These lines were developed by backcrossing and are nearly isogenic to ‘Williams 82’ (1), ‘Clark 63’ (7), and ‘Amsoy 71’ (6). The recurrent parents are domestic commercial cultivars with the Ti\(^{\#}\) Ti\(^{-}\) genotype (4) for the common type and amount of Kunitz trypsin inhibitor and belong to Maturity Groups III, IV, and II, respectively. Each germplasm line is an F\(_2\) plant progeny selected for the ti\(^{-}\) ti\(^{-}\) (null) genotype (5) from the BC\(_2\), L81-4590 is from Williams 82\(^{6}\) X PI 157.440, L81-4871 is from L6\(^{6}\) X PI 157.440, and L83-4387 is from Amsoy 71\(^{6}\) X PI 157.440. The experimental line, L6, is related to and apparently identical to Clark 63 but with more backcrossing to ‘Clark’ (3). The donor parent for the null trait, PI 157.440, is the cultivar ‘Kum-du’ introduced into the USA in 1947 from the Central Experimental Station, Suweon, South Korea.

After each backcross, seeds from F\(_1\) plants were analyzed by polyacrylamide disc electrophoresis (4) or activity color test (2) to identify F\(_2\) plants segregating F\(_2\) seeds with no Kunitz trypsin inhibitor (the ti ti genotype). Protein and oil content in seeds and yield of the null lines as well as morphological characteristics are similar to those of the respective recurrent parent.

Small amounts of seeds of the germplasm lines can be obtained from R.L. Bernard, USDA-ARS, Department of Agronomy, University of Illinois, 1102 South Goodwin Avenue, Urbana, IL 61801.

R. L. Bernard AND T. Hymowitz (8)

Reference and Notes


REGISTRATION OF FOUR WINTER WHEAT GERMPLASM LINES WITH RESISTANCE TO DWARF BUNT

Four winter wheat (Triticum aestivum L.) germplasm lines (Reg. no. GP-270 to GP-273, formerly identified as 1, SM Sel. 4, SM Sel. 11, SM Sel. 22, respectively) have been released cooperatively as germplasm lines by the USDA-ARS and the Idaho Agricultural Experiment Station since 1983 and 1985, respectively. The original resistant to all races of dwarf bunt (caused by Typhula idahoensis Remsb.) tolerant germplasm lines was introduced in 1929 as PI 82.202 from Gangwon De-