REGISTRATION OF CROP CULTIVARS

"H"/Kenya 338 AC-2-E2'/2/'I"/Kenya 338 AC-2-E2'. "I" is an Indiana selection of complex pedigrees involving these lines — 'Surprise' / 'Falta' / 'K6 99' / 'Hungarian' / 'V838' / 'K6 99' / 'V822' / 'Fairfield' / 'Trumbull' / 'Hope' / 'Hussar'. "H" de-notes H168-1-2 / 'Purplestraw' / 'Trumbull' 555-1 / 'Steintin' / 'Thorne'. In 1968 and 1969 Potomac was tested as Virginia 66-54-9 in the Uniform Southern Wheat nursery grown at approximately 17 locations in the Southeast.

Potomac is a medium maturing cultivar with straw of medium height (107.5 cm) and medium strength. Stalks are apically awned, lax, and long. The glumes are generally white with a small percentage of brown chaff types, long and midwide; shoulders are rounded and midwide. The kernels are red, soft, and ovate. The germ is midsize; the crease is narrow and middeep; the cheeks are rounded and the brush is medium in size and length.

Yield results of 16 tests conducted from 1971 to 1975 in Maryland showed Potomac to average approximately 1.45 and 0.85 hl/ha (10 and 6 bushels/acre) more than 'Arthur' and 'Blueboy', respectively. In Virginia, Potomac yielded approximately 0.57 hl/ha (4 bushels/acre) more than Arthur and Blueboy for the last 8 years. In the Uniform Southern Wheat nursery, Potomac yielded approximately 0.62 hl/ha (3 bushels/acre) less than Blueboy.

The grain of Potomac has excellent test weight. Potomac has displayed an average soft wheat baking and milling quality for cakes, cookies, and other pastries. Potomac is resistant to powdery mildew (Erysiphe graminis DC. f. sp. tritici em. Marchal) but is susceptible to stem rust (Puccinia graminis f. sp. tritici Epts. E. Henn.). It has a small percentage of plants resistant to leaf rust (Puccinia recondita Rob. ex. Desm. f. sp. tritici Johnson & Browder). Additional information on performance and management has been published.

The Maryland Agricultural Experiment Station will maintain certified and breeder seed of Potomac.

REGISTRATION OF VONA WHEAT1

J. R. Welsh, G. Ellis, R. Normann, W. S. Ball, G. Hinz, and H. Mann

VONA', CI 17441, a hard red winter wheat (Triticum aestivum L. em Thell.), was named and released by Colorado State University in 1976 for both irrigated and dryland production in the southern and central Great Plains area. The cultivar is from the cross II 21183/C0652363/Lancer K92136 made in 1968. II 21183 is a semi-dwarf spring wheat from the International Maize and Wheat Improvement Center (CIMMYT) and has the pedigree of Andes 64A/Sonora 64/A. Taucari. C0652363 is a hard red wheat selection from the Colorado State University with the pedigree of Warrior 2/K99 58/Newhattan 29 (Cheyne/Tennmark/Mediterranean)/Hope/3/Parker. The F6 of II 21183/C0652363 was crossed with a hard red winter wheat selection of the pedigree Lancer/K92136 is derived from the cross Norin 16/3/Nebraska 60/Mediterranean/Hope/4/Kaw. Vona originated from an individual F6 plant selection followed by head selection in the F6. No further reselection occurred. Vona was identified as selection C0725049 after the F6. Vona is a sister selection to the cultivar 'Lindon'. It has been in state-wide yield trials since 1975 and was entered in the Southern Regional Performance Nursery in 1975 and 1976. In an average of 22 Colorado trials, Vona has outyielded 'Lindon' by 5%, 'Centurk' by 7%, and 'Scout 66' by 10%. It has a test weight equal to or better than that of Centurk and Scout 66 but is slightly lower than Lindon.

Vona is early in maturity, heading on an average of 1 to 2 days earlier than Scout 66. It is semi-dwarf in stature, averaging 5 cm shorter than Lindon and 20 cm shorter than Scout 66.

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REGISTRATION OF SPRAGUE WHEAT2

G. W. Bruehl, M. Nagamitsu, W. L. Nelson, C. J. Peterson, Jr., and G. L. Rubenthaler

'SPRAGUE', CI 15376, WA 5910, is a semi-dwarf soft white common winter wheat (Triticum aestivum L. em. Thell.) cultivar developed cooperatively by the Washington State University Agricultural Research Center and the SEA, USDA Research Service, USDA. Sprague, released in 1972, was named after Roderick Sprague, a long-time student of snow mold. Sprague was selected in the F5 generation from the cross PI 18126/‘Gaines’ made at the Dryland Research Unit, Lind, Wash. in 1962.

Sprague has winter habit, narrow leaves, is midseason in maturity, short (semi-dwarf) in height, the stems are white, glabrous, and weak to medium-strong. The spike is awned, oblong in shape, and inclined. The awns are 5 to 6 cm long and white. The glumes are glabrous, short to midwide, and square to slightly elevated with a narrow acuminate beak about 2-7 mm long. The chalk color varies from white to dark brown in response to environmental conditions.

The kernel is white, short to midlong, ovate-elliptical. The endosperm is soft and the germ is small. The crease is narrow and middeep. The cheeks are rounded. The brush is large and short.

Sprague is moderately resistant to snow mold when seeded early. It is equivalent to 'Gaines' in hardness and has the Brit 1 and Brit 4 smut (Tilletia caries (DC) Tul) resistance genes of the Gaines parent. It has moderate field resistance to local stripe rust (Puccinia striiformis, West) races and is intermediate in response to dryland Fusarium foot rot. Sprague is susceptible to Cercoporella foot rot, flag smut (Urocystis tritici Koern.) leaf rust (Puccinia recondita Rob. ex Desm. f. sp. tritici Epts.), and stem rust (Puccinia graminis f. sp. tritici Epts. & E. Henn.).

Sprague is adapted to the snow mold areas of Washington. It was evaluated in the observation and performance nurseries of Washington from 1968 to 1972 and was included in the Western Regional Soft White Winter Wheat Nursery in 1972. Sprague yields competitively with 'Moro' and 'Luke' in the chronic snow mold areas of north central Washington in the absence of snow mold and is superior in yield to Moro and Luke when snow mold occurs. In high yielding areas, lodging may be a problem. The test weight of Sprague is slightly less over a wide range of production conditions. The stem is white, strong, and hollow. The spike is awned, dorsoventrally compressed, fusiform, lax, midwide, and shallow, and shattering resistant. The glumes are white, midlong, and midwide, with oblique shoulders. The beak is midwide and 4 to 7 mm long. The awns are white and average 65 mm long. The kernel is red, medium-long, hard, and ovate with a midlarge germ; crease wide, shallow, and rounded; brush mid sized and short. Vona has seedling resistance to races 56, 15, 15B 151, and 17 of stem rust (Puccinia gronanis Pers. L. sp. tritici Epts. & E. Henn.) but is susceptible to prevalent races of leaf rust (P. recondita Rob. ex. Desm. f. sp. tritici). It has good milling and baking properties in comparison with currently grown hard red winter wheat cultivars.

Supporting information on performance and management has been published.

2 Respectively, plant pathologist, research technologist III, and former agronomist (presently agronomist, CIMMYT), Washington State University Agric. Res. Ctr.; research agronomist, and cereal chemist, SEA, USDA.