

locations), and 1992 (four locations), B100's best performance was in crosses with A632, A681, and SD40. Single-cross A632 × B100 yielded 15% more than did A619 × A632 in 1992 and 12.6% more than the average of all single crosses included in the trials conducted for 3 yr. Grain moisture level and root and stalk strength of A632 × B100 were similar to those of A619 × A632 in 1990 and 1991, but less than those of A619 × A632 in 1992. The average yield of B100 in crosses with A632, A681, and SD40 was 9.75 t ha⁻¹, compared with the average yield of 9.51 t ha⁻¹ for four commercial checks in 1992, but grain moisture level of B100 in crosses averaged 30 g kg⁻¹ higher than grain moisture level in checks. Inbred B100 is highly resistant to first-generation European corn borer.

Flowering time for B100 is similar to A632 and 4 d later than A681. Pollen production is excellent, and seed yields of B100 are similar to A681. Plant and ear heights of B100 are 20 to 30 cm less than A632 and A681. Ears have 14 rows of yellow, semiflint kernels on white cobs. B100 has good plant health, clean appearance, and is easy to maintain. B100 has potential as either a male or as a female in the production of hybrid seed. Maturity classification is AES600.

Breeder seed of B99 and B100 is maintained by the Iowa Agriculture and Home Economics Experiment Station and is distributed (100 seeds per request) by the Committee for Agricultural Development, 23 Curtiss Hall, Iowa State University, Ames, IA 50011.

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Registration of ICPM 93006, ICPM 93007, and ICPM 93008, Three Short-Duration Genetic Male-Sterile Parental Lines of Pigeonpea

Three short-duration genetic male-sterile parental lines of pigeonpea [*Cajanus cajan* (L.) Millsp.] designated as ICPM 93006 (Reg. no. PL-1, PI 586684), ICPM 93007 (Reg. no. PL-2, PI 586685), and ICPM 93008 (Reg. no. PL-3, PI 586686) were developed at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) located at Patancheru, India. These genetic male-sterile lines were released by the ICRISAT Plant Materials Identification Committee (PMIC) in 1994. The basis for their release was the stable nature of their male-sterility, extensive usage in development of hybrids, and their use in the population improvement programs at ICRISAT Asia Center (IAC) and the Indian national programs. The world's first pigeonpea hybrid, ICPH 8, was developed by using ICPM 93006 as the female parent and the second hybrid, ICPH 732, was developed by using ICPM 93008 as the female parent at IAC. Several other pigeonpea hybrids involving ICPM 93006, ICPM 93007, and ICPM 93008 are in multilocation trials. These male-sterile parental lines were developed by transferring a recessive male-sterile gene *ms₁* from a medium-duration indeterminate pigeonpea male-sterile stock (MS 3A) through backcrossing. ICPM 93006 [= *ms* 'Prabhat' (DT)] and ICPM 93007 [= *ms* Prabhat (NDT)] were developed by backcrossing MS 3A to a short-duration determinate cultivar Prabhat as the recipient parent. Heterozygous (*MS ms*) segregants in the F₂ generation were backcrossed to Prabhat to produce BC₁F₁. From the BC₁F₂ population, determinate and indeterminate male-sterile

(*ms ms*) plants were selected for further backcrossing to Prabhat. After five backcrosses, determinate (ICPM 93006) and indeterminate (ICPM 93007) male-sterile lines were developed and further maintained by sibbing. Using a similar procedure, ICPM 93008 (= *ms* T 21), with indeterminate growth habit, was developed by backcrossing MS 3A to an indeterminate short-duration cultivar, T 21, as the recurrent parent.

ICPM 93006 has a determinate plant habit, is 114 cm tall, and matures in about 110 d at IAC. ICPM 93007 is indeterminate, 138 cm tall, and matures in about 124 d at IAC. ICPM 93008 is indeterminate, 218 cm tall, and matures in about 125 d at IAC. All the three male-sterile lines have green stems, medium-sized leaves, yellow flowers with medium to dense red streaks, green pods with dark brown streaks, and dark brown oval seeds. The 100-seed weight is 7.5 g for ICPM 93006, 6.9 g for ICPM 93007, and 8.9 g for ICPM 93008. All three male-sterile lines produce numerous pods under open pollination.

The Genetic Resources Division of ICRISAT (Patancheru, AP, India) maintains and supplies breeder seed of these lines upon request.

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References and Notes

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