Registration of ‘Leduc’ Barley

‘Leduc’ spring barley (*Hordeum vulgare* L.) (Reg. no. CV-260, PI 592799) ([ClHo](https://www.ars-grin.gov)-15852; [CN2363]) was developed at the Research Station, Agriculture and Agri-Food Canada, Brandon, MB, and registered for sale in Canada in 1982, where the registration number was 2277. It was tested at Brandon as Br. DS4-1 and in the Canadian Western Cooperative Six-Row Barley Registration Trials as BT337.

Leduc was selected at Brandon, MB, in 1974 as an F₄ plant from the cross ‘Steptoe’/‘Klondike’, made in the fall of 1972. A modified bulk breeding method was used. F₃ and F₄ seeds of the cross were carefully selected for size, shape, and freedom from staining due to disease and weathering. F₄ plants were selected for a high level of tillering and absence of leaf disease symptoms. The F₅ nonreplicated plots were selected for yield, uniformity, and clean leaves. Breeder seed was developed from 311 F₇ head selections made in 1977. A true-to-type bulk of head row progeny was sent to the Experimental Farm, Agriculture and Agri-Food Canada, Indian Head, SK, Canada, to continue seed increase of the cultivar. Leduc is a six-rowed spring barley with midseason maturity. The spikes are fairly short and moderately dense. The lateral kernels do not overlap at the tip. Kernels are covered, fairly large, wide, and of medium length. The aleurone is yellow. The lemma is not wrinkled but the palea is, slightly. Rachilla hairs are short. There are numerous barbs on lateral veins. The basal marking of the kernel is an incomplete horseshoe depression. Both glume and lemma awns are rough and green tipped. The glume awn is short, about equal to the length of the glume. The dorsal surface of the glume is covered with short hairs. The rachis edge is tapered and glabrous. The lowest internode of the spike is slightly curved.

Leduc is widely adapted across the Canadian prairies (1). During the years 1985 through 1992, between 4.3 and 7.3% of the area sown to barley in Western Canada was in Leduc (205 000 to 313 000 ha yr⁻¹) (2). In spite of its wide adaptation, the major concentration of hectarage has been within about 200 km of Edmonton, AB.

Leduc was tested in replicated trials beginning in 1976. In the 1978–1981 Western Cooperative Six-Row Barley Registration Tests, consisting of 72 yield trials across western Canada, it yielded 97% of the feed check ‘Johnston’ and matured 2.8 d earlier (51 station years). In these same trials, it had somewhat stronger straw, 3.5 vs. 3.9 on a scale of 1 to 9, where 1 = erect (34 station years). Its test weight was less and its mean kernel weight was greater than those of Johnston, 61.7 vs. 62.3 kg hL⁻¹ (57 comparisons) and 42.0 vs. 37.3 mg (56 comparisons), respectively. In these tests, Leduc averaged 74.2 cm in height, 6.7 cm shorter than Johnston (55 station years).


Registration of ‘Starling’ Barley

Starling (Reg. no. CV-262, PI 591480) six-rowed barley (*Hordeum vulgare* L.) was developed by the cultural Experiment Station and released in June 1993 from a composite of six populations in which the initial populations was completed in 1977. Five plants of these six populations were composited to make a bulk that was advanced using a modified bulk breeding method. The six populations were (i) [ClHo](https://www.ars-grin.gov)-11550/4/1/HarriCape/Wong/3/Cebada/Capaw/Wong/3/Cebada/4/*3 11550/VA 77-27-47 (Surry selection), (ii) [ClHo](https://www.ars-grin.gov)-11550/4/Harrison/3/Cebada/Capaw/Wong/3/Cebada/4/*3 11550/VA 77-27-47 (Surry selection), (iv) [ClHo](https://www.ars-grin.gov)-11550/Surry/VA 77-27-47 (Surry selection), (iv) [ClHo](https://www.ars-grin.gov)-11550/Surry/VA 77-27-47 (Surry selection), (v) [ClHo](https://www.ars-grin.gov)-11550/Surry/VA 77-27-47 (Surry selection).

Starling is a medium tall, midseason, six-rowed barley with compact spikes. Early growth is semiprostrate but average 19 cm in length and 16 mm in width from the flag leaf to the spike is greater than those of Johnston, which are slightly waxy, dense, and parallel, and have overlapping lateral kernels. Spikes are not occasionally have short, semi-smooth awns on pustule-shaped heads.