CI 11049 and M-101, which possesses the sdi gene, the F1 plants were tall. The F2 segregation ratio, confirmed by F2 progeny tests, was 59 tall: 15 normal semidwarf: 16 narrow-leaf semidwarf: 1 narrow-leaf double dwarf. This ratio provides a satisfactory fit to a 9:3:3:1 model (0.10 < P < 0.20) for two independent genes. Since the leaf type, seed size, and semidwarfism of this line were inseparable, the semidwarfing gene in CI 11049 appears to have a pleiotropic effect for short, narrow leaves, and reduced seed size. In a single location trial, CI 11049 yielded 7,720 kg/ha compared to 9,140 kg/ha for the semidwarf check cultivar M-301.

CI 11050 (GP 47) is a short stature mutant (experimental designation S-6193-3) that was selected following cobalt-60 irradiation of the tall cultivar Tsuru Mai. Height of CI 11050 is about 85 cm, making it about 30 cm shorter than its parent. CI 11050 also has short and narrow leaves, although not as short and narrow as those of CI 11049. Flag leaf length and width of CI 11050, taken in the same trial described for CI 11049, were 121 ± 6 and 7.6 ± 0.1 mm. Seed size of CI 11050 does not appear to be reduced. Inheritance of short stature and leaf type in CI 11050 has not been studied. In a single location trial, CI 11050 yielded 7,390 kg/ha compared to 8,800 kg/ha for the semidwarf check cultivar M-301.

CI 11051 (GP 48) is a spontaneous mutant for early maturity (experimental designation ED7) that was found in a seed increase field of the semidwarf cultivar Calrose 76. CI 11051 is 15 to 20 days earlier than its parent, and similar to the cultivar M-101. Like its parent, CI 11051 carries the semidwarfing gene sdi.

CI 11052 (GP 49) is an early maturity mutant (experimental designation S-6190-57) that was selected following cobalt-60 irradiation of the cultivar M5. CI 11052 is about 1 week earlier than M5, but is otherwise similar to its parent. Inheritance of early maturity of CI 11052 has not been studied.

CI 11053 (GP 50) is an early maturing mutant (experimental designation S-8157-82) that was selected following cobalt-60 irradiation of the cultivar S6. CI 11053 is about 1 week earlier than S6, but is otherwise similar to its parent. Inheritance of early maturity of CI 11053 has not been studied.

CI 11054 (GP 51) is an early maturing mutant (experimental designation S-6189-21) that was selected following cobalt-60 irradiation of the cultivar Terso. CI 11054 is about 3 weeks earlier than Terso, but is otherwise similar to its parent. Inheritance of early maturity of CI 11054 has not been studied.

These 10 germplasm lines were jointly released on 15 March 1981 by AR-SEA-USDA (now ARS-USDA), CCRRF, Inc. and the California Agric. Exp. Stn. Germplasm amounts of seed (< 10 g) of the above lines may be obtained from germplasm Resources Laboratory, ARS, USDA, NER, Bldg. 047, BARC-West, Beltsville, MD 20705.

REFERENCES