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REGISTRATION OF PENNCOMP 31 HULL-LESS OAT GERMPLASM

PENNCOMP 31 hull-less spring oat (Avena nuda L.) composite (Reg. no. GP-33) was released in 1985 by USDA-ARS and The Pennsylvania Agricultural Experiment Station to provide a population from which breeders can select genotypes having the hull-less trait combined with other desirable traits.

Penncomp 31 was constituted by compositing F3 to F8 remnant seed of bulk populations from 40 crosses. Cultivars or germplasm lines used directly or indirectly as parents in the crosses were:

Hull-less—'Nuprime', 'James', 'Phatex', 'Parker's Huskless', PI 401824, PI 401780, PI 258595, OT-02337-78, OA-503-1


Otee, Jaycee, and Preston have relatively high protein grain; Orbit, Ogale, and Lang are high yielding and widely adapted; Otee, Jaycee, Bates, Lang, Larry, MO 06204, and MO 06622 are early; Ogale, Larry, and Otee are resistant to barley yellow dwarf virus; and Ogale, Egdolon 26, and CI 8447 are lodging resistant.

Selection pressure against hulled seeds was applied to Penncomp 31 with a specific gravity grader, and at release, it had less than 0.5% hulled seeds. The average groat weight was about 26 mg. Penncomp 31 has wide ranges of genetic variability for plant height, lodging resistance, maturity, groat size, grain protein content, and disease resistance, and it should be a useful gene pool for extracting improved hull-less germplasm and cultivars.

Seed of Penncomp 31 is available for research and breeding purposes from the Cereal Crops Research Unit, USDA-ARS, Department of Agronomy, The Pennsylvania State University, University Park, PA 16802.

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References and Notes


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