of which was obtained from Aberdeen, Idaho. Backcrossing to Hadden kept the plants short, added disease resistance and earliness. The last cross with CI 14023 contributed most to soft-textured kernels with superior milling and baking qualities.

Omega 78 is an early maturing wheat adapted to the Coastal Plain and Piedmont areas of the southeastern United States. It averages 2 days later in maturity than 'Holley' but is 9 days earlier than 'Arthur 71' in south Georgia. It exhibits satisfactory winter hardiness for the Piedmont area.

Omega 78 plants have strong straw and are semidwarf at maturity, approximately the same height as Oasis and Doublecrop (101 cm) at Tifton. The spikes of Omega 78 are blocky, midlong to long and unevenly apically awnletted. They have glabrous white glumes which are midlong, with broad shoulders, with beaks moderately long and mostly recurved. The grains are red, soft, plump and small to medium in size. The germ is midsized, the crease is midwide and shallow; the cheeks are uniformly rounded and the brush is midlong.

The grain of Omega 78 has medium test weight. It scored high in milling and baking quality characteristics of particle size index, AWRC, cookie diameter and cake volume. In USDA tests at Wooster, Ohio, Omega 78 scored as well as Oasis and Arthur 71 and was superior to Ga. 1123, Holley and most other Southeastern wheats.

Omega 78 is resistant to present races of leaf rust (caused by Puccinia recondita tritici Rob. ex Desm.). It is resistant to most races of powdery mildew (incited by Erysiphe graminis DC ex. Merat) but since its release in 1978 it has exhibited susceptibility to another race now prevalent in the Southeastern U.S. Omega 78 is susceptible to Hessian fly (Mayetiola destructor Say), stem rust (caused by Puccinia graminis Pers. f. sp. tritici Eriks., and E. Henn.), and Septoria glume blotch (caused by Septoria nodorum Berk.).

Omega 78 has a good yield record compared to other adapted cultivars in the Southeastern United States. It was increased and released when acreage was rapidly increasing and there was a demand for a semidwarf cultivar of high milling quality and early enough for double cropping with soybeans. Over 2,025 ha (5,000 acres) were grown for certified seed in Georgia in 1979-80. Breeder seed of Omega 78 will be maintained at the Coastal Plain Exp. Stn., Tifton, GA 31793 and foundation seed will be available from the Georgia Seed Development Commission 2420 S. Milledge Ave., Athens, GA 30605.

REGISTRATION OF POWELL WHEAT

R.S. Albrechtsen

'Powell,' CI 17761, is a hard red spring wheat (Triticum aestivum L. em. Thell.) developed by the Utah Agric. Exp. Stn. and released in 1979. The AR-SEA-USDA participated in testing and evaluation of the cultivar. Local commercial flour mills assisted in evaluating quality characteristics. The wheat was named after John Wesley Powell, an early explorer of the Intermountain Region.

Powell originated as a single head selected in 1971 from an F3 bulk composite of two crosses, UT.S15 ('Roque 66'/Delmar') and UT.S16 ('Jaral 66'/Delmar) made at Logan, Utah, in 1967. The original F3 headrow was designated as UT.S15, 16-517. It has been evaluated in Utah irrigated tests since 1973 and was in the Western Regional Spring Wheat Nursery for three years (1976-78). Powell was purified for Powell and Borah in 33 Western Regiona_l Spring Wheat Nursery trials grown in 1976-77. Powell appears to be best suited to production under irrigated conditions.

Powell is a medium maturing cultivar with medium yellow white straw. It is comparable to Fremont in height, earliness but heads about three days later. The spike is conically compressed, fusiform, midmolded, erect, and shattering. Glumes are white, glabrous, midlong and mostly recurved. The awns are white, 2 to 8 cm long; the awn crease is middeep with somewhat angular cheeks, and midlong.

Powell ranges from moderately susceptible to resistance to stripe rust (caused by Puccinia striiformis Westl.) depending upon the location and the existing race complex of the causal organism.

Milling and baking properties of Powell are superior. Mixing stability, loaf volume, and loaf score are usually higher than those of Fremont; test weight and percent protein are slightly lower. Overall baking ratings for Powell are high.

Breeder and Foundation seed will be maintained at the Crop Sci. Soc. of Am. Approved for publication November, 1981.

REGISTRATION OF SINTON WHEAT

R.M. De Pauw, E.A. Hurd2, and L.A. Patterson

'Sinton,' hard red spring wheat (Triticum aestivum L. em. Thell.) CI 17573, was developed by the Research Station, Agriculture Canada, Swift Current and Regina, Canada. Assistance was received from the Research Station, Agriculture Canada, Winnipeg, to select for rust resistance. A separate registration number license number 1613 in Canada in October 1978.

Sinton was selected from a cross between seeds of 'Mountain Gold' and a line derived from 'Thatcher'*6// 'Lee'*6/Kenya Farmer. Sinton has the awned line derived from 'Thatcher'*6// 'Lee'*6/Kenya Farmer and the rust resistant parent was selected from the pedigree method using the selection method for both grain yield and breadmaking quality. Sinton was evaluated as CT 440 in the Western Regional Cooperative Tests at about 20 locations in each of the years 1971-1974. Breeder seed was developed by bulking the progeny from 48 uniform plant rows.

In the rust area of Manitoba and eastern Saskatchewan, Sinton averaged 8% higher grain yield than 'Neepawa.' In the drier prairie area of Saskatchewan and southern Alberta, Sinton was equal or higher yield than Manitou and 1% lower than Neepawa. Sinton's main attributes are higher grain yield in the rust area, the west of the Canadian prairies and resistance to stripe rust.

Sinton requires about 2 more days to ripen than Neepawa, has straw length similar to Neepawa but slightly longer, is moderately susceptible to shattering. The spike is blocky, midlong, awned, and midlong to midmolded. Glumes and awns are midlong, with broad shoulders, with beaks moderately long and mostly recurved. The awns are white, 2 to 8 cm long; the awn crease is middeep with somewhat angular cheeks, and midlong.

The last cross with CI 14023 contributed most to soft-textured kernels and superior milling and baking qualities. The last cross with CI 14023 contributed most to soft-textured kernels and superior milling and baking qualities.