A meeting of the Research Management Committee of the Citrus Research and Development Foundation, Inc. was held on Wednesday, May 11, 2022, at the Grove House, 20160 Hwy 27, Lake Wales, FL 33853. The meeting was properly noticed and recorded. The meeting was called to order at 10:01 a.m. by Chairman John Updike. Roll was called, and a quorum was present. Committee members participating were Bobby Barben, Larry Black, Steve Farr, Ned Hancock, Aaron Himrod, David Howard, Ed Leotti, Morgan McKenna, Tom Obreza, Pat Ouimet, Brian Scully, Shannon Shepp, Wayne Simmons, and John Updike.

Also participating were Stéphane Brunet, Dave Crumbly, Rick Dantzler, Bill Dawson, Jeremy Dufour, Mike Edenfield, Steve Futch, Jim Graham, Chris Gunter, George Hamner, Deeley Hunt, Thomas Knobloch, Denise Manker, Richard Meredith, Ram Newpane, Audrey Nowicki, Brandon Page, Shannon Shepp, Joby Sherrod, Jim Syvertsen, Kevin Thomas, Barbara Thompson and Rosa Walsh.

Mr. Howard made a motion to approve the Summary of the February 8, 2022, RMC/CPDC meeting. The motion was seconded by Ms. McKenna and, with no discussion, passed unanimously.

Mr. Updike opened the discussion with Dr. Lauren Diepenbrock’s request for the third-year extension with additional funding of project 20-002C, ‘Developing near and long-term management strategies for Lebbeck mealybug (Nipaecoccus viridis) in Florida citrus.’ CRDF does not normally fund international travel, but in this case the conference was moved from Seattle, WA to Vancouver, B.C. after the proposal was submitted. Dr. Scully made a motion to approve the travel and continue the existing project, and to open the floor for further discussion on additional funding. The motion was seconded by Mr. Farr and passed with one no vote by Mr. Leotti. Mr. Dantzler clarified his understanding of the motion, which was approval of the $57,000 carryover, plus the international travel budget, but not the $80,000 request for the next year.

Discussion continued on the additional funds requested. Some members felt mealybug research funding will not help growers stay in business. While not in the Pathway document, this project was funded prior to the creation of Pathway. It was noted that the predation facet of this research could help with greening as well as with mealybug. Dr. Scully asked Dr. Futch to weigh in on the return on the research investment. Dr. Scully moved to approve the extension, with the requirement to make recommendations to the citrus community in addition to completion of the papers resulting from the project. The motion was seconded by Mr. Farr. There was a suggestion that the project should be modified to focus on round oranges, concentrating on Valencia and Hamlin, and grapefruit. After a roll call vote, the motion failed 6-4.
Later in the meeting, Mr. Howard informed the committee that he felt that his and Mr. Black’s yes votes on the Zoom call were not counted, so Ms. Shepp moved for unanimous consent that the two (2) additional yes votes be added to the vote total. Mr. Simmons seconded the motion and it passed unanimously. However, even with the two additional yes votes, the vote on the proposal still failed 6-6. r. Denise Manker and other researchers on the NIFA Bayer project were recognized to update the committee on their progress. Dr. Manker summarized the progress to date and outlined research to be completed prior to the August 2023 end date. Asked about affordability for citrus growers, she indicated that pricing will be geared for citrus even though it is being tested on several other crops. She discussed Serenade® and Minuet™, launched this year, and will check on the label for citrus. Ms. Shepp suggested that Bayer also present at the Annual Conference in Bonita Springs in June; it was agreed that they would if their schedules permitted.

Mr. Updike moved on to the review of the Directed Research Proposals:

1. **S. Santra proposal 22-002, ‘Management of tree health and huanglongbing disease pressure using advanced Zn formulations’**

   Dr. Graham led the discussion by stating that Zinkicide as a nano formulation is unlikely to be approved. Consequently, the committee did not wish to proceed with work on nano formulations. Also, since work had only been done in the SWFREC area, the committee wished for work to occur in all three major growing areas.

   It is believed the project will produce recommendations for growers on Valencia, Hamlin, and grapefruit. Mr. Hancock moved to recommend Dr. Santra’s proposal, which should include grower cooperators by region and a requirement that the data be shared with the grower community. The motion was seconded by Mr. Simmons and passed unanimously.

2. **F. Alferez proposal 22-003, ‘Determining best timing for Brassinosteroid application to achieve maximum beneficial effects on citrus tree health and fruit yield and quality’**

   Mr. Updike asked Dr. Graham to summarize the Alferez proposal. This project will focus on the number and timing of applications, as well as the economics of brassinosteroids. Since it has been proven to work on young trees and for increasing Brix, it was suggested that the focus be on mature trees of Hamlins and Valencias. It was noted they could fund one year to determine the effect on trees that were at least 4 or 5 years old. Mr. Simmons moved to approve Dr. Alferez’s project. It was seconded by Ms. McKenna, and the motion passed unanimously.

3. **T. Vashisth proposal 22-004, ‘Hormonal therapy to improve productivity of HLB-affected sweet orange’**

   Dr. Vashisth intends to make a comparison of Ascend and X-Cyte, a soluble form of the plant growth hormone Cytokinin. Included in the budget is the option to include additional GA in
the project. Two formulations of two products will provide enhanced levels of GA. A grower cooperator has been identified for the project. Mr. Himrod made a motion to recommend funding for the first year with a review at the end of the year. It was suggested another grower cooperator be added. The motion was seconded by Ms. McKenna and it passed unanimously.

Four proposals were received from crop consultants in response to the RFP. All the responders were known to the industry and capable of performing the scope of work. Since all were qualified, staff recommended accepting Dr. Curtis’s proposal since it was the lowest cost. The total price would be $17,600 per trial site with an additional $2,000 per site for quality analysis which will be completed at CREC. Mr. Leotti said that Mr. Edenfield’s comments should be incorporated into whichever bid is accepted, and staff confirmed they will be. Mr. Himrod made a motion to recommend the board approve Dr. Curtis, Better Crops, LLC, perform the PGR studies at three sites. The motion was seconded by Mr. Farr. The suggestion was made to test on Hamlin’s and Valencias, at three sites each, on a consistent rootstock. The motion passed unanimously.

Regarding the RFP for OTC injection on mature trees, Mr. Dantzler pointed out that CRDF was currently funding Dr. Albrecht to do work with all OTC formulations and injection devices under consideration. He also noted that residue testing to date was encouraging.

Mr. Dantzler reported that he and Matt Joyner had gone to Tallahassee to meet with FDACS regulators and representatives from TJ Biotech. Dantzler pointed out that his message to regulators was make a decision quickly once the application from TJ Biotech was received.

Dr. Futch gave a Power Point presentation on the proposed RFP for OTC injections. Mr. Hamner said the optimal spraying time is in February, March, and April. The DOC will test for residues in the leaf at no additional cost. Testing residue levels on fruit must be done externally to obtain the required levels of measurement. Mr. Hancock questioned doing a trial with a product that we are not sure is going to be available. Invaio has its own injection device and product. Is it best for CRDF to apply for its own Experimental Use Permit? Dr. Albrecht’s collaboration should be included on the permit since she is known for her experience with it.

Additional discussion centered on doubling or, at minimum, expanding the trials as much as possible but keeping within the 10 acres allowed to obtain results on more than a few trees in any location. It was suggested they concentrate on Southwest and Central Florida, noting that grapefruit will react the same as oranges do. Mr. Hancock moved to recommend pursuing the RFP experiment. The motion was seconded by Mr. Himrod, and it passed unanimously.

Mr. Page gave a presentation on the status of the 2015 CRDF rootstock trials that had been requested by Chairman Updike. He noted also that the current trials that still needed cooperators and whether CRDF should proceed. The financial incentive has been increased to what would be
comparable to a CRAFT trial (approximately $4,400/acre for Hamlins and $3,400/acre an acre for the Vernias and Valencias, depending on the number of trees per acre).

California has eliminated stage two scion trials for their scions because they do not feel they have time to see how stage two trials play out.

Ms. Shepp re-visited the discussion of Dr. Diepenbrock’s proposal. Mr. Dantzler suggested he give her a no-cost extension for several months to keep her going until there was an opportunity to take another look at it.

With no further business, the meeting was adjourned at 2:04 p.m.

Minutes submitted by Barbara Thompson