

## **CROP GERmplasm COMMITTEES**

A Key Component of the U. S. National Plant Germplasm System (NPGS)

Rationale – Responsibilities – Organization

American agriculture is of vital importance to the nation's welfare. In agriculture, production of most key food, feed, fuel, fiber, and ornamental crops, and associated research is generally crop-commodity oriented. Therefore, plant genetic resources ("crop germplasm") and their conservation and use are also most effectively considered on a crop-by-crop basis.

Research and development efforts on crop germplasm involve collective support from Federal and State agencies and private industry. The boundaries for each sector's responsibilities and efforts are difficult to delimit. There is a continuum from the utilization of germplasm in agricultural production back through seed/propagative material production, breeding, enhancement, evaluation, characterization, preservation, and the acquisition of plant genetic resources and associated information. The acquisition, preservation, characterization, and distribution of basic germplasm stocks and associated information are mainly supported by Federal and State funds whereas the production and delivery of commercial seeds/propagative material to the grower is largely in the hands of private industry.

Crop Germplasm Committees (CGCs) are needed to provide sound information and authoritative technical input regarding the conservation and use of germplasm of specific crops. Selection for membership on a CGC carries with it both national and professional prestige as recognized by the competence required, importance of issues considered, influence on research, and support of genetic resource management activities.

### A. Definition and Name

Crop Germplasm Committee (CGC) is a generic name for a specific national working group of specialists providing analysis, data, and technical input about germplasm within a specific crop or group of related crops of present or future economic importance.

### B. Function

The function of a CGC is to serve their crop commodity groups and provide expert input to individuals or organizations such as the USDA/Agricultural Research Service (ARS), State Agricultural Experiment Stations (SAES), and others on technical matters relating to crop germplasm, its collection, preservation, characterization, evaluation, enhancement, and effective utilization.

C. Duties and Responsibilities

1. Develop comprehensive Crop Vulnerability Statements and concise Crop Vulnerability Updates which assess a crop's or group of crop's vulnerabilities to specific threats, and the adequacy of the germplasm base for a crop or group of crops. These reports inform appropriate governmental and private agencies of the needs for broadening and strengthening each base via additional exploration, collection, acquisition of private collections, and evaluation.
2. Develop and provide a strategic overview of the total national scientific effort devoted to the study and utilization of germplasm of specific crops or group of crops and identify priorities and cooperative approaches for improvements in the germplasm management system where needs are apparent.
3. Serve as scientific peer reviewers of proposals for funding support to: 1) acquire new germplasm for NPGS collections, especially through plant explorations; and 2) conduct characterizations or evaluations of NPGS germplasm accessions and incorporate the resulting data into GRIN-Global.
4. Assess genetic improvement progress in each crop through breeding and the role crop germplasm might play in improving traits of economic importance.
5. Suggest guidelines for the effective maintenance, regeneration, distribution, evaluation, characterization and utilization of germplasm and associated information for each crop or group of crops.
6. Consider needs for fundamental and applied studies on each crop and identify promising research approaches and enhancement opportunities.
7. Assess the impact of biotechnology and genetic engineering crop germplasm needs and utilization in their respective crops.
8. Develop and maintain an understanding of international germplasm developments and activities on the crops(s) represented by the CGC. Identify and describe implications for science and agriculture in the United States or in those institutions abroad that receive major support from this country.
9. Provide means for commodity groups to voice opinions on needs for crop germplasm, their improvement and utilization to those individuals responsible for these areas at the national level.

D. Formation

1. The CGCs will be formed for specific crops or a group of crops important or potentially important to U.S. agriculture. Although several individual crops might

be grouped into a single CGC, the number of extant CGCs is not subject to a specific limit.

2. Whenever possible, a CGC should have its origin in an existing national crop improvement conference or association.

3. The ARS National Germplasm Resources Laboratory (NGRL), Beltsville, Maryland, will assist in the formation, direction, and maintenance of CGCs.

4. The CGCs will exist subject to periodic review of need.

E. Membership

1. Membership on specific CGCs shall include scientists and producers who are knowledgeable about germplasm activities relating to that specific crop or group of crops with representation from, but not limited to, SAES, ARS, and private industry.

2. Membership should include representation from various scientific disciplines most pertinent to germplasm activities of each crop or group of crops. Representation related especially to the geographical diversity of crop production within the U.S. shall be observed.

3. The number of members on each CGC will be unspecified although it is anticipated that 10 to 15 or fewer should suffice.

4. Selection of CGC members should be the function of each respective crop commodity group with ARS, SAES, and private industry being encouraged to recommend persons for membership.

5. Each CGC shall have a chairperson, selected with special care, who is a recognized national scientist and authority for the crop or group of crops they represent.

6. Tenure and rotation of members and CGC leadership shall be determined by members of each individual CGC. Considering that CGC membership is based primarily on expertise, long tenures are expected. However, where equivalent expertise exists, rotation of membership is encouraged through individual terms of 4 to 6 years. CGCs are encouraged to identify and invite new and early career scientists with expertise in their crop(s) to become members of the committee.

7. Crop-specific curators and ARS National Program Leaders will serve as ex-officio members of CGCs. Others such as Research Leaders of sites where the germplasm is managed; personnel at the NGRL; the National Laboratory for Genetic Resources Preservation; and the National Plant Germplasm Quarantine Center will be ex-officio members when determined appropriate by the CGC.

F. Working Relationships

1. In some cases, CGCs can be sanctioned by and represent their respective commodity research groups, e.g., North American Alfalfa Improvement Conference or Sorghum Improvement Conference of North America, where such exist, as an action committee on germplasm concerns.
2. The Research Leader, NGRL, through her/his office, will coordinate activities of each committee, maintain a registry of their membership, assist in the organization of new CGC, help develop guidelines for their operations, and otherwise assist the CGCs in the execution of their responsibilities.
3. The CGCs will serve primarily their respective crop commodity groups, the USDA, Association of Public and Land-grant Universities, and other national organizations, as appropriate, and identify national problems and needs relating to germplasm of specific crops.
4. The CGCs collaborate with curators, Research Leaders, and the ARS National Program Leader for Plant Germplasm on matters relating to the introduction, characterization, evaluation, preservation, utilization, dissemination of germplasm and associated information, and the improvement and use of that germplasm.
6. The CGCs meet, study issues, and engage in other germplasm activities relating to their specific crop or crops.
7. Each CGC will plan its own meetings and activities, but whenever feasible, should meet with their respective commodity research conference. “In-person” meetings are encouraged, but teleconferences and/webinars can suffice for annual/periodic meetings.
8. Each CGC is encouraged to formulate Bylaws which record that CGC’s operational procedures, such as choosing a Chair, filling vacancies with new members, the recommended tenure for the Chair and members, voting procedures, establishing subcommittees and their functions, membership representation by commodity groups, ex officio members, etc.

G. Support

1. To the extent possible, the NGRL will provide administrative assistance for CGCs. The NGRL staff can arrange teleconference or webinar capacities at the CGC’s request. NGRL will maintain a publicly accessible website for CGCs that includes meeting dates, membership rosters, meeting minutes and reports, and the Crop Vulnerability Statements and Updates.

2. The ARS curators and the National Program Leaders will provide guidance and assistance to the CGCs.

3. The CGC members are unpaid volunteers. They are expected to apply support available to them through their own organization for CGC activities and meetings. They are subject to rules and administrative procedures of their respective organizations in conducting committee business.

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