'Monument'—Small, White Dry Bean

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Additional index words. Phaseolus vulgaris, early maturity, white mold, rust, common blight, direct combining, vegetable breeding, Xanthomonas campestris pv. phaseoli, Sclerotinia sclerotiorum, Uromyces appendiculatus var. appendiculatus, bean common mosaic virus

'Monument', a small, white dry bean (Phaseolus vulgaris L.) has been released to fulfill a need in western Nebraska for a cultivar maturing earlier than small, white 'Aurora', thereby reducing the risk of freeze damage in early fall frosts, and having an upright plant habit and less dense canopy, facilitating harvesting and reducing white mold disease (Sclerotinia sclerotiorum (Lib.) de Bary) (1, 2). The new cultivar is named in honor of the Scottsbluff National Monument, a historic site along the Oregon Trail, which is near the center of the Nebraska bean growing area in the North Platte Valley.

Origin

'Monument' (evaluated as Nebr. CSW-5) was derived by pedigree selection (F6) from a cross between moderately late, indeterminate, upright, small, white dry bean 'Aurora' and the small, white dry bean breeding line Nebr. CSW-73-11. CSW-73-11 has a densely branched and fairly weak plant habit, but possesses excellent seed quality. It was selected from the F3 BC3 of the cross 'California Small White #53' x Meader #1, the former being used as the recurrent parent. Meader #1 (obtained from E.M. Meader, Univ. of New Hampshire, Durham) was derived from the cross 'California Small White #53' x 'Prestige #1'.

Description

'Monument' has an indeterminate upright growth habit with a porous canopy that facilitates direct mechanical harvest and provides a mechanism for avoidance of the white mold disease. The new cultivar has a more upright plant habit than 'Aurora' (Fig. 1). 'Monument' has an earlier and more stable maturity date (range of 85-90 days) than 'Aurora' (range of 90-105 days), which should reduce the risk of frost damage in the fall. Baked and canned seed samples of 'Monument' have good texture, flavor, and appearance. 'Monument' is resistant to bean common mosaic virus strains 1 and NY-15 and some strains of rust (Uromyces appendiculatus var. appendiculatus Pers. Unger), but is susceptible to common blight [Xanthomonas campestris pv. phaseoli (Smith) Dye]. 'Aurora' is susceptible to common blight and is resistant to rust.

'Monument' was compared with 'Aurora' in 6 field trials (1980-1984), and in 2 white mold and common blight field nurseries (1983 and 1984) at Scottsbluff, Neb. No significant difference was detected between these 2 cultivars in yield, seed size (0.15 g/seed), seed shape, or degree of whiteness of seeds.

Availability

Foundation seed as well as samples for trial are distributed by the Nebraska Foundation Seed Division, Univ. of Nebraska, Lincoln, NE 68583.

Literature Cited