

Division of Agriculture
PMGS-99-1
Issued February 12, 1999

ORGANIZATION AND OPERATION ARKANSAS CROP VARIETY IMPROVEMENT PROGRAM

ORGANIZATION AND MISSION

The release, production and dissemination of crop seed is an established function of the Arkansas Agricultural Experiment Station (AAES). The process used by the AAES to assure quality seed stocks was particularly effective when most, at least a large proportion, of the available crop varieties were developed by AAES scientists (i.e. public varieties). However, the role of state experiment stations is changing rapidly as private industry has assumed an increasingly important role in producing crop varieties. In addition, the relationships with other states relative to the exchange of plant material has changed substantially in the last 10 years from one of free exchange among crop breeders to an increasing restricted relationship. In many cases, state AESs are requiring that marketing groups be established before they will release varieties and royalties and fees are becoming more common. This changing environment prompted a review of the Arkansas Foundation Seed Program and a proposal to more tightly organize and orchestrate the release and dissemination program. It was decided that the entire release-dissemination process and all quality assurance needs should be aggregated under a single program, The Arkansas Crop Variety Improvement Program (ACVIP).

The ACVIP is a management entity within the AAES, Division of Agriculture, University of Arkansas system charged with assuring availability of high quality seed stocks to Arkansas agriculture. It has as its general purpose to release and make available crop varieties¹ and germplasms, whether developed through traditional or biotechnological methodologies. It also has as its purpose to continue to provide information on comparative performance of available varieties. Thus, ACVIP consists of two independent components, the Arkansas Variety Testing Program (AVTP) and the Arkansas Foundation Seed Program (AFSP). The ACVIP shall also be composed of, the Plant Materials Release Committee (PMRC), the Arkansas Foundation Seed Program (AFSP), and Arkansas Seed Council (ASC) as illustrated in the chronology of activities required for release and dissemination of Foundation Seed in the attached figure.

GOAL

The central goal of the ACVIP is to maintain a highly credible foundation seed program that provides the highest quality and reasonable quantity of seed of selected highly adapted varieties for certification and distribution to certified seed growers. This will be accomplished by operating within a system which provides leadership in the release and dissemination of standard horticultural, agronomic or forestry cultivars and germplasms as well as transgenic cultivars, germplasms and gene products.

¹AVariety@ and Acultivar@ are often used interchangeably; for the sake of simplicity, AVariety@ will be used herein.

MANAGEMENT

The operating officer of the ACVIP is the Director who reports to the Associate Vice President for Agriculture-Research (AVPA-R), Division of Agriculture, University of Arkansas System. A Board of Advisors for the ACVIP will be composed of the Associate Director, Arkansas Agricultural Experiment Station; Associate Director, Cooperative Extension Service; three representatives of the seed industry; one representative of the vegetable industry; one representative of the value-added food industry and a representative of the State Plant Board. The industry and Plant Board representatives shall be appointed by the AVPA-R.

The Director, ACVIP, will coordinate all activities associated with the crop improvement programs in the Division of Agriculture with regard to release of germplasms to private industry, foundation seed programs or other avenues by:

1. Serving as a point of contact for faculty, industry, producers and others with the Arkansas Foundation Seed Program.
2. Advising the AVPA-R relative to the restricted or unrestricted release of varieties, breeding lines, germplasms, gene or gene products.
3. Developing policies and strategic plans for approval of the AVPA-R; and, implementing such policies and plans when approved relative to the development and release of all cultivars, lines and germplasms. These policies, guidelines and plans shall include the establishment of relationships with seed industries on seed production, sale and distribution.

Specific functions of the Director, ACVIP, will include:

1. Chair the Plant Materials Release Committee.
2. Manage the Arkansas Foundation Seed Program including coordination with industry organizations such as marketing boards and seed associations; and, coordinate the activities of the Foundation Seed Program with producer marketing boards, foundation seed programs in other states.
3. Provide oversight for a uniform crop variety testing program.
4. Chair the Arkansas Seed Council and coordinate its activities with the overall plant improvement program of the AAES.

PLANT MATERIALS RELEASE/ SEED INCREASE PROCESS

The originating scientist petitions the Plant Materials Release Committee, PMRC, (see following sections for composition and role of the PMRC) for consideration of a variety, germplasm or other genetic material to be released by the AAES (see figure). It is the responsibility of the originating scientist to provide the research data and other information necessary to establish the plant material as superior to existing materials available for public use or as containing genetic traits important to the development of superior varieties (see Policy and Guidelines for Release of Plant Materials, PMGS-95-1).

The PMRC upon considering the presentation by the originating scientist may recommend to the AVPA-R that the material (1) not be released, (2) be released as a public variety or (3) be released on an exclusive basis (licensed) to private party(ies). The AVPA-R is not bound by these recommendations.

If the decision is a public release, the variety is then moved to the ACVIP for consideration as a candidate in the Arkansas Foundation Seed Program. If the decision is

exclusive release, procedures found in the Plant Materials Release document will be followed by the ACVIP in releasing the material.

Once foundation seed is of a quantity that it can be moved into the seed certification process, the variety is made available to certified seed growers through the Arkansas Seed Council by the Arkansas Foundation Seed Program. Each existing variety also is considered annually by the Arkansas Seed Council as to the need for continuance in the certification program. If the recommendation of the Seed Council to discontinue a variety in the certification program is accepted, the variety may be made available through the ACVIP for exclusive license (Figure 1).

ACVIP COMPONENTS

Plant Materials Release Committee (PMRC). The PMRC is appointed by the AVPA-R as an advisory committee and consists of four members (1 each) from the Departments of Horticulture, Agronomy, Entomology and Plant Pathology and is chaired by the Director, ACVIP. Ex-officio members of the committee include the Heads from the Departments of Horticulture and Agronomy, an extension representative, and an industry representative each for horticultural and agronomic crops and the manager, Arkansas Variety Testing Program. Additional persons knowledgeable about the proposed release may be invited to participate at the discretion of the PMRC. A representative of the Agricultural Publications Department will act as recorder and be responsible for all public relations activities related to the release.

The purpose of this committee is to advise the AVPA-R on the release of cultivars, germplasms and breeding lines of all crop materials not involved in the Foundation Seed Program (oats, rice, soybeans and wheat) and, when appropriate, to assure that industry provides an adequate supply of the germplasms after exclusive release.

Arkansas Foundation Seed Program (AFSP). The AFSP will operate under the direction of the Director, ACVDIP, in association with the Directors of the Research and Extension Centers and Research Stations within the AAES.

The purpose of the AFSP is to coordinate the maintenance, production and distribution of the highest quality oat, rice, soybean and wheat seed to certified seed growers within the State and the U.S.

The Arkansas Seed Council (ASC). The ASC was formed by the AAES to encourage the increase and use of cultivars of oats, rice, soybean and wheat adapted to Arkansas. The membership of the ASC shall consist of two members of the Arkansas Seed Dealers Association, two members from the Arkansas Seed Growers Association, one member appointed by the Associate Vice President for Agriculture-Extension (AVAP-E) to serve as general secretary, the Director of the ACVIP (as permanent Chair), one member from the State Plant Board, and one member from each of the crop commodity boards for which public varieties are produced (currently rice, soybean and wheat). The AVPA-R, AVPA-E and manager of AVTP will be ex-officio members of the ASC.

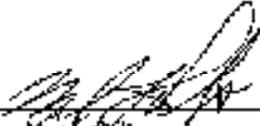
The ASC will meet twice each year at an appropriate time to determine whether cultivars approved for release by the PMRC will be included in the program, to determine which cultivars will be maintained in the program, to allocate foundation seed produced by the AAES and to announce the availability of new cultivars available in the program. At each of these meetings, the Director of the ACVIP will provide the ASC with information (in a written report to be included in the minutes of the meeting) regarding the acreage planted and harvested for each cultivar, the quantity of seed produced and harvested, the amount of seed discarded as a result of conditioning, the quality of each lot as determined by the State Plant Board and the amount of seed available for distribution. The Director of ACVIP will also report on the amount of seed

requested for each cultivar of each crop for the upcoming season for the purpose of discussions and planning for the upcoming growing season.

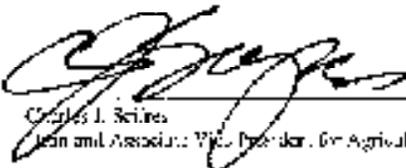
The ASC will be responsible for redefining the priority ratings for certified seed producers, for assigning and reassigning priority ratings to certified seedsmen based on performance standards. The ASC will also actively develop and distribute information regarding the performance and characteristics of the crop cultivars in the AFSP.

Arkansas Variety Testing Program (AVTP). The AVTP will be responsible for conducting or assisting in all field trials establishing the growth and yield characteristics of the major agronomic crops including corn, sorghum, wheat, oats, rice, cotton and soybean. It will be the responsibility of the Manager, AVTP or cooperating breeders to publish, on a timely basis, the annual results of the field trials in appropriate experiment station publications, to make the information available to growers, to the AFSP and to the ASC. All crop breeders will coordinate their variety testing with the AVTP to establish and publish comparative data before varieties are released.

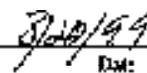
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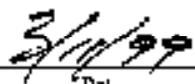


M. J. Smith
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Date: _____


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Chronology for Releasing and Disseminating Plant Materials

