Registration of ‘Bridge’ Barley

‘BRIDGE’ (Reg. no. CV-232, PI 560137) is a spring two-rowed barley (Hordeum vulgare L.) cultivar developed at the Agriculture Canada Research Station, Lethbridge, AB, Canada, and registered on 14 June 1990 by the Food Production and Inspection Branch, Agriculture Canada. Bridge [*Zephyr'/ ‘Hector' (TR521)/2/‘Betzes’/ ‘Piroline’/2/ ‘Zephyr’ (TR516)/3/ 5*Zephyr/ hector (TR521)] was tested at Lethbridge and in the Western Cooperative Two-Row Barley Registration Test under the designation TR544.

TR521, tested in the Western Cooperative Two-Row Barley Registration Test (1978-80), outyielded the checks by 3.5 to 8.7% and had superior 1000-kernel weight. TR521 was not registered because it could not be visually distinguished from current barley varieties registered for malting purposes. TR516, tested in the Western Cooperative Two-Row Barley Registration Test (1976-77), outyielded the checks at some locations, and had good agronomic characteristics, with short rachilla hairs.

The F₁ hybrid (TR521/ TR516) was backcrossed five times to TR521 to incorporate short rachilla hairs for kernel visual distinguishability. Progeny rows from the final backcross were evaluated under irrigation at Lethbridge in 1983. Selection for yield and agronomic characteristics were continued at Lethbridge in 1984 and 1985 and at six locations in Alberta and Saskatchewan in 1986. One of the backcross-derived lines, designated TR544, became Bride.

Bridge is a two-rowed, rough-awned spring feed barley. Its kernels are covered, midsized, long in relation to width, with white aleurone and short rachilla hairs. The spike is lax, medium long and seminodding. Bridge headed one day earlier than ‘Abee’ and was similar to Abee and ‘Harrington’ in plant height and resistance to lodging.

Bridge was evaluated in the Western Cooperative Two-Row Barley Registration Test, where it yielded 3% more than the feed check cultivar, Abee, over 3 yr (1987-1989), and 6% more than Harrington, the malting check, over 2 yr (1988 and 1989). The increase in grain yield of Bridge over the checks, Abee and Harrington, was slightly greater in the brown soils (5 and 8%, respectively) than in the black and grey soils (3 and 5%, respectively). Bridge demonstrated improved grain quality, with an increase of 1.7 kg hL⁻¹ in test weight and 3.3 g 1000 kernel⁻¹ in kernel weight compared with Abee.

In trials conducted by the Alberta Cereal and Oilsseed Advisory Committee, Bridge yielded 8% more than Harrington and 7% more than Abee in a 3-yr (1989–1991) yield comparison with 55 station-yr in south and central Alberta. Bridge compares less favorably in northern Alberta, where it yielded 1% less than Harrington and Abee in a 36-station-yr comparison (1989–1991). Bridge also showed a yield advantage in trials conducted by the Saskatchewan Regional Variety Testing Program, where it yielded 5.7% more than Harrington averaged.

Registration of ‘Weskan’ Winter Barley

‘WESKAN’ WINTER BARLEY (Hordeum vulgare L. Reg. no. CV-233, PI 560331) was developed by the Western Cooperative Barley Hardiness Nurseries. In Kansas tests from 1987 through 1990, Weskan was intermediate between ‘Dundy’ and ‘Hitchcock’ in winterhardiness and maturity. Weskan’s average survival across locations was similar to Weskan, which was tested as 82C58, was derived from a single F₉ head from the cross Purdue 1294 (pedigrees unknown) made at the Kansas Experiment Center, Colby, KS, in 1973.

The cross was carried in succeeding generations as an unselected bulk until 1981. Head selections were evaluated in F₉ head row in 1982. Seed from 1983 through 1987 by annual roguing of small seed increase blocks. Head selections were observed, and head rows were grown in 1988. All head rows were harvested in bulk to produce foundation seed.

Weskan is a six-rowed, rough-awned, medium-height, midseason maturity, winter feed barley. It is smooth in appearance but is shorter and later heading than Abee, with higher yield, test weight, and winterhardiness. Weskan is short to midlong, and slightly inclined and has slightly waxy haired rachilla, and colorless aleurone. Weskan’s average survival across locations was similar to Weskan, which was tested as 82C58, was derived from a single F₉ head from the cross Purdue 1294 (pedigrees unknown) made at the Kansas Experiment Center, Colby, KS, in 1973.

The cross was carried in succeeding generations as an unselected bulk until 1981. Head selections were evaluated in F₉ head row in 1982. Seed from 1983 through 1987 by annual roguing of small seed increase blocks. Head selections were observed, and head rows were grown in 1988. All head rows were harvested in bulk to produce foundation seed.

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‘Dicktoo’ and ‘Kearney’ in 1988 through 1990 USDA Winter Barley Hardiness Nurseries. In Kansas tests from 1987 through 1990, Weskan was intermediate between ‘Dundy’ and ‘Hitchcock’ in winterhardiness and maturity. Weskan’s average survival across locations was similar to Weskan, which was tested as 82C58, was derived from a single F₉ head from the cross Purdue 1294 (pedigrees unknown) made at the Kansas Experiment Center, Colby, KS, in 1973.

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Weskan is a six-rowed, rough-awned, medium-height, midseason maturity, winter feed barley. Weskan was evaluated in the Western Cooperative Two-Row Barley Registration Test, where it yielded 3% more than the feed check cultivar, Abee, over 3 yr (1987-1989), and 6% more than Harrington, the malting check, over 2 yr (1988 and 1989). The increase in grain yield of Bridge over the checks, Abee and Harrington, was slightly greater in the brown soils (5 and 8%, respectively) than in the black and grey soils (3 and 5%, respectively). Bridge demonstrated improved grain quality, with an increase of 1.7 kg hL⁻¹ in test weight and 3.3 g 1000 kernel⁻¹ in kernel weight compared with Abee.

In trials conducted by the Alberta Cereal and Oilsseed Advisory Committee, Bridge yielded 8% more than Harrington and 7% more than Abee in a 3-yr (1989–1991) yield comparison with 55 station-yr in south and central Alberta. Bridge compares less favorably in northern Alberta, where it yielded 1% less than Harrington and Abee in a 36-station-yr comparison (1989–1991). Bridge also showed a yield advantage in trials conducted by the Saskatchewan Regional Variety Testing Program, where it yielded 5.7% more than Harrington averaged.