REGISTRATIONS OF CULTIVARS

Registration of ‘UC 937’ Barley

‘UC 937’ barley (Hordeum vulgare L.) (Reg. no. CV-296, PI 608667) is a six-rowed spring feed barley released by the California Agricultural Experiment Station in 1998. UC 937 was selected from the cross ‘Sma1’/’Sunbar 401/3’/’Gus’/’Kombyne’//’Sma1 (Matchett and Cantu, 1978). Sma1 has the parentage ‘Steptoe’/2’/’Diamant’/3’/Minn Dwarf 64.98-8/’Briggs’/4’/’Asse’ (Muir and Nylan, 1973; Schaller and Prato, 1968). The final cross was made at Woodland, CA, in 1983 by Robert Matchett. Subsequent generations were handled in a pedigree selection program. An F1-derived seed sample in the F1 generation (86Woodland 41233) was received for testing by the University of California, Davis, from Robert Matchett in 1987. A head row was selected for agronomic appearance in 1992 by Lynn Gallagher and designated UCD 92-10,615 for preliminary yield trials. In 1993, it was designated UC 937 and placed in California regional yield trials for statewide evaluation. Over 32 yield trials, UC 937 averaged 4688 kg ha⁻¹ and was superior to other varieties with an increase of 14.8% more than ‘UC 476’ (Schaller et al., 1990), 22.2% more than ‘UC 603’ (Schaller et al., 1990), 11.4% more than ‘Nebula’, 104.2% more than ‘Max’, and 23.6% more than ‘Patti’. UC 937 is short statured, averaging 88.9 cm, as a result of the sdw gene, but averages 5 cm taller than ‘UC 828’ (Gallagher et al., 1996). UC 937 is intended for late fall to early winter (November-December) sowing in the Central Valley of California. Heading time of UC 937 is 2 to 5 d later than UC 828, with mid- November to mid-December emergence under short daylengths in California.

UC 937 is moderately resistant to Barley yellow dwarf virus, leaf rust (caused by Puccinia hordei Otth.), powdery mildew [caused by Erysiphe graminis DC. f. sp. hordei Em. Marchal; syn. Blumeria graminis (DC.) E. O. Speer], net blotch (caused by Pyrenophora teres Drechs.), and scald [caused by Rhynchosporium secalis (Oudem.) J.J. Davis]. UC 937 is resistant to races of stripe rust (Puccinia striiformis f. sp. hordei) existing in California from 1996 through 1998. Over 32 yield trials, UC 937 averaged 4688 kg ha⁻¹ compared with 6266 kg ha⁻¹ for Steptoe and 5288 kg ha⁻¹ for ‘Gustoe’ at Tulelake in the Klamath Basin. No differences were observed among varieties for grain yield at the Lassen or Siskiyou locations outside the Klamath Basin.

The spike of UC 937 is semi-smooth awned, mid-dense, waxy, and semi-erect. The kernels are beige with a white aleurone and covered. Kernel weight averages about 42.4 mg and is heavier than ‘Steptoe’ and 5288 kg ha⁻¹ for Steptoe and 5288 kg ha⁻¹ for ‘Gustoe’ at Tulelake in the Klamath Basin. No differences were observed among varieties for grain yield at the Lassen or Siskiyou locations outside the Klamath Basin.

UC 960 is moderately resistant to Barley yellow dwarf virus, leaf rust (caused by Puccinia hordei Otth.), net blotch (caused by Pyrenophora teres Drechs.), and scald [caused by Rhynchosporium secalis (Oudem.) J.J. Davis]. UC 960 is resistant to races of barley stripe rust existing in the Central Valley of California and the Klamath Basin. In 2 yr of stripe rust observations at Cochabamba, Bolivia, in 1994 and 1995 (W.M. Brown, V. Velasco, and J.P. Hill, personal communication, 1994 and 1995), UC 937 was scored TrR and 5MS compared with 6266 kg ha⁻¹ for Steptoe and 5288 kg ha⁻¹ for ‘Gustoe’ at Tulelake in the Klamath Basin. No differences were observed among varieties for grain yield at the Lassen or Siskiyou locations outside the Klamath Basin.

UC 960 is short statured, averaging 71.1 cm, and similar to ‘Gustoe’ for height, presumably as a result of the sdw gene either from Diamant or Minn Dwarf 64.988. UC 960 yields 7866 kg ha⁻¹ compared with 6266 kg ha⁻¹ for Steptoe and 5288 kg ha⁻¹ for ‘Gustoe’ at Tulelake in the Klamath Basin. UC 960 is intended primarily for spring planting under long daylengths in the southern Klamath Basin.

The spike of UC 960 is rough awned, mid-dense, waxy, and semi-erect. The kernels are beige with a white aleurone and covered. Kernel weight averages about 42.4 mg and is heavier than ‘Steptoe’ and 5288 kg ha⁻¹ for Steptoe and 5288 kg ha⁻¹ for ‘Gustoe’ at Tulelake in the Klamath Basin. No differences were observed among varieties for grain yield at the Lassen or Siskiyou locations outside the Klamath Basin.

References


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