REGISTRATION OF 'WL 322 HQ' ALFALFA

'WL 322 HQ' alfalfa (Medicago sativa L.) (Reg. no. CV-170, PI 549097) was developed by W-L Research, Inc. This cultivar was tested under the experimental designation 88-6 and released in September 1990.

WL 322 HQ is a synthetic variety composed of 147 plants selected for high forage quality (high percent crude protein, low percent acid detergent fiber, and low percent neutral detergent fiber) using near infrared reflectance (NIR) spectroscopy. Source material traces to 22 clones derived from 18 experimental breeding lines that had been selected for resistance to bacterial wilt (caused by Clavibacter michiganense subsp. insidiosum [McCulloch] Davis et al. 1984], fusarium wilt [caused by Fusarium oxysporum Schlechtend.:Fr. f. sp. medicaginis (J.L. Weimer) W.C. Snyder & H.N. Hans.], and phytophthora root rot (caused by Phytophthora megasperma Drechs. f. sp. medicaginis T. Kuan & D.C. Erwin), and for tolerance to potato leafhopper [Empoasca fabae (Harris)] yellowing in field nurseries. Subsequent selection was performed for resistance to verticillium wilt (caused by Verticillium albo-atrum Reinke & Berthier). Parental germplasm traces to 'Vernal' (15%), 'Saranac' (20%), 'Kanza' (25%), 'Atlantic' (20%), 'WL 305' (10%), and 'WL 309' (10%).

The fall dormancy of WL 322 HQ is similar to that of Saranac. WL 322 HQ has high resistance to bacterial wilt, fusarium wilt, pea aphid [Acyrthosiphon pisum (Harris)], and spotted alfalfa aphid [Theroioaphis maculata (Buckton)]; resistance to verticillium wilt, phytophthora root rot, and blue alfalfa aphid (Acyrthosiphon kondoi Shinji); moderate resistance to anthracnose (Race 1) (caused by Colletotrichum trifolii Bain & Essary); and low resistance to stem nematode [Ditylenchus dipsaci (Kühn) Filipjev] and northern root-knot nematode (Meloidogyne hapla Chitwood). WL 322 HQ is a moderately fall-dormant cultivar adapted for forage use in the northwestern, midwestern, and northeastern regions of the USA. Approximately 95% of the flowers are purple to dark purple in color, and ~5% blue and blue variegated, with a trace of cream flowers.

One generation of breeder (Syn 1) and two generations each of foundation (Syn 2 or 3) and certified (Syn 3 or 4) seed classes are recognized. Breeder seed was produced under cage isolation at Warden, WA. Sufficient foundation seed was produced at Warden, WA, for the life of the cultivar. Maximums of 3 and 5 yr are permitted on fields producing foundation and certified seed, respectively. In 1991, WL 322 HQ received a favorable review from the National Alfalfa Variety Review Board. Application has been made for a Plant Variety Protection certificate.

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