NEW VARIETIES AND GERMPLASM

The following is only a partial list of new wheat varieties and germplasms available in the region. Included are those for which we have current information.

VARIETIES

The Colorado Agricultural Experiment Station announced the release of 'Yuma' hard red winter wheat. Yuma has the pedigree 'NS14/NS25//2*Vona' and was tested in the SRPN as CO850061. Yuma is similar to Vona in height, maturity, and coleoptile length. It is similar to TAM-107 in grain yield, test weight, and heat tolerance, superior in leaf rust resistance, and inferior in resistance to the wheat curl mite.

The Texas Agricultural Experiment Station announced the release of 'TAM-202' and 'TAM-109' hard red winter wheats. TAM-202 is an awned semidwarf primarily adapted to the Rolling Plains and irrigated production areas of the High Plains of Texas. It was tested in the SRPN as TX86V1405. The pedigree of TAM-202 is not known, derived from a greenhouse outcross of Siouxland. TAM-202 is heterogeneous for the 1A/1R translocation, moderately susceptible to current races of leaf rust, and carries Sr5 and Sr31 genes for stem rust resistance. TAM-109 is an awnless semidwarf selected from the cross TAM W-101*5/CI9321. It was evaluated under the designation TX87A6821. Agronomic characteristics, performance, and disease reactions are similar to those for TAM W-101. It is an awnless variety intended to facilitate use as either forage or grain crop.

Agripro Biosciences has indicated the intent to release two varieties in 1992. 'Laredo' is derived from the cross 'Colt/Victory' and has been entered in the 1992 SRPN under its experimental designation W87-018. 'Falcon' is derived from the cross 'WI81-133/Arkan' and has been entered in the 1992 SRPN under its experimental designation W88-181.

GERMPLASM

The USDA-ARS, Kansas Agricultural Experiment Station, and the Wheat Genetics Resources Center at KSU announced the release of KS91WGRC11 and KS91WGRC12 leaf rust resistant hard red winter wheat germplasms. KS91WGRC11 is a BC_2F_2-derived line with Century as the recurrent parent. Its leaf rust resistance is governed by a single, partially dominant gene from R. Tauschii accession TA2450 and exhibits low seedling and adult plant infection types. KS91WGRC12 is a composite of eight BC_2F_3-derived lines, descended from two BC_2F_2 plants with Century as the recurrent parent. The leaf rust resistance, derived from T. Tauschii accession TA2541, appears to be conditioned by a single recessive gene which confers adult plant resistance. Seedlings of KS91WGRC12 have a high infection type reaction. Both germplasms are similar to Century in general phenotype, whereas KS91WGRC12 is slightly taller, and both possess the Lr24 gene.

The USDA-ARS and Oklahoma Agricultural Experiment Station announced the release of hard red winter wheat germplasm GRS1201. GRS1201 is resistant to biotypes B, C, E, G, and I of the greenbug, *Schizaphis Graminum* (Rondani). GRS1201 is a 1AL/1RS translocation line developed by irradiation of mature pollen of an alien substitution wheat x rye hybrid with pedigree 'Short wheat sel n./Scout (TX69A345-2)//Insave F.A.'. GRS1201 is a composite of 40 homozygous resistant X_5 lines. Greenbug resistance is conditioned by a single dominant gene located, presumably, on the 1RS chromosome derived from Insave F.A. rye. GRS1201 also carries stem rust resistance genes Sr5, Sr7b, and Sr17. It is susceptible to the wheat curl mite and powdery mildew.

The Oklahoma Agricultural Experiment Station announced the release of 27 pairs of 1RS/1BL vs 1B near-isolines from two hard red winter wheat populations. Members of each pair are genetically similar except for presence or absence of 1RS/1BL translocation. The two crosses were 'OK82298/Chisholm' and

'OK83398/Arkan'. OK83398 is homozygous for 1RS/1BL derived from the cross TAM W-101*2/Aurora. In the F_5, one plant with a pair of normal 1B chromosomes and one plant with a pair of 1RS/1BL chromosomes were selected in each family derived from a heterozygous F_4 plant. Each F_5 family traced to a different F_2 population. Nineteen pairs of near-isolines from OK83398/Chisholm and eight pairs from OK83398/Arkan were developed.

The Colorado Agricultural Experiment Station announced the release of CORWA1 hard red winter wheat. CORWA1 is resistant to the biotype of the Russian Wheat Aphid currently present in Colorado. Derived from the cross 'Sumner/CO820026,F_1//PI372129,F_1/3/TAM-107', resistance is conditioned by a single dominant gene from PI372129 (T-57). CORWA1 is an F_3-derived F_4 line similar to TAM-107 in maturity, plant height, winter survival, leaf and stem rust reactions, test weight and grain yield.

The Nebraska Agricultural Experiment Station and USDA-ARS announced the release of three hard red winter wheat germplasm lines: NE82438 (PI537261); NE82533 (PI537262); and NE84557 (PI537263). They were released as F_3-derived F_4 lines having useful combinations of traits for breeding purposes. They were tested in either the Northern or Southern Regional Performance Nurseries. The pedigrees are: NE82438, 'HiPlains/Wings/3/Parker*4/Agent//Bel. 198/Lancer'; NE82533, 'Newton sib/Agate//Sage sib'; NE84557, 'Warrior/Scout//MoW6811 /3/Agate sib/4/NE68457/Ctk'.

The USDA-ARS and Nebraska Agricultural Experiment Station announced the release of N86L177 (PI559717) hard red winter wheat germplasm. It is an F_4-derived line from the cross 'Nap Hal/Lancer//Karlik 1/3/NS 622/4/Ctk/ GK-Tiszataj/2/Plainsman V'. N86L177 was released based on its superior grain protein concentrations and bread-making qualities. It is a short, lodging resistant, early maturing line with lower yield potential than current Nebraska varieties.