REFERENCES


REGISTRATION OF HOLBERG PINTO BEAN

'HOLBERG' PINTO BEAN (Phaseolus vulgaris L.) (Reg. no. 40) was developed and released jointly by the North Dakota and Washington Agricultural Experiment Stations, and the USDA-ARS on 13 Jan. 1982. Holberg was tested extensively at several dryland and irrigated locations in North Dakota from 1977 through 1982 under the experimental designation 6R-364. Holberg was tested as ND364 in the National Cooperative Dry Bean Trial in 1980, 1981 and 1982. The parentage of Holberg is 'Viva Pink' (Sutter Pink) × 'Red Mexican UI-35' × PI 203958)] × Pinto 5R-568 ['Pinto UI-114' × (Pinto UI-114 × PI 203958)].

Crosses, pedigree selections, disease and initial performance selections were made at Prosser, Wash. Holberg was last singled as an F_5. Breeder seed was singled in the 11th generation.

Holberg, a vine-type pinto with white flower, has out-yielded UI-114, a commonly grown cultivar in North Dakota, by about 9% in the major bean growing areas of North Dakota. Its yield was 3.1% more than 'Pindak' during the same period (1977 to 1982). In the National Cooperative Dry Bean Trial, Holberg (tested as ND364) was the highest yielding pinto entry in 1980, 1981 and 1982. Holberg out-yielded the commercial check cultivar Pinto UI-114 by 8.4% over 45 location years and was 1 day later in maturity. Holberg matures 2 to 3 days later than Pinto UI-114 in North Dakota. Although Holberg has a lower 1000 seed weight than that of UI-114, its seeds are more plump and uniform in size. Fewer seeds of Holberg are lost in tare over a 12/64 × 3/4 screen than with UI-114. Seed color is very bright. Canning tests conducted by S.R. Drake at Prosser, WA indicated that Holberg produces a cooked product similar to the control Pinto 'UI-111'.

Holberg is resistant to the prevalent type and New York 15 strains of bean common mosaic virus. Holberg is resistant to curly top virus and has an effective level of resistance to Fusarium root rot (Fusarium solani (Mart.) Sacc. f. sp. Phaseoli (Burk.) Snyd. and Hans.). In field evaluations Holberg is only moderately susceptible to some of the prevalent bean rust (Uromyces phaseoli var. typica (Pers.) Wint.) races found in North Dakota. Percent rust infection is considerably less than UI-114 but greater than Pindak.

Breeder seed will be maintained by the Seedstocks Project, North Dakota Agric. Expt. Sta., Fargo, ND 58105. Inheritance of characters is described in the following manner:

1. Flower: White
2. Pod: Light brown
3. Seed: Black
4. Maturity: Intermediate

Holberg is a two-parental clone cultivar (2n = 4X = 36) and will be marketed as a general purpose dry bean cultivar. The outstanding feature of Holberg relative to current commercial cultivars is its yield for a vine-type pinto. It is a competitive cultivar for those regions where vine-type pinto beans are grown.