REGISTRATION OF AWNLESS (SHORT-AWNED) BARLEY ISOCOSGENIC LINES

Five pairs of isogenic lines of two-rowed barley (Hordeum vulgare L.) were developed cooperatively by USDA-ARS and the Montana Agricultural Experiment Station and released on 1 Nov. 1989. The pairs of isolines are described as follows: ‘Betzes’ awnless (Reg. no. GP-105, PI 534510, CI 16575) and Betzes awned derived (Reg. no. GP-106, PI 534511, CI 16576); ‘Compana’ awnless (Reg. no. GP-107, PI 534512, CI 16577) and Compana awned derived (Reg. no. GP-108, PI 534513). The Ingrid awnless isoline PI 534516 (CI 16576), for which a short-awned awnless genotype was transferred.

The awnless genotype was selected from the awnless (LkLk) with the recurrent parent Engleawnless (Engleawnless) male in 1976, followed by six backcrosses when the awnless genotype was transferred.

The Ingrid awnless isoline PI 534516 (CI 16576), was released on 1 Nov. 1989. The pairs of isolines are described as follows: PI 533600, CI 16569 (GP-115; ‘Betzes’ hooded), PI 534503, CI 16570 (GP-116; Betzes awned derived), PI 534518 and PI 534519, were produced by crossing Betzes (CI 6398) (7), Compana (CI 5438) (4), Dekap (Iklk) (5) (CI 2505) with recurrent parents.

The awnless genotype was selected from the awnless (LkLk) with the recurrent parent Engleawnless (Engleawnless) male in 1976, followed by six backcrosses. The awnless genotype was transferred.

Engleawnless is a tall, two-rowed cultivar with awnless (short-awned) lemmas. A short inversion in barley can result in seed sets ranging from 40 to 83% (8). These isolines have no more sterility than normal barley.

Small samples of seed (5g) of each isoline may be obtained upon request from USDA-ARS, National Small Grains Collection, P.O. Box 307, Aberdeen, ID 83210.

Published in Crop Sci. 30:753–754 (1990).