
Breeder seed of Seebe is being maintained by the Field Crop Development Centre of Alberta Agriculture, Food and Rural Development, Lacombe, AB, Canada. Distribution rights were granted to SeCan Association, 200-57 Auriga Dr., Nepean, ON K2E 8B2, Canada.

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References and Notes

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Registration of 'Tukwa' Barley

'Tukwa', a six-row, semidwarf, spring habit, covered feed barley (*Hordeum vulgare* L.) (Reg. no. CV-254, PI 591613), was released in 1993 by the Field Crop Development Centre of Alberta Agriculture, Food and Rural Development, Lacombe, AB, Canada (Canadian Reg. no. 3707). It was derived from the cross 174161/‘Hипроли’ made in 1975 in Alberta. 174161 is a six-row barley introduced from the International Maize and Wheat Improvement Center (CIMMYT), Mexico. Hiproly is a two-row, hulless Ethiopian line.

Using a modified bulk breeding method, seed off F1 plants was bulked to form the F2 generation, grown at Cd. Obregón, Mexico. Head selections were picked and bulked in nurseries alternating between Alberta and Mexico. In the F2 generation, grown at Lacome in 1983, head selections were made for plant breeding line development. In the subsequent F3 head rows, including the one which became Tukwa, were grown at Lacome in 1984, and were advanced to yield testing. Selections were made in the F3 and following generations for yield, test weight, protein content, straw strength, threshability, and leaf disease resistance. Breeder seed of Tukwa was derived from a bulk of 144 F3 lines.

Tukwa has a green coleoptile and erect juvenile growth habit. Leaf blades are green, medium wide and medium long. The flag leaf is narrow, short, and upright, with white auricles and waxy sheath. Stems have an average thickness of 5 mm. Culms generally have five elongated internodes, an open collar, a snaky neck, and an exsertion above the base of the leaf-blade leaf of 0 to 3 cm. The stem is resistant to neck breaking. Tukwa's spike is medium dense, short and of semierect attitude, with kernels overlapping at the tips. Lemma awns are smooth and long, with purplish tips. The glume awns are rough and long. The first internode of the rachis is straight. The rachis edges are tapered, with numerous hairs. Kernels are medium wide and medium long, with a yellow aleurone. The basal marking of the lemma is a slight crease. The rachilla is medium long, with long hairs.

Tukwa was tested as H75355021004 from 1988 to 1991 in the Alberta breeding trials, as BT539 in the Western Cooperative Six-Row Barley Test of the Canadian Prairie Registration Recommending Committee (PRRGC) in 1989, and as SD503 in the Western Cooperative Semi-Dwarf Barley Registration Test of the PRRGC from 1990 to 1994. In 48 site-years of the Western Cooperative Semi-Dwarf Barley Test, averages for the four production areas of Alberta and Saskatchewan, irrigation and black soils, Tukwa yielded 7210 kg ha⁻¹, 106% of the semidwarf barley check, 'Duke'. In 47 trials of the same test, Tukwa had a test weight of 62 kg hL⁻¹ and a mean kernel weight of 34 mg, compared with 60 kg hL⁻¹ and 38 mg kernel⁻¹ for Duke. In 34 station-years, on Alberta irrigated and central Alberta black soils, Tukwa yielded 7887 kg ha⁻¹, 106% of Duke and 99% of Brier, the high-yielding check cultivar. In these 5 yr of testing, with 29 trials, Tukwa averaged 3 d earlier than Duke, and 1 d earlier than Brier. In the same test, in 30 station-years, Tukwa averaged 86 cm in height, compared with 85 cm for Duke and 94 cm for Brier.

In the Western Cooperative Semi-Dwarf Barley Test, Tukwa showed moderate resistance to smut (caused by *Rhyynchosporium secalis* (Oudem.)). J.J. Davis. In the six trials where scald ratings were taken, Tukwa averaged 4.1, and Brier 5.2 on a scale of 0 to 9 (where 0 is least affected). When inoculated with covered smut (caused by *Ustilago hordei* (Pers.) Lager.), Tukwa had a mean level of smutted plants, over 3 yr, of 0%. Similarly, the level was 3% when inoculated with false loose smut (caused by *U. avenae* (Pers.) Rostr.; *U. nigra* Tapke) and 40% when inoculated with loose smut (caused by *U. tritici* (Pers.) Rostr.; *U. muda* (Jens.) Rostr.). Equivalent data for checks were not available for the smut inoculations. Tukwa showed moderate resistance to stem rust (caused by *Puccinia graminis* Pers.: *P. f. sp. Eriks. & E. Her. I*) (non-QCC). It is susceptible to septoria leaf blotch (caused by *Septoria passerinii* Sacc.).

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Registration of 'Chinook' Barley

'Chinook' barley (*Hordeum vulgare* L.) (Reg. no. CV-257, PI 591823) was developed by the Montana Agricultural Experiment Station and released for commercial production in February 1995. It is a selection from the cross 'Hector'/Klages'. The initial cross was made in Bozeman, MT, in 1973. A single F2 plant was selected from the F2-derived MT140523 in 1989 and advanced to replicated yield trials in 1991.

Chinook is a two-rowed, white-kerneled, midseason spring barley. It has midlax, midlodge spikes that are seminodding before maturity and nodding at maturity, similar to 'Lewis' (Cl 15856). The spike has rough awns; glume awns are equal to the length of the hair-covered glume. Kernels have adhering, finely wrinkled hairs. Rachillas have 1 or 2 hairs.

Compared with Hector (CI 15514), the most widely grown feed barley in Montana, Chinook provided 7% greater grain yield in replicated yield trials at 11 locations over 2 yr, with similar kernel plumpness and test weight; it flowered at the same time as Hector, was 3 cm shorter at maturity, and lodged 30% less. In the same trials, Chinook provided 4.5% greater grain yield, 2% greater test weight, and flowered 1 d earlier than 'Harrington', the most widely grown malting barley in Montana. Similar differences were observed between the parental bulk population, MT140523, and both Harrington and Hector in >100 location-years of testing in Montana. No significant differences in agronomic performance have been observed between Chinook and MT140523 in 22