

Minutes: PBCC Annual Meeting; 17 July 2023
Leader: Duke Pauli
Attending in person

The PBCC held their annual business meeting on 17 July 2023 during the NAPB annual meeting. A total of 26 attended the in-person meeting (virtual was not an option this year as NAPB was in-person only as well therefore the technical support to host a virtual meeting was not present). Discussions centered around accomplishments during the previous year and plans for 2023/24. Again, given the number of in-person attendees, it was decided to forego the usual subcommittee breakout structure and instead remain as a large group to discuss the idea of germplasm transitioning and best practices that should be employed.

The summarized minutes of this group session are captured below and represent the discussion of the participants present. Hand transcribed notes are also included.

The session was opened by PBCC Chair Duke Pauli who provided a brief background on the issue and highlighted that our overall goal was to ensure the security of public germplasm resources that have been developed for the sake of future breeding efforts. After this, Mikey Kantar provided a more in-depth explanation of the work that PBCC has been doing this past year, the development of the transition best practices document, and the projected timeline for hosting a USDA-NIFA supported meeting specifically focused on this issue.

Wayne Smith commented that one of the key issues with germplasm transitioning and something that relates to a larger problem, is communicating with stakeholders and leadership the value in public germplasm. In his view, if communication was enhanced then the underlying problem of resourcing plant breeding programs and keeping them operational could be better addressed as the fundamental value in these programs would be clear. With this in mind, it was suggested that a separate document be created that clearly demonstrates the impact of plant breeding programs for state stakeholders and the institution. An example is highlighting how many royalty dollars are generated by released varieties and how this impacts farmers/producers who grow that variety.

Kate Evans highlighted that having clear, articulable guidelines for breeders who are preparing to retire is the first step to creating sustainable transitions. A key point was highlighted that breeders, at a fundamental level, want to ensure a smooth transition because they want their developed germplasm used by the incoming breeder as it is a form of their legacy. Another fantastic point that was raised was that in addition to the documentation describing the germplasm, information describing the logistical operation of the program would also be extremely beneficial as most times there is not overlap between the retiring breeder and the newly hired breeder; as such that knowledge is lost and represents another area where public resources are not effectively transferred. Finally, another piece of information that should be captured is some level of guidance on what germplasm has been previously acquired and how it was used in crossing.

Marceline Egnin also highlighted that any type of transition planning should also include clear instructions on how germplasm should be stored for long-term preservation. This is essential so institutions can address if they have the capacity to store the germplasm or if they need to find other ways to store the material. Along with information on storage conditions, there should also

be a broader conversation of what information needs to be included with each germplasm accession as this is essential otherwise there is limited value with respect to its further use. This idea of documentation also brought forth the idea that some type of digital information repository is needed as this would greatly facilitate

Julie Dawson also commented that identifying what programs/crops are vulnerable to the impacts of transition would also be beneficial as then perhaps USDA might be willing to partner with these programs to help ensure their continued operation after the transition. This would be done to preserve the investment the public has already made.

Jim McFerson, who is currently serving on the National Genetic Resources Advisory Council, also raised the issue of how to perhaps rescue some collections that may have already been subject to a poor transition. There are countless stories of transitions that have already occurred and gone wrong, so would there be any mechanism to try and rescue those collections? These collections still represent public value and therefore, it is felt there is a sense of duty to preserve them to the best of our ability.

Another point was raised that perhaps engagement with the private sector is needed. Although the private sector focuses on their own germplasm development, it often uses germplasm developed through prebreeding programs at LGUs. Given that the LGUs are addressing the needs of the companies, through the costly process of prebreeding, they have a vested interest in ensuring access to these materials. Parallel to this idea was how to engage the respective commodity group for each crop to bring this matter to their attention as they are also key stakeholders. Engagement with both groups might serve to better foster relations with the public institutions and help alleviate some the problems institutions have with financing a transition.

Along those lines, it was mentioned by Jenna Hershberger that perhaps there should be a public funding mechanism to specifically support the transition and exchange of germplasm. It was suggested to USDA-NIFA representative, Christian Tobias, that perhaps NIFA could develop a new grant program that is included with the standard AFRI RFA release. These funds could be used to support the documentation of the germplasm, prepare it for storage, document breeding program logistics, and help support the incoming breeder on learning about and utilizing the developed germplasm. This idea was well received by the attendees as with all things, if there is no support for it, it will likely not be completed. Finally, it was pointed out that given the large amount of investment in public breeding programs, the cost of a grant to cover periods of transition would be relatively minor in comparison.

Rich Pratt pointed out another issue that needs to be planned for is whether germplasm repositories, such as the USDA GRIN, will accept the material. In his experience, he encountered the situation where the repository was unable or unwilling to accept the germplasm creating a difficult situation for the institution. In cases like this, what are the best paths forward? How should this situation be handled? While no one had any concrete solutions to the problem, it does highlight the complexity of the larger issue and why a best practices transitioning document is needed.

One agreed upon item was the need for case studies. The meeting attendees agreed that having a handful of case studies would be incredibly useful. Ideally, studies focused on when transitions

that were effective would be included along with those that were not or created significant problems. Also, along those lines, transitions that represent different situations would be valuable. This would include overlap between the retiring and new breeder, when a breeding program is shut down with no incoming breeder, and those programs which are being restarted after long periods of inactivity. The overall goal of the case studies is to highlight the different situations that arise (PBCC is cognizant that case studies will not represent every situation), what was effective/helpful, and what was not helpful.

To facilitate the development of a transition best practices document/reference, everyone agreed that having a conference dedicated to the issue would be incredibly useful and likely well attended. The PBCC is actively targeting a USDA-NIFA-AFRI conference grant so that a meeting devoted to just this topic can occur in the upcoming year. The tentative plan is to host this meeting perhaps before or after the next annual NAPB meeting, which most PBCC members attend, to maximize attendance. Leading up to the meeting, PBCC members have begun drafting materials and a short survey that can be used to help guide the discussion at the meeting as well as shape what the ideal outcomes would be.