

**POLICIES AND PROCEDURES
FOR
RELEASE AND DISTRIBUTION
OF PLANT MATERIALS**

**OKLAHOMA AGRICULTURAL EXPERIMENT STATION
OKLAHOMA STATE UNIVERSITY
STILLWATER, OKLAHOMA**

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Foreword

The mission of the Oklahoma Agricultural Experiment Station (OAES) includes the discovery and development of superior plant germplasms and varieties with current or potential economic importance to Oklahoma. As improved plant materials are discovered or developed, it is the policy of the OAES to transfer these materials to Oklahoma agricultural stakeholders as expeditiously as possible.

The purpose of this document is to establish uniform policy and procedures for release of plant materials by the OAES.

Policies and procedures presented herein are intended to be consistent with the guidelines and responsibilities regarding use and release of plant materials as developed by the Experiment Station Committee on Organization and Policy (ESCOP) of the Association of Public and Land Grant Universities (APLU), the Plant Variety Protection Act Amendments of 1994 (PL 103-349), the Federal Seed Act as amended (Title V), and general patent law. The policies and procedures established herein are intended to facilitate orderly and equitable release of plant materials while allowing necessary flexibility in their application to individual species or varieties under different circumstances.

Definitions of Classes of Released Plant Materials

All plant materials suitable for commercial production and meeting Federal Seed Act requirements are referred to herein as "variety(ies)." The terms "variety" and "cultivar" are considered as synonyms. Inbred lines or other "elite" germplasm used directly in production of commercial hybrid or synthetic varieties are considered as varieties as far as release mechanisms are concerned.

Plant material possessing special genetic characteristics of immediate or potential value in public or private breeding and/or research programs may be released as "germplasm." Germplasm encompasses seed and vegetatively propagated plants, pollen, and plant cell and tissue culture lines.

Criteria for Release of Plant Materials

To be eligible for release, a variety must be identifiable, reproducible, and clearly superior to existing varieties of the same species in one or more important characteristics or a combination of characteristics. Demonstration of these criteria will be judged on the basis of the description of the proposed variety and performance data obtained through sound and adequate experimental testing. The eligibility for release of a germplasm line will likewise be

contingent on its demonstrated or potential usefulness by virtue of possession of one or more genetic characteristics not found in other available germplasm of the same species or genetic background.

The OAES often cooperates with other state experiment stations, with the Agricultural Research Service and Natural Resources Conservation Service of the USDA, and with other public and private institutions in plant improvement research. The OAES will cooperate with such agencies in the release of plant materials having demonstrated merit when there has been mutual effort in the development and/or testing of the material. Contributions by cooperating agencies in the development and/or testing of a variety that do not warrant joint release of the variety by those agencies may be acknowledged in the release document.

Ownership of a variety or germplasm accrues to the individual(s), institution(s), agency(ies), and/or company(ies) developing or discovering the material and confers specific legal rights. Release of a variety or germplasm is independent of ownership of the material to the extent that an entity can jointly sponsor such release without being an owner of the material. Consequently, joint release of a plant material by two or more entities does not automatically confer co-ownership on all participants in the release. For certain kinds of joint releases (e.g., general unrestricted) it may not be necessary to address ownership. When necessary (e.g., restricted releases) legal ownership of plant materials jointly released by the OAES and one or more cooperators will be made on a case-by-case basis and stipulated by mutual memorandum of agreement. In those cases requiring specification of ownership, the memorandum of agreement will specify the extent of ownership by each party, but the official release document shall simply state which of the participant parties in the release are joint owners. The Director, OAES, may also seek additional legal ownership agreements with cooperators.

Release Procedures

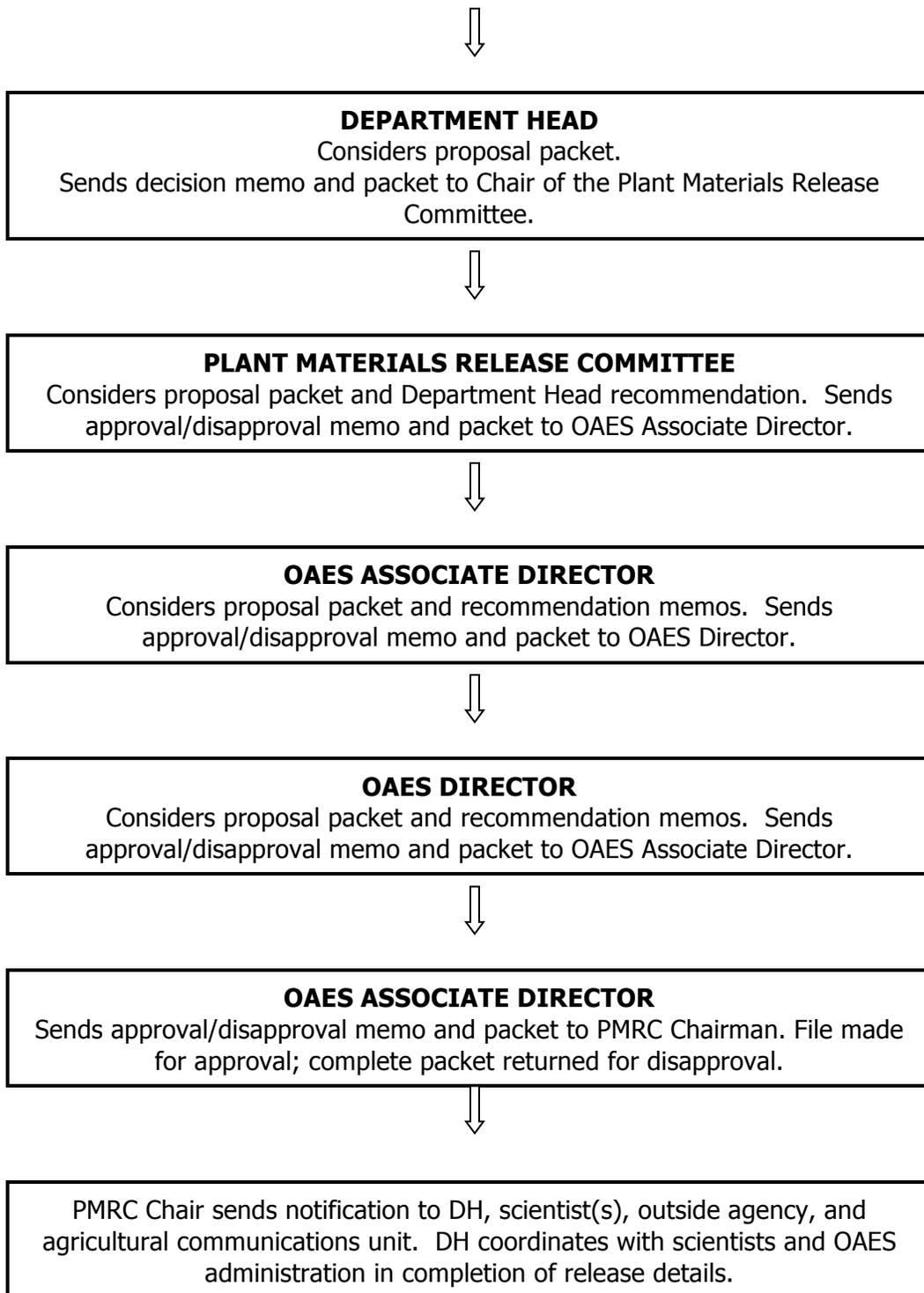
The originator or developer of new plant material must apply to the Director, OAES, for release by submitting a Plant Materials Release Form (Attachment 1), a proposal detailing the description and merits of the material, and a summary release document. The release proposal packet is submitted by the developer through the appropriate department. A flow chart depicting the various steps associated with a proposal packet is given in Fig. 1.

Release Proposal. The release proposal should contain the following information:

1. The experimental designation, kind, and scientific name of the material.
2. A description of the origin of the plant material and the procedures used in its development.
3. A description of the morphological, physiological, cytogenetic and/or performance features that distinguish the material. Performance data (yield, quality, disease, and insect reaction, etc.) from scientific tests subjected to appropriate statistical analysis(es) should demonstrate the usefulness and superiority of the material relative to standard varieties or available materials of the same species for the specified area of adaptation and probable use. For varieties, the comparisons should be with the leading commercial varieties.
4. Summary justification for release.
5. For varieties, an indication of the probable area and conditions of adaptation, the variety(ies) it is intended to replace, and any weaknesses relative to commercial varieties that might limit its usefulness.
6. For germplasms, an indication of the useful trait(s) and potential contribution to breeding and scientific investigation.
7. Seed increase status.
8. Generations of increase for varieties. A statement should indicate the pedigreed classes of increase permitted for the material. Pedigreed classes are Breeder, Foundation, Registered and Certified as defined by the Association of Official Seed Certifying Agencies. For perennial crops, the breeder may also stipulate the number of years a class of propagating stock may be produced from a field.
9. Suggested names.
10. Proposed method of release with justification.

Summary Release Document. In addition to the Plant Materials Release Form and detailed release proposal, the originator should submit a summary release document for signature by the Director and, in the case of joint releases, the appropriate officer of other cooperating entities. The release document summarizes the description, origin, and performance characteristics of the plant material. It frequently also serves as the "press release" document. Attachments 2 and 3 are examples of varietal and germplasm summary release documents, respectively.

Fig. 1. Flow chart of steps in the approval process for release of plant materials



Methods of Release

The decision to release plant material mandates a second decision on the method of release. The general policy of the OAES is to release materials in a manner most likely to ensure their equitable and ample availability to the general public. Following this basic policy, the OAES will release plant material through one of the following methods chosen by the Director upon the advice of principals (scientists, agencies) involved in the release.

1. **Unrestricted Public Release without Protection Certificate.**

Seed or vegetative propagules of a new variety are made available to the general public without limitation on use or sale of propagating material. Initial increase of propagating stock is under the auspices of the Oklahoma Foundation Seed Stocks (hereinafter referred to as OFSS), but certification is Voluntary. A new variety may be registered with the Plant Variety Protection Office without applying for a Plant Variety Protection Certificate (PVPC) as a means of advertising and verifying its release, which may aid in preventing others from obtaining a PVPC as a novel variety. Germplasm may be released by this method, usually with the proviso that a small amount of propagating material will be made available to bona fide researchers upon written request and agreement to give proper credit for its use. A fee may be levied to recover cost of production, handling, and shipping.

2. **Exclusive Rights Waived - Certification Not Required.**

A PVPC is obtained without the proviso that seed can be sold by variety name only as a class of certified seed. The OAES declares the variety to be a public release, with waiver of exclusive rights.

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A PVPC is obtained with the proviso that seed can be sold by variety name only as a class of certified seed. The OAES declares the variety to be a public release, with waiver of exclusive rights.

4. **Exclusive Rights Retained - Certification Not Required.**

A PVPC is obtained without the proviso that seed can be sold by variety name only as a class of certified seed. The OAES retains or assigns to agent(s) or licensee(s) exclusive rights to use for a specified period of time, with or without remuneration.

5. **Exclusive Rights Retained - Certification Required.**

A PVPC is obtained with the proviso that seed can be sold by variety name only as a class of certified seed. The OAES retains or assigns to agent(s) or licensee(s) exclusive rights to use for a specified period of time, with or without remuneration.

6. **Exclusive Rights Retained - Plant Patent.**

A plant patent is obtained for a vegetatively propagated variety or germplasm. The OAES retains or assigns to agent(s) or licensee(s) exclusive rights to use for a specified period of time, with or without remuneration.

7. **Exclusive Rights Retained - Utility Patent.**

A utility patent is obtained for a vegetatively or sexually reproduced variety or germplasm. The OAES retains or assigns to agent(s) or licensee(s) exclusive rights to use for a specified period of time, with or without remuneration.

Notice of Release

OAES Release. Public announcement of the release of a plant material will ordinarily be issued at time of release, or an appropriate time thereafter. In some instances, particularly for exclusive or partially exclusive licensed materials, the parties may agree that no news release will be made by the OAES. Public release announcements by the OAES will normally be through Agricultural Communications Services of the Division of Agricultural Sciences and Natural Resources. News releases of a new variety should coincide with the availability of reasonable amounts of propagating stock. In some instances, notice of release of a variety or germplasm may be made to selected public and private agencies, institutions, or organizations well in advance of a public news release.

Cooperative Releases. When the OAES cooperates with other agencies, institutions, or organizations in the release of plant materials, the date of public announcement of the release is to be agreed upon by all parties.

Registering Plant Varieties

Upon administrative approval of release of a new variety or germplasm, it is the policy of the OAES to register or list the material with the appropriate authority. Crop varieties and germplasms are registered with the Journal of Plant Registrations. Horticultural varieties and germplasms are listed with the American Society of Horticultural Science. Instructions are available from the respective Societies registering different plant cultivars or germplasms.

Exclusive Releases

Exclusive or partially exclusive licenses may be licensed to one or more private companies, grower or marketing organizations, or other bona fide organizations to use protected varieties and germplasms when one or more of the following provisions exist:

1. The interests of the University, the OAES, and the public will best be served by the proposed license, in view of the applicant's intentions, plans, and ability to produce and distribute adequate propagating stock, or otherwise use the plant material on a continuing basis.
2. Adequate certified propagating stock is not likely to be achieved expeditiously on a continuing basis under any nonexclusive license which has been granted, or which may be granted to produce and distribute propagating stock.
3. Exclusive, or partially exclusive, licensing is a reasonable and necessary incentive to call forth the investment of risk capital and expenditures to produce and distribute adequate propagating stock on a continuing basis.
4. The proposed terms and scope of exclusivity are not greater than reasonably necessary to provide the incentive for producing and distributing adequate propagating stock on a continuing basis.

The usual steps to be followed in the process of licensing include:

1. Procurement of licensing bid(s). Specific procedures used in procuring licensing bids will be decided on a case-by-case basis by the Director acting with the advice of Principals involved in the release. Collaborative research/development agreements between the OAES and private enterprise may, in limited cases, address licensing of products derived from the effort. When no such agreements exist, procedures will be adopted to solicit licensing bids. The Director may solicit bid proposals through direct mailings, commercial advertisement, or other appropriate means.
2. Information included in the request for proposals for licensing of rights would usually include as a minimum: 1) a description of the material and information pertaining to its geographic adaptation and performance, 2) criteria for the licensing of the material, and 3) a suggested format to be used in applying.
3. Bids will be judged on the criteria specified in the request for proposals for licensing of rights. The Director will notify the successful applicant(s) and make the contractual agreement.

PVPA or Patent Protection

Plant varieties approved for release by the OAES will normally require application for a PVPC under the Plant Variety Protection Act, specifying when an approved variety is to be sold by variety name only as a class of certified seed, and retaining exclusive rights. Selection of one or more of the previously described alternatives under the act will be made on a case-by-case basis.

The application for a PVPC will ordinarily be prepared by the originating scientist(s) in cooperation with the Director of the Oklahoma Pedigreed Seed Services for submission by the OAES Director to the USDA Plant Variety Protection Office. The applicant will be the OAES. The OAES will enlist the provisions of the PVPA to prevent unauthorized use of a variety or germplasm developed and released by the OAES.

Plant material inventions that are candidates for protection under general patent law (plant patent or utility patent) will be considered and acted upon in accordance with OAES policies and procedures governing intellectual property rights.

Royalties and Revenues

All royalties and revenues collected from licenses for plant materials are subject to OSU Policy 1-0202, Intellectual Property, which describes distribution policy and procedure (i.e., 50% allocated to originators, 30% allocated to OSU Technology Development Center, and 20% allocated to the OAES).

Increase and Maintenance of Materials

When plant material is identified as warranting release, propagating stock is increased by the originator in sufficient quantity to meet demand. For commercial varieties, the Breeder stock will be increased to the volume necessary to meet demands either directly or through the Foundation Seed program. Breeder stock of a variety should be maintained as long as there is significant public use of the variety. When a variety's public use is judged to be inadequate to warrant continued maintenance, the station will notify appropriate agencies of its intent to discontinue maintenance.

It is the responsibility of the Oklahoma Foundation Seed Stocks (OFSS) to produce and maintain an adequate quantity of propagating stock to ensure a variety's effective release and full utilization. The OFSS will provide the maintenance of an adequate supply of propagating stock of all plant varieties released under its jurisdiction for which there is substantive demand.

New varieties may be entered into the Oklahoma Seed Certification Program and thereby into the OFSS program by meeting one or more of the following provisions:

1. Release by the Oklahoma Agricultural Experiment Station.
2. Endorsement by a Member Agency of the Association of Official Seed Certifying Agencies (AOSCA).
3. Certification by the Plant Variety Protection Office (subject to pertinent sections of the Oklahoma Seed Certification Standards and Rules).

Acceptance of a variety into the Oklahoma Seed Certification Program will be at the discretion of the Director, Oklahoma Pedigreed Seed Services, with the advice and consent of the Executive Director, Oklahoma Crop Improvement Association (OCIA). Foundation propagating stocks will be produced, processed, and allocated under regulations established for the Foundation Class of a respective crop established by the OCIA or AOSCA. Foundation propagating stocks will be sold to approved producers at a price established by the Director of Pedigreed Seed Services. Allocation of Foundation Stock of public varieties will be on an equitable basis to approved producers subject to limitation of availability.

Plant Materials Release Committee

The OAES Plant Materials Release Committee is appointed by, and is advisory to, the Director of the OAES. The committee shall consist of at least five voting and five ex officio members. The voting members shall be appointed by the Director from departments with faculty involved in plant improvement programs. The five ex officio members shall be the Heads of the Plant and Soil Sciences and Horticulture departments, the Executive Director of Oklahoma Crop Improvement Association, the Coordinator, Productions and Operations, of Oklahoma Foundation Seed Stocks, and a member of the Division's agricultural communications unit.

The responsibilities of the Committee will include advising the Director on policy and procedure regarding release of plant materials and merits and procedures of individual requests for releasing new plant materials.

APPENDIX

Attachment 1. Approval form for release of plant materials

Attachment 2. Example of a variety summary release document

Attachment 3. Example of a germplasm summary release document

Instructions:

1. Submit completed approval form along with plant materials proposal to the Department Head for review. Department Head will forward approved proposals to Plant Materials Release Committee.
2. Plant Materials Release Committee will review and packets will be sent forward with the committee's recommendation approval or disapproval to OAES Director.
3. Upon the decision by OAES Director the packet will be returned to the PMRC Committee, who will distribute documents to appropriate agencies, department head, and PMRC secretary. Approved packets will be retained in OAES, disapproved packets will be returned to the Department Head who will deliver it to the scientist.

ATTACHMENT 2. EXAMPLE OF A VARIETY SUMMARY RELEASE DOCUMENT¹

OKLAHOMA AGRICULTURAL EXPERIMENT STATION
OKLAHOMA STATE UNIVERSITY
STILLWATER, OKLAHOMA

AND

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WASHINGTON, D.C.

RELEASE OF 'CENTURY' (P.1. 502912) HARD RED WINTER WHEAT

The Oklahoma Agricultural Experiment Station, Stillwater, and the Agricultural Research Service, United States Department of Agriculture, agree to release a new Hard Red Winter Wheat variety. P.1. 502901, known also as OK81322, will be released as CENTURY. CENTURY was developed cooperatively by the Oklahoma Agricultural Experiment Station and the Agricultural Research Service, U.S. Department of Agriculture.

CENTURY is an increase of an F4 plant selection from the cross Payne/ITAM W-101/Amigo. The cross was made in 1976, and the individual F 4 plant resistant to biotype C greenbug was selected in 1979. The F5 line was evaluated in an observation nursery at Stillwater in 1980 and advanced to preliminary yield nursery in 1981. CENTURY was evaluated as OK81322 in the Advanced Wheat Performance Nursery from 1983 through 1985 and in the Southern Regional Performance Nursery in 1984 and 1985.

CENTURY is an awned, white-glumed semidwarf Hard Red Winter Wheat cultivar. It is slightly taller, 3-4 centimeters, than TAM W-1 01, Chisholm, and Vona, and 1-3 centimeters shorter than Newton. CENTURY is comparable to Vona and TAM W-101 in bushel weight. Maturity is medium-early, similar to TAM W-101.

CENTURY is resistant to leaf rust, powdery mildew, and greenbug biotypes Band C, but susceptible to greenbug biotype E and Hessian fly. It appears to have field tolerance to Septoria leaf blotch.

The bread-making properties of CENTURY are similar to those of TAM 105 except in dough characteristics, as measured by the mixograph. It has 0.5 minutes longer mixing time. CENTURY is similar to TAM 105 in grain protein content.

Breeder seed of CENTURY will be maintained by the Oklahoma Agricultural Experiment Station. Foundation seed will be available from the Oklahoma Foundation Seedstocks, Department of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK 74078.

The U.S. Department of Agriculture has no seed for distribution.

¹Includes minor modification of official release statement.

Release date for publicity purposes shall be effective on the date of final signature of the release notice.

Director
Oklahoma Agricultural Experiment Station
Oklahoma State University
Stillwater, Oklahoma 74078

Date

Administrator
Agricultural Research Service
U.S. Department of Agriculture
Washington, D.C. 20250

Date

ATTACHMENT 3. EXAMPLE OF A GERmplasm SUMMARY RELEASE DOCUMENT²

THE OKLAHOMA AGRICULTURAL EXPERIMENT STATION
OKLAHOMA STATE UNIVERSITY
STILLWATER, OKLAHOMA

AND

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WASHINGTON, D.C.

RELEASE OF FOUR GREENBUG-RESISTANT AND-SUSCEPTIBLE NEAR ISOGENIC
PAIRS OF WINTER BARLEY

The Oklahoma Agricultural Experiment Station and the Agricultural Research Service, U.S. Department of Agriculture, agree to release four near-isogenic pairs of winter barley (*Hordeum vulgare* L.) lines resistant and susceptible to greenbug biotypes C and E [*Schizaphis graminum* (Rondani)]. Scientists participating in the release of this germplasm are B. F. Carver, G. H. Morgan, and L. H. Edwards, Dept. of Agronomy; and J. A. Webster, USDA-ARS and Dept. of Entomology. Release of this germplasm should lead to improved molecular and physiological characterization of the gene (or set of closely linked genes) conditioning greenbug resistance in U.S. barley cultivars.

The pedigree of this material is 2*Rogers/Omugi, whereby the resistance gene(s) is derived from Omugi (current gene symbol Rsgla, formerly Grb). The BC₁F₂ population was advanced three generations by bulk selfing without selection before harvesting individual BC₁F₅ plants. Progenies were tested for greenbug response in uncaged greenhouse flats containing seedlings infested with biotype C greenbugs. Fourteen segregating BC₁F₆ families were identified from which susceptible (homozygous recessive) and resistant (homozygous dominant or heterozygous) plants were transferred to the field for increase. The following years, the BC₁F₆-derived F₇ lines were increased in plant rows and also reevaluated for greenbug response (biotype C) in greenhouse flat tests. Segregating lines were discarded, leaving a minimum of one homozygous susceptible and one homozygous resistant line tracing back to a common segregating BC₁F₆ family. From a total of 90 lines from 14 families, 16 lines from 5 families were selected on the BC₁F₈ observation nursery as potential sources of near-isogenic lines. Following another year of observation and seed increase, all lines were tested in replicated performance nurseries for four years and two locations. Based on these agronomic data, four near-isogenic pairs were chosen with uniform characteristics within pairs. These lines are designated OK87851 Sand OK87851 R, OK87852S and OK87852R, OK87853S and OK87853R, and OK87854S and OK87854R. Two lines sharing the same experimental number indicate a pair of greenbug-susceptible (S) and -resistant (R) near-isogenic lines.

² Includes minor modification of official release statement.

All lines are uniform for test weight and plant height, but differences exist among pairs of near-isogenic lines for grain yield potential (ranging in relative yield from 91 to 113⁰ of the check cultivar, 'Will') and heading date maximum difference of 4 days between pairs). The eight lines were last increased in 1987 as BC₁F₆-derived F₁₂ lines and evaluated for greenbug response to biotypes C and E. Each line was homogeneous for resistance or susceptibility and consistent for responses to biotypes C and E.

A limited quantity of seed of each line is available for research purposes. Written requests should be sent to B.F. Carver, Dept. of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK 74078.

Director
Oklahoma Agricultural Experiment Station
Oklahoma State University
Stillwater, Oklahoma 74078

Date

Administrator
Agricultural Research Service
U.S. Department of Agriculture
Washington, D.C. 20250

Date