REGISTRATION OF CULTIVARS

Registration of 'Blaze' Oat

'Blaze' spring oat (Avena sativa L.), (Reg. no. CV-354, PI 602968), was developed at the Illinois Agricultural Experiment Station of the University of Illinois in cooperation with USDA-ARS and released in 1997. Blaze was tested as experimental line IL89-1730 prior to release. The performance of Blaze was evaluated in Illinois from 1992 to 1997 and in the Uniform Midseason Oat Performance Nursery in 1996 and 1997. Blaze was released because it combines high yield potential, good test weight, tan kernel color, and tolerance to barley yellow dwarf virus (BYDV).

The parentage of Blaze is IL83-7646/'Newdak'. The pedigree of IL83-7646 is Purdue72261-2-3-2/IL75-5665 ('Coker 227'/ 'Clintford'/ 'Portal'). As experimental breeding line IL89-1730, Blaze was first selected as an F<sub>5</sub> plant row originating from a single panicle selected from an F<sub>4</sub> bulk population grown in the field at Urbana, IL, in 1988. The F<sub>2</sub> and F<sub>3</sub> generations of the bulk population were grown in the greenhouse using modified single-seed descent. Panicles selected from an F<sub>6</sub> single plot of IL89-1730 were planted in F<sub>2</sub> plant rows in 1991, a single plant row was harvested, and seed from this plant row was used for the initial seed increase (F<sub>8</sub>) in 1992. Seed was increased further from 1993 through 1995. Breeder seed was produced in 1996.

Blaze has been consistently high yielding in many environments and is adapted to the north-central and northeastern regions of the United States. Blaze ranked third for yield in Uniform Midseason Oat Performance Nursery in 1996, and second in 1997. Blaze yielded 806 kg ha<sup>-1</sup> more than 'Ogle' over 20 locations in 1996, and 470 kg ha<sup>-1</sup> more than Ogle over 17 locations in 1997. Averaged over 57 tests in Illinois and throughout the spring oat growing region, Blaze yielded 558 kg ha<sup>-1</sup> more than Ogle.

In 20 tests in Illinois, test weight of Blaze averaged 1.9 kg hl<sup>-1</sup> higher than Ogle. Blaze is a midseason variety with maturity similar to Ogle. It is usually slightly shorter than Ogle, but taller than 'Brawn'. Blaze is somewhat more susceptible to lodging than Ogle or Brawn. Based on data from the 1996 Uniform Midseason Oat Performance Nursery, great percentage of Blaze is similar to Ogle.

Barley yellow dwarf virus tolerance of Blaze is similar to Ogle. In inoculated tests for BYDV tolerance from 1992 to 1997, Blaze averaged 4.0, compared with 3.80 for Ogle, on a 0-to-9 scale where 0 = tolerant and 9 = very sensitive. Blaze has been moderately resistant to crown rust (caused by Puccinia coronata Corda var. avenae W.P. Fraser & Ledington), but may be susceptible to some races. Blaze is susceptible to loose smut [caused by Ustilago avenae (Pers.) Rostr.].

The juvenile growth habit of Blaze is erect. Upper culm nodes of Blaze are glabrous, but a few hairs may occur at the lower margin of the flag leaf node. Leaf margins and leaf sheaths are glabrous. Ligules are present. Blaze has midbroad equilaterial panicles with ascending branches. Spikelet separation occurs by fracture, and floret separation by heterofracture. Lemmas are tan or Brawn. Based on data from the 1996 Uniform Midseason Oat Performance Nursery, compared with 3620 kg ha<sup>-1</sup> for Ogle.

Lodging of Blaze has been similar to Ogle, or slightly higher. Test weight of Ogle. Rodeo is ~3 cm taller than Ogle, averaging 91 cm in the growing region, Blaze yielded 558 kg ha<sup>-1</sup> more than Ogle.

References and Notes

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Registration of 'Rodeo' Oat

'Rodeo' spring oat (Avena sativa L.) (Reg. no. CV-596583) was developed at the Illinois Agricultural Experiment Station of the University of Illinois in cooperation with USDA-ARS and released in 1996. Rodeo was tested as experimental line IL86-596583) was developed at the Illinois Agricultural Experiment Station, Urbana, IL 61801. Limited quantities of breeder seed are allowed in Blaze if it is used in the development of a new plasm, parental line, or genetic stock.

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