

# **Hard Winter Wheat Region**

## **Principles for Collaborations in Wheat Breeding and Biotechnology**

*Public Breeder Subcommittee of the Hard Winter Wheat Improvement Committee*

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Public wheat breeders in the hard winter wheat region of the Great Plains, under the auspices of the Hard Winter Wheat Improvement Committee (HWWIC), encourage Universities and their respective Marketing Organizations to adhere to common principles of germplasm exchange, use, and management as biotechnology is further developed and adopted in the wheat industry. Private industry investment in wheat research has and will create unique opportunities for collaborations in germplasm and variety development, novel trait and genetic marker discovery, and commercialization of varieties and traits. With these partnerships come challenges for universities to manage and protect intellectual property, while maintaining open exchange of germplasm and information, which has long been a strength of both public and private wheat breeding research in the Great Plains. Therefore, public wheat breeders in the hard winter wheat region of the Great Plains encourage Universities to adopt the following principles as collaborations, agreements, and licenses with private industry are developed.

### **I. Germplasm and Information Exchange**

Existing wheat germplasm and information exchange mechanisms in the hard winter wheat region have provided significant, long-term benefits to stakeholders in the region. These mechanisms, based primarily on the Wheat Worker's Code of Ethics (WWCOE, attached), should be preserved and strengthened in development of future collaborations to maintain viability of public wheat breeding programs and maximize benefits to the wheat industry. Key principles include:

- a) Material Transfer Agreements (MTAs) for germplasm exchange should be standardized and constructed based on the principles of the WWCOE. MTAs should be executed in a timely manner to promote and facilitate germplasm exchange rather than to obstruct or delay exchange.
- b) Pre-release experimental lines entered in the regional nurseries will be available for crossing by participants of the nurseries in accordance with the WWCOE. Lines carrying public or private patented traits will be subject to special provisions.
- c) Varieties developed with germplasm obtained and used in a manner consistent with the WWCOE are owned by the developing organization, without obligation of co-ownership or royalties to other parties for use of their germplasm. Varieties carrying publicly or privately patented traits will understandably be subject to different co-ownership and royalty agreements.
- d) Access to seed of the regional nurseries will be determined by participation and based on reciprocity and the ability to abide by the principles of the WWCOE.

### **II. Intellectual Property Rights**

Public wheat breeding programs are in a unique position to deliver new technologies to the benefit of the entire wheat industry. Intellectual property rights (IPR) related to these new

technologies must be respected and managed appropriately, with legal rights enforced. Key principles include:

- a) University wheat breeding programs should not enter into research or germplasm exchange agreements that prohibit collaborations for the entire University program with other public or private parties.
- b) Ownership and legal rights obtained on released varieties, such as Plant Variety Protection (PVP), will be enforced by the Universities or Marketing Organizations.
- c) Commercial varieties not containing proprietary traits should be protected by PVP or through provisions that allow access to germplasm for breeding purposes.
- d) Owners of intellectual property protected by utility patents on traits, and who develop substantially similar research agreements with multiple partners, should allow exchange of materials among those partners.

### **III. Trait and Marker Development and Deployment**

Collaborations should promote opportunities for co-development, co-ownership, and co-commercialization of new germplasm or varieties, and new breeding technologies. Key principles include:

- a) The University and collaborators should agree that new breeding technologies jointly developed, such as genetic markers or novel traits, will be jointly owned.
- b) Universities will ensure that collaborators recognize the requirement for timely publication of research findings by University scientists, staff, and graduate students.
- c) Collaborators will commit that Universities have reasonable access to proprietary traits to incorporate into University germplasm. Universities will commit that collaborators have reasonable access to University germplasm as vehicles for trait deployment.
- d) All parties are expected to adhere to regulatory guidelines in research, development, and commercialization of GM traits in wheat; to provide scientifically based information on risks and benefits; and to contribute positively to public education on GM technologies in wheat, regardless of their role in commercialization.

### **IV. Value-Capture Mechanisms**

Wheat grower organizations and Marketing Organizations have made significant long-term investments in public wheat research and variety development. These organizations can play a positive role in fostering collaborations and should be a party to development of collaborations and appropriate value-capture provisions which, in turn, create a positive environment for further investments in wheat research. Key principles include:

- a) Returns from commercialization of intellectual property wholly or jointly owned by public institutions should be managed in a manner that honors the contributions of the stakeholders.
- b) Germplasm with non-proprietary traits, in which public institutions hold sole or joint ownership, should be available for germplasm exchange among Universities. Jointly developed markers, technologies, and novel traits should be managed in a manner that appropriately balances reasonable expectation of return with promotion of wheat improvement for the public good.

## **ATTACHMENT**

### **WHEAT WORKER'S CODE OF ETHICS**

This seed is being distributed in accordance with the 'Wheat Workers' Code of Ethics for Distribution of Germplasm', developed and adopted by the National Wheat Improvement Committee on 5 November, 1994. Acceptance of this seed constitutes agreement.

1. The originating breeder, institution, or company has certain rights to the unreleased material. These rights are not waived with the distribution of seeds or plant material but remain with the originator.
2. The recipient of unreleased seeds or plant material shall make no secondary distributions of the germplasm without the permission of the owner/breeder.
3. The owner/breeder in distributing unreleased seeds or other propagating material grants permission for its use in tests under the recipient's control or as a parent for making crosses from which selections will be made. Uses for which written approval of the owner/breeder is required include:
  - (a) Testing in regional or international nurseries;
  - (b) Increase and release as a cultivar;
  - (c) Reselection from within the stock;
  - (d) Use as a parent of a commercial F1 hybrid, synthetic, or multiline cultivar;
  - (e) Use as a recurrent parent in backcrossing;
  - (f) Mutation breeding;
  - (g) Selection of somaclonal variants; or
  - (h) Use as a recipient parent for asexual gene transfer, including gene transfer using molecular genetic techniques.
4. Plant materials of this nature entered in crop cultivar trials shall not be used for seed increase. Reasonable precautions to ensure retention or recovery of plant materials at harvest shall be taken