

**Plant Science Research Greenhouse Facility
Faculty Oversight Committee Meeting
September 8, 2021, 10:30 am**

Present: Chrislyn Particka, Director; Erik Runkle, (HORT), Co-Chair; Thomas Sharkey (PRL and BMB), Co-Chair; Bjoern Hamberger, BMB; Mary Hausbeck (PSM); Roberto Lopez (HORT), David Lowry (PLB); Carolyn Malmstrom (PLB); Eric Olson (PSM); David Smitley (ENT), Michael Walters (FOR)

The meeting opened with a discussion of a few space reassignments that have recently taken place. The objective is on using the facility, with its current limitations, to its fullest. The needs of each group are matched to the capability of the greenhouse sections. Open communication and collaboration are greatly appreciated!

Chrislyn provided an update on upgrades/modifications that have been made since the last meeting in March 2021. These include:

- Evaporative cooling systems. Led by greenhouse coordinator Trevor Hardwick, greenhouse staff and student employees thoroughly cleaned all of the systems to improve function. He and greenhouse engineer Larry Thayer designed screen covers for each pad and taught student employees how to build them. The screens are proving to be highly effective at catching debris (especially cottonwood tree seed “fuzz”) and keeping it out of the pads, which will prolong pad life and improve function. Temperature data analysis from one greenhouse indicates that during 6 days at the end of August in both 2020 and 2021, the maximum high temperature outside was approximately 31.5 °C. In 2020, the maximum high temperature inside the greenhouse was 6.5 °C hotter than outside, whereas in 2021, the maximum high temperature inside the greenhouse was 1 °C cooler than inside.
- In partnership with IPF Landscaping, a gravel border was installed around the entire perimeter of the greenhouse complex. The gravel will decrease the need for mowing and weed-whipping in narrow spaces and suppress weed growth, which was a source of constant weed seed and insect pressure in the greenhouses.
- Greenhouse engineer Larry Thayer led work in greenhouses 44 and 46 to remove walls and restore the greenhouses to their proper function. Larry also installed LEDs in greenhouse 46, solving a power insufficiency issue.
- A custom sprayer was built to apply whitewash, allowing for a faster, more even, application.
- Greenhouse 45d was renovated to establish a quarantine room. Any plant material (other than seeds) that is brought into the facility must go through the quarantine room before being placed in greenhouse sections. Contact Lance Forsberg (ljf@msu.edu) to arrange for use of the quarantine room.
- Greenhouses at the horticulture farm received new weedmat and benches, improving sanitation and safety.

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- HPS lights in many greenhouse sections were taken down and re-hung to provide a more uniform light environment.

Chrislyn also provided an update on the \$4M investment in the greenhouse facility. Phase 1 is well underway, which includes:

- Repaving the area between the east and west greenhouse ranges was completed in July.
- A project to fix the drainage in the floors of greenhouses 47-52 began in late July and will be complete by the end of September.
- Work is progressing to order and install the first set of Wadsworth Seed environmental control systems in about 1/4 of the greenhouse sections.

Any remaining funds from Phase 1 will be used to install LEDs and/or additional Wadsworth Seed environmental control systems.

Chrislyn listed the tours that have been given in recent months, including US Representative Elissa Slotkin in May and State Representatives Scott VanSingel (June) and Curtis Hertel (July, led by E. Runkle). These are done to help communicate the need for state funding to renovate the research greenhouses.

Chrislyn briefed the committee on the steam explosion that occurred on August 12, as a result of flooding in the steam tunnels due to an extreme rainfall event. IPF will be installing dewatering equipment and high-water alarms in steam tunnels to prevent future occurrence.

The meeting adjourned at 11:20 am.