protein content and seed weight (g/1000 seeds). The 100 S lines with the highest protein plus the 100 S lines with heaviest seed weight were evaluated for yield in two replications at two locations near Manhattan, Kan. Plants from remnant seed of the 20 highest yielding S lines were allowed to random mate to form RMP1 (S)C1.

Although dwarf, RMP1 (S)C1 is somewhat variable in height. It is also somewhat variable in head size and shape, seed size and color, and maturity. It is highly resistant to greenbugs, *Schizaphis graminum* (Rondani), biotype C, and is resistant to iron chlorosis. Table 1 shows grain yield, grain protein, and grain amino acid profile of RMP1 (S)C1 compared with 'Martin' sorghum.

RMP1 (S)C1 could be used as a synthetic variety. However, it was released to provide breeders with improved germplasm for further population improvement, or for development of inbred lines.

REGISTRATION OF NORCO WHEAT GERMPLASM

(Reg. No. GP 69)

C. J. Peterson, Jr., O. A. Vogel, D. W. George, G. L. Rubenthaler, and R. E. Allan

NORCO wheat, *Triticum aestivum* L. em. Thell., CI 14482, is a semidwarf soft white facultative wheat developed cooperatively by ARS-USDA, and Washington State Agric. Research Center. Norco was selected from the cross 'Norin 10'/ 'Brevor', 11/*P14/3/CI 13438. P14 was crossed with Norin 10/Bevor, 11 by CIMMYT in Mexico. P14 was a selection from the cross 'Newhatch'/ 'Marroqui'/ 'Kenya'/ 'Mentana'/3/'Frontana'. Norin 10/Bevor, 11 and CI 13438 were developed by the ARS-USDA at Pullman, Wash. Norco was evaluated in observation and performance nurseries in Washington from 1966 to 1974.

Norco has a lax spike with long awns. The glumes are white, long, and midwide. Kernels are white, soft, and midlong, and the crease is shallow. The auras may be purple under some environmental conditions. Norco has semidwarf stature, but the plant height may vary as much as 15 cm within the population. It has about the same winterhardiness as 'Nugaines', CI 13968, when seeded late at Pullman, Wash. Norco requires very little vernalization and can be seeded early in the spring. It is less sensitive to daylength than cultivars currently grown in the region.

Norco is resistant in the field to most races of stripe and leaf rusts in the Pacific Northwest. It is susceptible to common and dwarf bunt and moderately susceptible to flag smut. Norco is very susceptible to *Cercospora* and *Fusarium* foot rot.

The milling characteristics of Norco are similar to those of Nugaines. The flour quality of Norco is a pastry type and resembles that of Nugaines, except that Norco has outstanding Japanese wet Udon noodle quality. The noodle-making properties of Norco's flour is superior to that of all commercial cultivars grown in Washington.

Norco was included in the Western Regional Soft White Winter Wheat Nursery from 1967 to 1970. The average grain yields of Norco equaled or exceeded those of Nugaines from late fall seedings. Norco's grain yields from early spring seedings generally equalled or exceeded those of Nugaines from late fall seedings. The 100 S lines with the highest protein plus the 100 S lines with heaviest seed weight were evaluated for yield in two replications at two locations near Manhattan, Kan. Plants from remnant seed of the 20 highest yielding S lines were allowed to random mate to form RMP1 (S)C1.

1974. It was recalled in 1975 because it was a race of stripe rust that was present in the region.

Small amounts of seed can be obtained from the Plant Breeding and Production Unit of the ARS-USDA, at Pullman, Wash. Seed supplies of these stocks can be obtained from the Agronomic and Production Unit of the ARS-USDA, at Pullman, Wash.

REGISTRATION OF PR-MPI AND PR-MP4 MAIZE GERMPLASM

(Reg. No. GP 70 and GP 71)

Jeweus Craig, G. E. Scott, G. F. Sprague, and O. J. Webster

PR-Mpl (Puerto Rico-Mississippi 1) and PR-MP4 (Zeas may L.) populations with broad genetic value as sources of disease resistance. They were released in 1974 by the ARS-USDA, the Missouri Exp. Stn., and the Texas Agric. Exp. Stn. They were developed cooperatively by the Major Cereals in Africa Project 625-11-130; the Western State Mission, Nigeria; the Mayaguez Inst. of Tropical Agric. and Foresty, Puerto Rico; the Miss. Agric. and Forestry Exp. Stn., State, Miss.; the Plant Industry Stn., Beltsville, Md.; and the Texas Agric. Exp. Stn., College Station.

PR-Mpl (Reg. No. GP 70) was derived from a composite A' (abbreviated NCA) which was developed cooperatively by the Missouri Exp. Stn., Beltsville, Md.; and the Texas Agric. Exp. Stn., College Station. The components of NCA were chosen from the results of African yield trials and included 'Nigeria Yellow', 'Kenya Kitale Composite E', 'Colombia Diacol V153', 'CBK (BS7)', 'SK (BS8)', and 'Nigeria Samaru Composite A' (abbreviated NCA) which was developed by the West-United States Corn Belt germplasm. Cytoplasmic variability in the composite was maintained by planting component. Male rows were planted with cultivars. Seed harvested from the female rows and bulked to plant male lineage.

PR-Mpl was developed from NCA by selection for general adaptation and reduced ear height (two cycles in winter nurseries in Puerto Rico) and included resistance to corn stunt in Mississippi and lodging in Maryland and Texas. This should be a valuable source of resistance to *P. polysora* and *Helminthosporium maydis* because most of the NCA components had resistance to these pathogens.

PR-MP4 (Reg. No. GP 71) was derived from NCA-Rh by incorporating monogenic resistance to race 2 of stripe rust *H. maydis* into the composite A-Rh. PR-MP4 was developed from NCA-Rh by two cycles of mass selection in winter nurseries in Puerto Rico. This population included resistance to *P. polysora* and *H. maydis* in Puerto Rico and in greenhouse tests in Mississippi.

Seed supplies of these stocks can be obtained from the Plant Breeding and Production Unit of the ARS-USDA, at Pullman, Wash.