

Plant Breeding Coordinating Committee

Operating protocols

- A. Link to PBCC web page that is currently hosted by the Main Lab
 - a. <https://www.nrsp10.org/PBCC>
- B. Overview and introduction to PBCC
 - a. The mission of PBCC is to focus on issues facing public plant breeding at land-grant universities (LGU) and other public institutions providing plant breeding education and research, while also addressing plant breeding issues affecting all who use, or are served by, the discipline.
 - b. PBCC was organized in 2006, after years of discussion across crops and sectors led to broad agreement on the need for a stable format for research and discussion. PBCC was proposed and approved in the format of a multistate coordinating committee (CC) within the State Agricultural Experiment Station (SAES) system. Core members are SAES researchers from any state having an interest in plant breeding (over 40 states at present). Other participants are welcome, including Cooperative Extension, non-LGU agricultural colleges and universities, 1890s LGUs, 1994 Tribal Colleges, other USDA agencies, and private sector participants, based on their interests and contributions.
 - c. Though PBCC is national in scope, there is no national CC structure. For management purposes, PBCC is approved as a regional CC, specifically as Southern Coordinating Committee 80 (SCC 80) <https://www.nimss.org/projects/view/mrp/outline/18753>, reflecting that region's sustained public breeding investment over a wide range of crops ([https:// www.nimss.org/projects](https://www.nimss.org/projects)).
 - d. The SAES multistate coordinating committee (CC) structure was proposed for several reasons that made it a good fit. CCs are proven mechanisms for public-sector "work space" when priority and complexity extend beyond the scope of a single state. CC's use established review and approval processes; and have relatively low operational costs of time and funds. Importantly, CC activities correspond well with needs for public plant breeding: develop and share ideas and information; identify critical/ key issues; create broad interest and draw specific attention where needed, and, eventually, coordinate programs.
 - e. Depending on the state, Hatch funds may be available for CC operations such as travel to meetings or portions of member salaries. By law, however, Hatch funds are only for SAES participants. A consequence is that SAES members are central to PBCC's accountability and reporting. Another is that PBCC may not contact elected members of government. PBCC may

welcome and respond to contacts and questions, but not initiate contact. Also, multistate CCs such as PBCC have a unique place in federal/state interaction (see Table 1). They are real-time approved channels through which USDA (i.e., NIFA) may contact participants directly and without additional protocol, to request input about advances, opportunities, needs, and issues. By contrast, without an approved channel, NIFA is limited to requesting input only in public situations, such as listening sessions, that are open to anyone and widely announced in advance through the Federal Register and other channels. These are important processes but lack the agility and specificity that approved multistate projects and coordinating committees provide.

- f. The young PBCC published a number of white papers describing plant breeding's contributions to human health, food security, rural development, and environmental protection. More recently, PBCC has provided input to USDA listening sessions; compiled and distributed success stories showing impact of federal funding for plant breeding, and was instrumental in publications on plant genetic resources (Byrne et al., 2018; Volk et al., 2019), intellectual property standards (Dawson et al., 2018), and science communication (Khoury et al., 2019). PBCC has completed a national survey of public plant breeding capacity; a public report of the results is available at https://www.nrsp10.org/US_public_plant_breeding_capacity. A recently completed survey identified the initial employment opportunities of graduating plant breeding PhD students.
 - i. Results available [here](#)
- g. Present PBCC Objectives
 - i. Collect, analyze, & disseminate information on U.S. plant breeding effort, both public and private sectors
 - ii. Promote conservation, characterization, and use of plant genetic resources, and access to them
 - iii. Identify Best Management Practices for public sector IP protection
 - iv. Optimize opportunities for public-private collaboration in plant breeding research and education, including continuing education for plant breeders
 - v. Foster communication among public plant breeders and federal agencies on policy issues, including alerts to threats to agricultural security that are relevant to plant breeding
- h. Differences and similarities between PBCC and professional societies

	PBCC	NAPB	ASA-CSSA-SSSA	ASHS
Organization type	Multistate Activity	Professional Society	Professional Society	Professional Society
Established by	SAES & NIFA	Members	Members	Members
Ownership	Land Grant Uni. (LGU) System	Independent	Independent	Independent
Membership	One /SAES, director-designated Anyone else by request	Anyone Membership fee	Anyone Membership fee	Anyone Membership fee
Primary activity	Coordinate activities to solve plant breeding problems of common interest	-Scientific exchange -Advocate for plant breeding -Recognize achievements	-Scientific exchange -Advocate for Agriculture Science -Recognize achievements	-Scientific exchange -Advocate for Horticultural Science -Recognize achievements
Recommendations to	LGU & USDA leaders State & federal agencies Congress ONLY if asked	State or federal legislators Any other federal, state, or private entity	State or federal legislators Any other federal, state, or private entity	State or federal legislators Any other federal, state, or private entity
NIFA may request comments	Directly (generally a role of Natl. Prog. Leader)	Only in open public forum widely announced in advance	Only in open public forum widely announced in advance	Only in open public forum widely announced in advance
Educational targets	Everyone	Everyone	Everyone	Everyone

C. Offices and Roles of Officers

- a. Chair: The role of the Chair is largely to coordinate the activities of the group in order to keep the PBCC Executive Committee functioning. The duties ascribed to the position are outlined below:
 - i. Manage the monthly meeting including the following
 1. Send out calendar invites
 2. Provide online (e.g. Zoom) meeting room link
 3. Draft an agenda
 4. Run the meeting
 5. Define and assign action items, if needed
 6. Present the brief PBCC update at the general NAPB meeting
 - ii. Draft annual report
 1. The annual report is due 60 days after the annual meeting. Details on report format and submission process is detailed below
 2. Draft renewal
 - a. Every five years, the PBCC must submit a renewal document outlining the charge of the organization and the objectives it seeks to accomplish.
 - b. Create new objectives in addition to the capacity and education objectives, which are always part of the mission.
- b. Vice Chair: The role of the Vice Chair is to assist the Chair in executing the duties of the PBCC Executive Committee. They are also to assume the role of Chair in the event that the Chair is unable to execute the duties of the

office or unable to attend meetings/functions. The duties ascribed to the position are outlined below:

- i. Oversee the PBCC budget (Link to [Budget](#)).
 - 1. The PBCC is given a budget of up to \$6,000 annually from the National Association of Plant Breeders (NAPB). Budget is described in more detail below
 - 2. Requests are made to the NAPB Treasurer to either issue checks on request or reimburse PBCC-relevant purchases.
- c. Secretary: The role of the Secretary is to document and record the proceedings of the PBCC Executive meeting as well as other meetings related to the function of PBCC. The duties ascribed to the position are outlined below:
 - i. Take meeting minutes for the monthly PBCC meeting
 - 1. Draft minutes are sent to the Chair for review. Once reviewed the Chair distributes draft minutes to meeting attendees for review prior to the next monthly meeting.
- d. Past Chair: The role of the Past Chair is to provide guidance to the current Chair as well as the PBCC Executive Committee. The duties ascribed to the position are outlined below:
 - i. Attend all monthly meetings to provide guidance and input on PBCC matters.
 - 1. Offer historical perspective on PBCC matters and operations. This also helps ensure continuity in operations and organization mission.
- e. Movement through positions
 - i. Position roles within PBCC begin after the conclusion of the annual meeting. At that time, the Chair for the preceding year assumes the role of Past Chair. The Vice Chair becomes the Chair, the Secretary assumes the role of Vice Chair, and the newly elected Secretary starts their tenure in the role.

D. Subcommittee, descriptions and roles

a. Education

- i. Objective: The objective of the Education Subcommittee is to provide guidance in the training and education of future plant breeders as well as promote plant breeding education. Through this mission, the Education Subcommittee identifies needs with respect to workforce training and development to provide recommendations of fundamental skills and knowledge that plant breeding students and trainees will need to be successful in the profession. This includes

formal coursework as well as applied skills needed to execute the objectives and duties of a plant breeder.

ii. Core Concepts

1. The subcommittee is responsible for identifying core concepts needed for plant breeding training and refining these concepts as the technology and understanding of plant genetics/breeding advances.
2. Present Core Concepts are:
 - a. Crop Genetics
 - b. Quantitative Analytics for Plant Breeding
 - c. Plant Breeding Methods
 - d. Applied Plant Molecular Genetics and Biotechnology
 - e. Molecular Plant Breeding
 - f. Quantitative Genetics for Plant Breeding
 - g. Principles of Cultivar Development
 - h. Host-Pest Interactions

b. Communications

- i. Objective: The objective of the Communications Subcommittee is to communicate and promote the importance of plant breeding to the broader plant science community as well as the public. Through this objective, more attention, community engagement, and stakeholder involvement can be achieved to improve and enhance plant breeding capacity, education and training, and awareness.
- ii. Success stories
 1. Success stories highlight plant breeding success, whether cultivar release, germplasm utilization, scientific discovery, or other triumphs related to plant breeding, to the broader plant science community and public.
 2. Solicit Stories and help authors craft the stories to fit the comics
 - a. Solicit high quality photos
 - b. Help them modify technical jargon to more understandable to a general understanding
 - c. Discuss iteratively stories with authors
- iii. Student video contest
 1. Student video contest is used to create short, less than 3 minutes, videos that highlight some aspect of plant breeding including the following:
 - a. Germplasm utilization
 - b. Activities related to student training in plant breeding

- c. Scientific research
- d. Breeding methodologies

c. Germplasm

- i. Objective: The objective of the Germplasm subcommittee is the conservation, utilization, and promotion of plant genetic resources in plant breeding. As plant breeders, we all recognize how vital these genetic resources are to our profession, but more importantly, to the greater communities we are all part of. By bringing attention to the importance of these precious resources, the Germplasm Subcommittee seeks to educate the general public on the need for conservation and study of these plant genetic resources for the sustainment of agriculture.
- ii. Development of germplasm best practices

d. Plant Breeding Capacity

- i. Objective: The objective of the plant breeding capacity subcommittee is to critically evaluate the state of resources within the area of plant breeding. This includes but is not limited to:
 - 1. Educational capacity at public institutions
 - 2. Human capacity in the form of trained plant breeding professionals
 - 3. Research capacity to provide resources for the study and investigation of science related to plant breeding
 - 4. Institutional capacity for providing needed resources for public breeding programs
 - 5. National capacity for meeting the private and public sector plant breeding needs and objectives

E. Financials

a. Annual Budget

- i. \$6,000 is the annual budget provided to PBCC through NAPB (if justified, additional funds may also be requested). These funds can be used to support the following activities or as approved by the PBCC Committee which requires a vote.
 - 1. Page fees for manuscripts and other publications
 - 2. Travel related to the execution of the PBCC mission and goals of PBCC
 - 3. Promotional materials including posters, flyers, handouts, banners, or merchandise that directly supports the mission and goals of PBCC
 - 4. Other expenses that are deemed necessary or serve to promote the mission of PBCC or further US plant breeding.

5. Fees for artists and graphic designers.

- b. Process for spending
 - i. To obtain funds, the required form must be completed and submitted to the Treasurer of NAPB. The Treasurer will then issue a check/payment on behalf of PBCC
 - ii. The form to complete can be found here: [Link to form.](#)
- c. Reporting
 - i. Once approved by NAPB, there is no additional reporting required for PBCC record keeping other than tracking in our annual budget spreadsheet (with link found above).
 - ii. The Vice Chair is in charge of keeping track of the annual budget and making sure that reporting and all records are maintained accurately and on a timely basis.

F. Election of Secretary

- a. Because officers rotate sequentially through the PBCC Executive Committee positions, election of the Secretary serves to select a candidate that will serve on the PBCC EC committee for a total of four years (Secretary, Vice Chair, Chair, Past Chair).
- b. Candidates must meet the following criteria:
 - i. Hold the degree of PhD in a field directly related to plant breeding, plant science, horticulture, or any other field related to plant science
- c. The election process begins in March when official nominations are requested from the PBCC membership as well as through solicitation of the state representatives and membership of NAPB.
 - i. Email to state representatives to solicit nominations needs to be sent in March using directory.
 - ii. Nominations are requested from peers and potential candidates may self-nominate.
- d. The period to accept nominations lasts until June 15th at which point nominations close.
- e. Once all nominations have been received, prospective candidates are contacted to make sure they agree with the four-year commitment to the PBCC EC Committee.
- f. If there are more than two nominations, the executive committee shall convene to determine which nominees shall become the candidates to be placed on the ballot.
 - i. Candidates are asked to supply an approximately one paragraph self-description and why they are the preferred qualified candidate for the position.
 - 1. This will be shared publicly.

- ii. Candidates are also asked to supply a current CV once they agree they agree to candidacy.
 - 1. This will be shared with those you are eligible to vote.
- g. Process for voting
 - i. An online voting poll will be opened up and sent out to PBCC state reps, EC, and committee members once all candidates are notified, vetted, and approved.
 - ii. Voting remains open for approximately 4 weeks.
 - 1. Reminder emails/notifications are sent out during the interim.
 - iii. Once all votes are tallied, the candidate will be contacted to ensure they accept the position. This should be done prior to formally announcing the results in the event the selected candidate declines the nomination and appointment to the position.
 - iv. If the 1st candidate declines the position, the candidate with the second most votes should be approached about accepting the position of PBCC Secretary.

G. Annual Meeting

- a. Organization and structure
 - i. Meeting authorization sent by administrative adviser
 - ii. The PBCC Chair contacts the President NAPB to arrange meeting room and necessary “technology” for meeting in conjunctions with the NAPB annual meeting
 - 1. PBCC Chair works with executive committee to prepare agenda for the annual meeting
- b. Presentations should be archived and documented with photographs for posting at the NIMSS and the PBCC web-sites
 - i. Can be found [here](#)
- c. For each objective or breakout group at the annual meeting, reports/summaries are to be generated by each group. These are collected and included in the annual report.
- d. The Chair will manage the annual meeting
- e. The secretary will collate notes
- f. The vice chair will distribute meeting summary to the membership
- g. The final report will be posted to the PBCC website as well as submitted to NIMSS.

H. Annual report

- a. The report format can be found [here](#)
 - i. Short sections on each objective
 - ii. Summary of achievement (success stories, publications, presentation)

- b. The final report must be submitted within 60 days of the last day of the annual PBCC meeting
- c. Steps for report submission
 - i. Log into NIMSS (nimss.org)
 - ii. Select Meetings/Reports>Reports>Draft/Edit Report from the left menu
 - iii. Find SCC80 and the appropriate meeting date
 - iv. Click Create Report (or Edit if you need to edit a report still in Draft)
 - v. Using the Sections menu on the left, select the report section you wish to edit; click Save to save your work before exiting each section
 - vi. Complete all sections of the report
 - vii. From the Sections menu, select Submit Report when you are ready to submit the report for Administrative Advisor approval
- I. Contact information relevant to PBCC
 - a. NMIS website: <https://www.nimss.org/projects/18753?search=scc80>
 - b. AES Director