REGISTRATIONS OF CULTIVARS

Registration of ‘AC Pintoba’ Common Bean

‘AC Pintoba’ pinto bean (Phaseolus vulgaris L.) (Reg. no. CV-200, PI 628748) was developed by the Agriculture and Agri-Food Canada Greenhouse and Processing Crops Research Centre (GPCRC), Harrow, ON, Canada. It was tested as HR55-1608 in the Prairie Cooperative Variety Registration Trials during 1993 through 1995 and registered (Registration no. 4668) by the Variety Registration Office, Canadian Food Inspection Agency, Ottawa, Canada on 16 Jan. 1998.

AC Pintoba was selected from the cross between ‘Sierra’ and ‘Fiesta,’ made in the spring of 1988 at GPCRC, Harrow. Sierra was used for its high yield potential and upright plant type, which might contribute to reduced white mold [caused by Sclerotinia sclerotiorum (Lib.) De Bary] and also would be a desired trait for direct combining of beans. Fiesta was used for its early maturity, good pinto bean seed type, and resistance to Bean common mosaic virus ( BCMV). The F1 hybrids were grown in the fall of 1988 at Harrow. The F2 bulks were advanced in the spring of 1989 and the F2 plants were harvested individually. Plants were selected for desired pinto seed type and advanced in plant rows in the summer of 1989 and 1990 at Harrow. A pedigree row, PN48303, was harvested in bulk as C1608b-48303 for its early maturity, upright plant type, and good pinto bean seed type.

Main criteria for selection were early maturing, high yield potential, and upright vine type with acceptable seed quality. Upright plants that allow for direct combining were an important breeding objective because pinto beans have been produced traditionally by pulling and windrowing before threshing. Line C1608b-48303 was tested in a replicated yield trial at Harrow in 1991 and in advanced performance trials at Shetland, ON, and Morden, MB, in 1992. During 1993 through 1995, it was tested as HR55-1608 in the Prairie Cooperative Variety Registration Trials under irrigated and dry land conditions in 12 tests at eight sites in Manitoba, Saskatchewan, and Alberta. HR55-1608 was grown in an isolation plot for purification by roguing off types and multiplication at Harrow in 1992. In 1995, it was purified and multiplied by bulking about 100 plants from rows, on the basis of plant type, where stock seed was established at Harrow.

AC Pintoba out yielded the check ‘Othello’ by an average of about 385 kg ha⁻¹ in an average of 16 cooperative cultivar trials in 1993 through 1995. Bean yields were about 41 and 10% more than Othello in dry and irrigated production fields, respectively. AC Pintoba was about 7 d later maturing than the check. It has similar seed mass to Othello, weighing approximately 338 g 1000 seeds⁻¹. AC Pintoba is taller than Othello but has less lodging. It has similar canning qualities as the standard pinto cv. Othello.


colletotrichum lindemuthianum (Sacc. & Magnus) and delta. It is susceptible to common bacterial blight [caused by Xanthomonas phaseoli (Smith) Dowson], brown spot [caused by Pseudomonas syringae pv. phaseoli (Pres.) G. Wint] similar to the check, Othello. It is tolerant to white mold probably because of its inbred type. AC Pintoba is resistant to Fusarium wilt [caused by Fusarium oxysporum Schlechtend:Fr. f. sp. phaseoli (Burkholder) Young et al.], brown spot (caused by Pseudomonas syringae pv. phaseoli (Burkholder) de F., W.C. Snyder (Fop)) as in the parental line, ‘Sierra’ (Ogg et al., 2000). It is susceptible to root rots [caused by Rhizoctonia solani (Mart.) Sacc. f. sp. phaseoli (Burkholder & H.N. Hans), Rhizoctonia solani Kühn] as in the parental line, ‘Sierra’ (Ogg et al., 2000). It is susceptible to common bacterial blight [caused by Xanthomonas phaseoli van Hall), and rust [caused by Pseudokolonia], brown spot (caused by Pseudomonas syringae pv. phaseoli (Pres.) G. Wint] similar to the check, Othello.

AC Pintoba has indeterminate growth habit, vines, upright plants with a narrow canopy. The seedlings have green hypocotyls and the plants have white flowers. The pods are green. It is susceptible to common bacterial blight [caused by Xanthomonas phaseoli van Hall], and rust [caused by Pseudokolonia].

The authors thank H.H. Muendel, AAFC Research Station, Lethbridge and B. Vandenberg, U. Saskatchewan, Canada for breeding. This research was supported in part by the endowed Bean Growers Association.

References


S.J. Park and T. Rupert, Agriculture and Agri-Food Canada, Greenhouse and Processing Crops Research Centre, Harrow, ON, Canada. Accepted 30 June 2002. Corresponding author (parks@agr.gc.ca).

Published in Crop Sci. 43:430 (2003).

Registration of ‘Bribri’ Small Red Bean

(Race Mesoamerica)