REGISTRATION OF TREK ALFALFA¹
(Reg. No. 77)
M. R. Hanna and E. J. Hawn²

'TREK' alfalfa (Medicago sativa L.) is an eight-clone synthetic cultivar developed at the Agriculture Canada Research Station, Lethbridge, Alberta. It is the first Canadian cultivar with a high level of resistance to the alfalfa stem nematode (Ditylenchus dipsaci [Kühn] Filipjev). Trek also has a high level of resistance to bacterial wilt (Corynebacterium insidiosum [McCull.] H. L. Jens.).

Trek was developed by backcrossing stem nematode resistance from several sources into the cultivar 'Beaver.' The eight basic clones of the new cultivar were selected from a BC₁ population of about 3,500 plants. The stem nematode resistance of seven of the eight clones was inherited from the cultivar 'Lahontan' in the original crosses with Beaver. The remaining clone inherited its resistance from a Kayseri alfalfa from Turkey (PI 277425).

Trek is suited for hay and for dehydrated alfalfa production in the irrigated districts in southern Alberta, where the alfalfa stem nematode is prevalent. In this region, it equals Beaver in forage yield and 'Vernal' in winterhardiness. It recovers more rapidly after cutting than either Beaver or Vernal and performs well under a three-cutting harvest schedule in southern Alberta.

Trek was licensed in Canada in 1975. It will be multiplied through the breeder, foundation, and certified seed classes. Breeder seed is maintained by the Agricultural Canada Research Station at Lethbridge.

¹ Registered by the Crop Sci. Soc. of Am. Accepted 12 Jan. 1976.
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REGISTRATION OF NEBAR BARLEY²
(Reg. No. 146)
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'NEBAR' barley (Hordeum vulgare L.), CI 15486, was developed by the Nebraska Agric. Exp. Stn. and released in 1973. Nebar is a six-rowed winter feed barley. Nebar is a F₂-derived line from the cross 'Rogers' x 'Kearney' x 'Sabbaton' x 'Meirni' made at the Nebraska Agric. Exp. Stn. in 1963. It was tested in the Uniform Winter Barley Nursery (Hardy Varieties) as Nebraska Selection 69135.

In Nebraska tests from 1970 to 1975, Nebar outyielded Kearney by 58% and 'Paoli' by 8%. It approaches hardness and has a much better recovery from leaf rust than Kearney depending on the season. Nebar has been intermediate in reaction to leaf rust (Puccinia anomala (Rostr.)), scald (Rynchosporium secalis (Oud.) J. J. Davis), and Septoria leaf blotch (Septoria passerinii Sacc.). It has usually escaped stem rust (Puccinia graminis Pers.) because of early maturity. It has the greenbug (Schizaphis graminum Rondani) resistance of its Rogers/Kearney parent.

The hull of Nebar is adhering, only slightly wrinkled, with a V-shaped crease. Awns are long and moderately rough. The spike is erect and lax to dense. The basal internode is short and straight, with a closed or slightly-open collar: the neck is straight. The basal mark is a depression tending to crease. The glumes may be nearly smooth or short-haired, barbed and generally more than twice the length of the glume. Rachilla hairs are generally short. The rachis has short hairs on the edges. Lemma veins may be barred white to pale blue.

Breeder seed will be maintained by the Nebraska Agric. Exp. Stn.

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