance available for funding is \$2.1 million. Mr. Himrod moved to accept the financial statement as presented. Mr. Updike seconded the motion and it passed unanimously.

Mr. Dantzler stated that we need to first decide how much money we have available from now until the end of the year, and secondly, how much is needed for the next fiscal year. Mr. Howard made a motion to send to CRAFT whatever funds remained after considering today's projects and any preproposals considered by some reasonable time in the future. That date was discussed, and the end of February seemed to be the sense of the board. The funds to CRAFT would be used to get products (2,4-D, GA, OTC, Brassinosteroids) into trees. The motion was seconded by Ms. McKenna-Porter and passed unanimously.

Ms. Wood reported that the CRAFT Board discussed receiving funds from the CRDF and possible other entities at their last meeting. They plan to seek funding for an expansion of the CRAFT program to include trees already in the ground for therapies such as OTC, 2,4-D, Gibberellic acid (GA) and Brassinosteroids. CRAFT has already been in discussions with the MAC Committee, and there are additional funds that are potentially available. Also, Matt Joyner is prepared to go for next legislative session to get additional funds. Perhaps the CRDF and MAC funds could be used for a pilot program.

The basic model that CRAFT had in mind was a cost share rather than the flat rate participation that CRAFT typically does. It would be a cost share dependent on which therapy was used. This would be up to 50%, so there would most likely would have to be limitations on acreage per participant, but CRAFT is prepared to move forward with this expansion of the program to treat existing trees.

Mr. Howard noted that he made a motion at the RMC meeting to put out an RFP to get more clarity on OTC injection rates, trying to quantify the manufacturer's recommendations. This would be a project that would be obligated from CRDF funds in addition to those projects funded today. Also obligated would be the \$300,000 needed for the project that Dr. Futch and Mr. Page have submitted. Dr. Futch verified that the dosage rates for injections were not in the list of projects that were identified in the Pathway 2.0, so that would be identified in an RFP.

Mr. Dantzler noted that Dr. Futch's work was contemplated to be done by CRDF with the existing rootstock trials being one of the stated studies.

Grower cooperators would be solicitated to help with other studies, with crop consultants likely be used to gather the data. With that, you could begin layering plant growth regulators on top of OTC in some of the studies. CRDF has a proposal from the Stelinskis about measuring the OTC effect on the psyllid, and the transmission of CLas after injecting OTC.

Mr. Dantzler stated that we needed to have projects selected within 45 to 60 days so there would be time to get money to CRAFT.

Mr. Atchley noted that the motion on the floor was to commit a balance, at least by June 30, 2023, to go to CRAFT for funding to assist growers with the tree therapy program, which included OTC. This motion had been previously made by Mr. Howard and seconded by Ms. McKenna-Porter. With no further discussion, a vote was taken and passed unanimously.

Mr. Dantzler continued with the second fiscal question, which was what our legislative ask should be. He suggested that a meeting of the Finance and Audit Committee meeting be convened quickly to think through not only what was just decided, but also what the existing balances are and what is anticipated carrying forward. Mr. Howard noted that the Plant Improvement number could be considered when Dr. Chater's March report comes in, so it could be part of the legislative request. Thus, the F&A needs to meet and quickly and get recommendations to the Board. If funding amounts are needed sooner, the Executive Committee could be convened.

Governance Committee: Mr. Himrod presented recommendations from the Governance meeting held at 9:30 a.m. previous to the Board meeting. The 2022-23 Conflict-of-Interest forms were reviewed and accepted. Mr. Himrod made a motion for the Board of Directors to accept the recommendations of the Governance Committee and approve the Conflict-of-Interest forms as presented. It was seconded by Mr. Howard and the motion passed unanimously.

Mr. Himrod announced a recommended slate of officers for the Board of Directors: President, Morgan McKenna-Porter; Vice-President, David Howard; Secretary, John Updike; and Treasurer, Ron Mahan. He put this forth as a motion and it was seconded by Dr. Mastrodicasa and passed unanimously. Mr. Dantzler noted that this was Dr. Hodges' last Board meeting. He also noted that 2-yr terms for officers had been agreed upon last year, which was acknowledged by the committee members.

Research Management Committee: Mr. Updike presented four proposals for approval:

22–015, Lagos, Yianni, Soilcea transgenic field trials proposal was put forth for approval for funding. A motion for approval was made by Mr. Updike and was seconded by Ms. McKenna-Porter. This motion was approved unanimously. Mr. Himrod made a motion which was seconded by Mr. Howard to look into developing a mechanism to reimburse money from the project if trees are developed and are commercially viable and sold by Soilcea. Mr. Dantzler noted that according to the statutes Chapter 601, if a new variety is created using tax dollars, the variety needs to be first offered to the Florida citrus industry through the Florida Department of Citrus before they can be privatized. An amendment to the original motion was made by Mr. Himrod to amend the earlier motion to approve the Soilcea project as presented with the caveat that Mr. Dantzler put in place a means for reimbursement. The motion was seconded by Mr. Howard and passed unanimously.

The next motion put forth was for the 22–016, Dutt, Manjul, UF–CREC, interstocks proposal. Mr. Dantzler noted that he met with Dr. Dutt as requested by Dr. Scully and Dr. Dutt was confident

that he would be able to complete the research proposed for the funded requested. If not, he could come back to the Board for further funding. The motion was made by Mr. Updike for approval of funding. The motion was seconded by Ms. McKenna-Porter and approved unanimously.

Mr. Updike made a motion to approve funding for the 22–017, Levy, Amit, UF–CREC, DDG proposal. The motion was seconded by Mr. Howard and approved unanimously.

Proposal 22–019, Dutt, Manjul, UF–CREC, Parson Brown. A motion was made by Mr. Updike and seconded by Mr. Howard to approve the project. Mr. Himrod brought up a discussion on the Carneys/Parson Browns found on an island in Lake Weir that should be studied. These are late creations, unlike others that are quite old and for which have a fairly large amount of data already collected. So a gap in fruit quality data exists and needs to be investigated for all selections of Parson Brown. Donaldson and Tobias were approved by RMC as part of the proposal. A vote was taken, and it was approved unanimously.

The first preproposal put forth was 22–020, Turgeon, Robert, Cornell Univ., protecting citrus trees. Mr. Updike made a motion to request a full proposal. The motion was seconded by Ms. McKenna-Porter and approved unanimously.

Mr. Updike noted that the 22–021, Killiny, Nabil, UF–CREC, phloem sap preproposal had failed at the RMC meeting due to a lack of motion, so no action was taken by the Board.

Next was the 22–022, Duan, Yongping, USDA–ARS, virus in escape trees preproposal. Mr. Page noted that the virus was not symptomatic; however, since the virus was not named, there was not much research that could be done at this time. Mr. Page thought that the name of the virus would be disclosed within 1 to 2 months. Mr. Page and Dr. Walsh will work on getting more information on the project. Mr. Atchley thought that it should come back to RMC after they have the name of the virus. Mr. Updike made a motion to send the project back to the RMC once more information is known about the virus. The motion was seconded by Mr. Himrod and passed unanimously.

22–023, Jin, Hailing, UC-Riverside, AMP cisgenic citrus preproposal. Mr. Dantzler stated that the trees which have been produced at the CREC are still in Dr. Zales' lab. Discussion centered around the possibility of keeping those trees here and letting University of Florida faculty do the work that she's proposing to do in California. That has not happened yet. Dr. Jin was not interested in having the tests done in Florida. She wanted to get trees sent to California for her to do the work. Getting them to California is a fairly elaborate process. Mr. Updike made a motion to ask for a full proposal. It was seconded by Ms. McKenna-Porter and approved unanimously.

Mr. Dantzler stated that he had several conversations with Michael Braverman with IR-4. They now register products and technologies for commodities that don't have the wherewithal to do it on their own. Mr. Dantzler mentioned that CRDF might need some help with CTV registration studies that remained to be completed. Mr. Dantzler has had some internal conversations on needed additional work and it has been well-received. IR-4 will need a letter from CRDF requesting them

to proceed with CTV registration for us. Mr. Himrod made a motion for CRDF to submit a letter of support requesting IR-4 to proceed with the CTV registration. It was seconded by Mr. Howard and passed unanimously. Mr. Atchley noted that Mr. Dantzler should make sure that IR-4 was aware of the contingencies that have been mentioned related to a company showing interest in CTV vector license.

The next item was the Consideration of Complimentary Work to the Usage of OTC via Directed Research and/or RFP. Mr. Dantzler met separately with various Board members last week and this matter was discussed. Mr. Howard noted Item 13 — Examining inputs not needed by system delivery devices (SDD) to determine savings in cost with GA, 2,4-D and OTC. OTC studies have been authorized to use up to \$300,000 in a previous motion. A motion was made by Ms. McKenna-Porter to move forward with the stated projects related to the OTC injection for up to \$300,000 of funding. It was seconded by Mr. Updike and the motion passed unanimously.

Mr. Dantzler showed his gamechangers slide presentation. He suggested asking for an RFP to cast a net wider than we had in the past to obtain access to people that would not normally be reached. CRDF would need to advertise in journals, linking our website, and hopefully obtain some proposals that are less traditional ideas on how to solve HLB. Mr. Sherrod said we needed to include this funding in our legislative request. He noted that in the past we had received preproposals that were too high dollar and therefore denied. He thought we needed to put a ceiling on the dollar amount so that the preproposals received could be voted on merit.

Ms. McKenna-Porter noted that maybe one of those high dollar requests could possibly be the one we are looking for. If it had merit, we could reach out to other agencies for funding. Dr. Mastrodicasa noted that she wasn't sure if there would be funding for the next Farm Bill. Mr. Sherrod made a motion to issue an RFP with funding based on appropriation. It was seconded by Mr. Updike and passed unanimously. Ms. Shepp noted that the Jan.—Feb. timing is good because it allows for the legislative session to appropriate funds. If CRDF has received a project that merits funding, we would be ready for July 1 funding.

Mr. Page gave a report on the rootstock trials. Approximately fifty percent of the trees were removed due to damage from Hurricane Ian at the Ridge site. They went plot by plot removing damaged trees. Mr. Dantzler conveyed that one of the cooperators had previously requested to drop out of the rootstock trials and the Board allowed the grower to withdraw from the trial. There are some trees at Agromillora that could be reallocated to another trial if someone else wanted to take on doing a rootstock trial as proposed or modify the trial to fit their needs. Mr. Page noted that there were still some trees left in the nursery and that a small-scale trial might be possible. Mr. Howard asked about CRDF acquiring land to plant 3,000 or 4,000 trees and have the CRDF staff do the trial. Mr. Updike made a motion which was seconded by Mr. Himrod to relieve the Ridge cooperator from the rootstock trial and the motion passed unanimously.

COO Report: Mr. Dantzler reported on the 4-hour Bayer Zoom call from Friday, December 9. Bayer has screened 200,000 microbials, 200,000 synthetic compounds and a number of external

candidates from other sources. Bayer has tested a number of compounds in the greenhouse and has six field trials. They have found a number of compounds that were working in the lab but not in the field. So that has been a little bit disappointing. They also, as part of this Federal grant, have a metabolomics compound, and they have done 13,000 samples using their metabolomics analyses process. They do have several strains of an antimicrobial that they believe have real promise. They have one plant growth modulator that they think has real promise. There's not a whole lot of time left on this grant, so their goal is to have these promising candidates ready for commercialization by the time the grant ends.

Partnership Updates: In Mr. Joyner's absence, Ms. Wood gave the update. She noted that it looked like the disaster relief bill would be attached to CR the first of the year. Mr. Joyner has worked with senators who had some concerns related to the previous proposed Brix legislation, but he is fairly confident that all of those concerns have been resolved. Mr. Joyner hopes to have that attached as part of the disaster legislation when that vehicle is ready as well. On the state level, Mutual is getting ready for the upcoming session. We are looking at not only the general industry requests that we have but also bumping up and getting substantial funding for continued cost share program for those existing tree treatments to OTC, 2,4-D Gibberellic acid and those kinds of things. That's what he's working on, continuing to monitor everything else, both in DC and Tallahassee, and making sure that we are up to date, and where we need to be on all of that.

Dr. Mastrodicasa had no updates from UF.

New Business: None

Public Comments: None

Future Meeting: January 24, 2023, 10:00 a.m., at Ft. Pierce. Plan to attend the Board of Directors meeting, plus a 2-hr retreat.

With no further business, the meeting adjourned at 11:54.

Minutes submitted by John Updike, Secretary.