Registration of Crop Cultivars

REGISTRATION OF WL 310 ALFALFA¹
(Reg. No. 89)

I. I. Kawaguchi and D. F. Beard²

'WL 310' alfalfa (Medicago sativa L.) was developed by the Waterman-Loomis Company. Tested experimentally as 72 MW-SNR-1, WL 310 was developed by screening 1273 clones, selected from Waterman-Loomis cultivars, with the stem nematode [Ditylenchus dipsaci (Kuhn) Filipjev]. Based on the resistance to stem nematode, pea aphid [Acyrthosiphon pisum (Harris)], spotted alfalfa aphid [Theroaphis maculata (Buckton)] and progeny yields in Minnesota and Illinois tests, 28 clones were selected. Another 147 clones were selected from 1085 plants based on stem nematode and bacterial wilt (incited by Corynebacterium insidiosum (McCull.) H. L. Jens.) resistance. These 175 clones were interpollinated in isolation using honey bees (Apis mellifera) to produce 72 MW-SNR-1.

WL 310 is similar to 'Washoe' and 'Lahontan' in stem nematode resistance, similar to 'Vernal' in bacterial wilt resistance, similar to 'Dawson' and 'Kanza' in spotted alfalfa aphid resistance, and superior to Dawson in pea aphid resistance. The yields of WL 310 have been generally superior to 'Ranger', Vernal, Lahontan, Saranac, Dawson, and/or Kanza in northern California, Utah, Nebraska, Missouri, Wisconsin, Illinois, and New Jersey where it has been tested. It is generally adapted to the northern portion of the United States west of 92 Long where dormant to moderately dormant cultivars are grown for forage production. The flower colors are approximately 80% purple, 15% variegated, 4% white or off-white, and 1% yellow.

WL 310 shall be increased on a three-generation basis: breeder, foundation, and certified. Breeder seed was produced in Kern County, California under isolation and pollinated by honey bees. Sufficient breeder seed is maintained in controlled storage at Bakersfield, Calif., for the life of the cultivar. Foundation seed shall be produced between 38° and 44° Lat from breeder seed. Certified seed is produced from breeder or foundation seed. No other class or generation will be recognized.

WL 310 received a favorable review in December 1974 by the National Certified Alfalfa Variety Review Board. Application for plant variety protection has not been considered to date for this cultivar.

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REGISTRATION OF MOREX BARLEY²
(Reg. No. 158)

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'MOREX' barley (Hordeum vulgare L.), CI 15726, was developed at the Michigan State University Agricultural Experiment Station and released in the fall of 1977. Prior to its release it was tested as Mi 69-518-57. It originates from a cross of Mi 62-431-17 × Mi 62-434-1 and has been tested in the Uniform Winter Barley Nursery of Hardy Varieties for 2 years. In tests at two locations in Michigan over a 5-year period, the yield of Norwind has been significantly and consistently better than that of 'Cass', CI 13735, and 'Lakeland', CI 13734, averaging 19 and 16% higher in yield, respectively.

Our objectives were to produce an early, resistant, high yielding cultivar for Michigan, headed, six-rowed, and early. It has rough, covered seeds, and short (occasionally) long, and semi-erect. Morex is medium-early, moderately strong straw.

The name, Morex (more extract), was chosen because the extract percentage of this barley exceeds that of western six-row barleys. In regional trials collaboration with the USDA Barley and Malt Laboratory, Madison, Wis., Morex exceeded 'Larker' in every other quality trait and it appears equal to Larker in protein percentage, which is lower, and alpha amylase higher. The malting and brewing industry years of testing for malting and brewing classified Morex as a malting barley. Morex is superior to Larker, the most widely grown cultivar, in lodging reaction, yield, and disease resistance. Grain yields of Morex have exceeded those of Larker in Minnesota. Morex has a high level of resistance (Puccinia graminis Pers. f. sp. tritici Eriks.), and net and loose smut (Ustilago nuda [Jens.] Rostr.), and moderate resistance to spot blotch (Helminthosporium B.). It is adapted to the barley growing areas of North Dakota and South Dakota.

Breeder seed is maintained by the Minnesota Agricultural Experiment Station, St. Paul, MN 55108.