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 'Jules' hard red winter wheat. Jules has the pedigree 'NE76667/Hawk' and was tested in the SRPN as CO860094. Jules is a semidwarf variety for production in eastern Colorado and the High Plains area. It has improved leaf rust resistance and straw strength, lower test weight, and higher grain yields when compared to Lamar.

The Nebraska Agricultural Experiment Station and USDA-ARS announced the release of 'Vista' hard red winter wheat. Vista (PI 562653) has the pedigree 'NE68513/NE68457//Centurk/3/Brule' and was tested in the SRPN as NE87615. Vista is targeted for dryland production in southwest Nebraska and may be adapted to irrigated production in western Nebraska. It possesses rust resistance genes Lr3 and Lr16 and Sr6, Sr17, and Sr36 and the H3 gene for resistance to Hessian fly. Winterhardiness is superior to TAM-200 and Rawhide and similar to, or slightly less than, Scout 66. Vista is similar in anthesis date to Arapahoe and Redland with straw strength less than Redland. Vista has strong mixing characteristics and acceptable baking quality, similar to, or better than Scout 66 and Arapahoe.

AgriPro Biosciences has indicated the intent to release two hard red winter wheat varieties in 1993. 'Ogallala' is derived from the cross 'TX81V6187/Abilene' and has been entered in the 1993 SRPN under the experimental designation WI89-055. Ogallala is targeted for western production areas of the central plains, similar to areas where TAM-107 and TAM-200 are grown. 'Ponderosa' is derived from the cross 'W81-133/Thunderbird' and has been entered in the 1993 SRPN under the experimental designation W87-017-44. Ponderosa is targeted for production in Kansas, west central and irrigated acreages in Nebraska, and for irrigated production in Colorado. AgriPro also announced a change in the variety name for the experimental line WI88-181 to 'Pecos'. Initially released as 'Falcon', a conflict over the name resulted in the change to Pecos. Pecos was tested in the 1992 SRPN.

The Kansas Agricultural Experiment Station and USDA-ARS announced the release of 'Arlin' (PI 654246) hard white winter wheat. Arlin originated from a bulk population of intercrossed winter and spring wheats and was tested in the SRPN under the designation KSSB-369-7. Arlin is early maturing with adequate, but not good, winterhardiness and is targeted for production in southwest Kansas. It is moderately resistant to SBMV, stem and leaf rust. Arlin has excellent milling properties with dough mixing properties similar to Newton.

The Kansas Agricultural Experiment Station and USDA-ARS also announced the release of 'Karl 92' (PI 564245) hard red winter wheat. Karl 92 is an F_{11} headrow selection from Karl and tested in the SRPN as KS831374-142. Karl 92 has slightly improved leaf rust resistance, earlier maturity, and is higher yielding than Karl. It has essentially the same quality characteristics as Karl.

GERMPLASM

The USDA-ARS, Kansas Agricultural Experiment Station, and the Wheat Genetics Resources Center at KSU announced the release of several hard red winter wheat germplasms in 1992:

KS92WGRC15 is derived from the cross Karl//TAM-200/KS86WGRC2. It results from the effort to transfer the Lr39 gene for resistance to leaf rust to a more desirable genetic background. KS92WGRC15 is similar to Karl in height and overall phenotype, heads one day later, and is homozygous for the 1AL/1RS wheat-rye chromosome.

KS92WGRC16 is derived from the cross Triumph 64/3/KS8010-71/TA2470//TAM-200 where TA2470 is an accession of Triticum tauschii. KS92WGRC16 carries a single, completely dominant gene for leaf rust resistance that segregates independently from other known resistance genes. It is similar to TAM-200 in height and days to heading, but lacks the 1AL/1RS translocation and is extremely susceptible to mildew.

KS92WGRC21 and KS92WGRC22 are wheat germplasms highly resistant to a wheat spindle streak and soilborne mosaic viruses. KS92WGRC21 is derived from the cross TAM-200*3/TA2570 and KS92WGRC22 from the cross Century*3/TA2567. TA2570 and TA2567 are closely related accessions of Triticum tauschii. The genetic basis of resistance has not been determined, but it appears that resistance to the two viruses are conditioned by different loci. It is not known if KS92WGRC22 carries gene(s) for resistance to spindle streak mosaic from TA2567 in addition to those from Century. The germplasm lines are similar in plant height, maturity, and overall phenotype to their respective recurrent parents.

KS92WGRC23 is derived from the cross Karl*3//PI266844/PI355520, where Karl was initially pollinated with an F_1 plant of Triticum monococcum (PI266844/PI355520). KS92WGRC23 carries leaf rust resistance genes derived from one or both of the T. monococcum parents. It is similar to Karl in height and overall phenotype, but heads two days later.