Registration of 'Falcon' Barley

‘Falcon’ is a six-row semidwarf, spring habit, hulless feed barley (Hordeum vulgare L.) (Reg. no. CV-253, P1 591612), released in 1993 by the Field Crop Development Centre of Alberta Agriculture, Food and Rural Development, Lacombe, AB, Canada (Canadian Reg. no. 3704). It was derived from the cross 11012.2/‘Tern’/‘Tulelake’*. The parental line 11012.2 is a short-strawed barley introduced from India to the International Maize and Wheat Improvement Center (CIMMYT), Mexico. An F2 bulk of the cross was introduced to the Alberta breeding program from CIMMYT and grown out for observation in 1977. Using a modified bulk breeding method, the cross was harvested and planted at Cd. Obregón, Mexico, in the fall of 1977. Subsequent bulk populations of the cross were grown alternately at Lacombe and Cd. Obregón to the F6. The F7 generation was grown at Lacombe in 1980. Seed produced at Lacombe was selected for density on a Carter-Day gravity table. Head selections for desirable plant type were made at Cd. Obregón. In the F8 generation, grown at Lacombe in 1981, head selections were made for plant breeding line development. Subsequent F9 headrows, including the one which became Falcon, were grown at Lacombe in 1982 and were advanced to yield testing. Selections were made in the F9 and following generations for yield, test weight, protein content, straw strength, threshability, and leaf disease resistance. Breeder seed of Falcon was derived from a bulk of 125 F1 lines.

Falcon has a green coleoptile and prostrate juvenile habit. Leaves are dark green, wide, and long, with glabrous green sheaths and blades. The flag-leaf blade is dark green, medium wide, short, and semierect. The sheath is waxy. The auricle is white. Stems are bluish green and waxy, with an average thickness of 5 mm. Culms generally have four elongated internodes, a V-shaped collar, a snaky neck, and an exertion above the base of the flag-leaf blade of 3 to 10 cm. Falcon’s spikes are moderately dense, medium long, and of nodding attitude, with kernels overlapping at the tips. Lemma awns are smooth and long, with green tips. The glume awns are semismooth and several times the length of the glume. The first internode of the rachis is straight. The rachis edges are slightly tapered, with few hairs. Kernels are medium wide and long, with a yellow aleurone. The basal marking of the lemma is a slight crease. The rachilla is long, with long hairs.

Falcon was tested as M77192004N from 1988 to 1991 in the Alberta breeding trials, and as HB501 from 1989 to 1991 in the Western Cooperative Hulless Barley Test. From 1991 to 1995, it was in the Alberta Regional Recommendation Trials. In 20 site-years of the Western Cooperative Hulless Barley Test (Alberta irrigated and black soil trials only), Falcon yielded 6424 kg ha⁻¹, 117% of the available hulless two-row check, ‘Condor’, and 104% of the hulled two-row check, ‘Harrington’. Six-row hulless and hulled checks were not available. In 99 trials of the Alberta Regional Recommendation Test, from 1991 to 1994, Falcon yielded 5006 kg ha⁻¹, 111% of Condor, and 94% of Harrington. In 32 trials of the Western Cooperative Hulless Barley Test, Falcon had a test weight of 75.4 kg hl⁻¹, compared with 77.5 kg hl⁻¹ for Condor.

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References and Notes

1. Alberta Agriculture, Field Crop Development Centre, Lacombe, AB T4L 1W8, Canada. Registration by Communication with Distribution to SeCan Association, 200-57 Auriga Dr., Nepean, ON K2E 8B2, Canada. Application has been made for plant breeder’s rights.

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Registration of ‘Phoenix’ Barley

‘Phoenix’ is a two-row, hulless, feed, spring barley (Hordeum vulgare L.) (Reg. no. CV-256, P1 592303), released in 1993 by the Field Crop Development Centre of Alberta Agriculture, Food and Rural Development, Lacombe, AB, Canada (Canadian Reg. no. 3850). It was derived from the cross ‘Betz’es’/‘Sulphur’/‘Piroline’/3/RB222-69A4/‘Scout’ made in 1981. Both parental lines are hulled barleys of European origin. Phoenix is a hulless cultivar developed at the Crop Development Centre, University of Saskatchewan at Saskatoon. Using a pedigree method, approximately 5000 F2 seeds were grown to form the F3 generation. Modified bulk selection, using headrow separation on a Carter-Day gravity table, was used to select the F4 and F5 generations. Head selections from desirable plant types were made in the F3 and F6 generations. Subsequent headrows, including the one that became Phoenix, were grown at Lacombe in 1985 and were advanced to yield testing. Headrows were made in the F7 and following generations for yield, test weight, maturity, protein content, straw strength, digestible protein, and leaf disease resistance. Phoenix was released from a bulk of 144 F7 lines.

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