REGISTRATION OF ‘ASPEN’ RAPESEED

‘ASPEN’ winter rapeseed [Brassica napus L. subsp. oleifera (Metzg.) Sinsk. f. biennis] (Reg. no. CV-10, PI 547111) is a canola-quality synthetic cultivar developed by the Idaho Agricultural Experiment Station at Moscow, ID. The four F₆ parental lines of Aspen (WRE 4, WRE 17, WRE 14, and WRE 21) were selected from three crosses. WRE 4 and WRE 17 were selected from ‘Sipal’/‘Indore’, WRE 14 from ‘Liraglu’/Sipal/Indore, and WRE 21 from WW 827/Indore. Sipal and WW 827 are edible-oil rapeseed cultivars with high levels of glucosinolates developed by the Swedish Seed Association of Svalöv, Sweden, and the Weibullsholm Plant Breeding Institute at Landskrona, Sweden, respectively. Indore is a low-glucosinolate, high-erucic-acid cultivar released by Oregon State University in 1983 (2). Liraglu is a low-glucosinolate, winterhardy parent developed by Deutsche Saatveredlung at Lippstadt, Germany. The segregating generations of these crosses were screened for very low levels of glucosinolates and erucic acid. Aspen was officially released for commercial production in the fall of 1991.

The agronomic performance of Aspen was compared with ‘Cascade’ in 27 tests located at diverse sites across the USA during the 1988–1989 and 1989–90 growing seasons (3, 4). In seven tests located between 30° and 34° N lat. Aspen produced seed yields that averaged 110% of Cascade; average oil content of Aspen was 373 g kg⁻¹, vs. 375 g kg⁻¹ for Cascade. In nine tests located between 34° and 38° N lat, Aspen had seed yields that averaged 108% of Cascade, with oil contents of Aspen (381 g kg⁻¹) and Cascade (385 g kg⁻¹) being almost identical. In four tests located between 38° and 42° N lat, winter damage reduced average seed yields of all cultivars. In these conditions, Aspen had average seed yields 22% lower than Cascade and an oil content of 353 g kg⁻¹ (vs. 364 g kg⁻¹ for Cascade). In the seven test sites located between 42° and 49° N lat, the average seed yield of Aspen was 96% of Cascade, while average oil content of Aspen and Cascade were 380 g kg⁻¹ and 382 g kg⁻¹, respectively. These trials indicated that Aspen was best adapted to those regions of the U.S. located between 32° to 36° N lat.

Aspen was evaluated in only four trials in the 1988–1989 and 1989–1990 growing seasons where differential winter survival was measured (3, 4). In these trials, Aspen had only 64% winter survival, vs. 95% for Cascade. Because of limited winter hardiness, Aspen should be grown in areas without severe winters and early spring frosts.

The seed of Aspen has low levels of glucosinolates and should consistently produce canola-quality meals that contain <30 μmol of glucosinates per gram defatted meal. The oil produced by Aspen has < 2% erucic acid, which meets Food and Drug Administration requirements for canola oil. It contains < 30 μmol of glucosinates per gram defatted meal. The oil produced by Aspen has < 2% erucic acid, which meets Food and Drug Administration requirements for canola oil.

References and Notes

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Seed increases of Aspen are limited by Plant Variety Protection (PVP 9100088) to foundation and certified classes. Information on sources of certified seed can be obtained from the Director of the Idaho Agricultural Experiment Station, University of Idaho, Moscow, ID 83843.


REGISTRATION OF ‘HARTWIG’ SOYBEAN

‘HARTWIG’ soybean [Glycine max. (L.) Merr. (Reg. no. CV-297, PI 543795)] was developed by the Idaho Agricultural Experiment Station and simultaneously by the Missouri, Arkansas, Mississippi, and North Carolina Agricultural Experiment Stations in May 1991. Hartwig is a Maturity Group V cultivar with resistance to all known races of soybean cyst nematode (SCN; Heterodera glycines Ichinohe) and would be suitable for planting in areas with a serious SCN infestation. Hartwig derived its resistance from race 1, 2, 3, 4, 5, 6, 9, and 14; the ones that were completely race 1, 2, 3, 4, 5, 6, 9, and 14; the ones that were completely

Hartwig was derived from a cross ‘Forrest’ × PI 437654, a line resistant to all races and successfully collected from all regions of the USA (1). Hartwig was initially released as germplasm S88-2036, (1).

Hartwig was developed at the Delta Conservation and Experiment Station, University of Missouri, Portageville, MO. It was derived from cross ‘Forrest’ × PI 437654. A backcross to ‘Forrest’ was made to introgress the desirable agronomic characteristics of ‘Forrest’ into the Hartwig germplasm.