

Seeds are obovate to globular and large (13 g 1000 seed⁻¹). Other morphological characters closely resemble those of ICTP 8203, except that ICMV 88904 has a lower frequency and intensity of purple pigmentation of anthers and nodes. ICMV 88904 tillers more than ICTP 8203, and has better panicle exertion.

ICMV 88904 has good resistance to downy mildew [caused by *Sclerospora graminicola* (Sacc.) J. Schröt.], with 3.2% incidence over 3 yr of screening in AICPMIP disease nurseries, compared with 3.6% for resistant WC-C75. Like other open-pollinated cultivars of pearl millet, ICMV 88904 is less affected by smut [caused by *Moesziomyces penicillariae* (Bref.) K. Vánky; syn. *Tolyposporium penicillariae* Bref.] than single-cross hybrid cultivars produced using the A₁ system of cytoplasmic-nuclear male sterility. Thakur et al. (3) have suggested that open-pollinated pearl millet cultivars are also less affected by ergot (caused by *Claviceps fusiformis* Loveless) than such single-cross hybrids.

Breeder seed of ICMV 88904 is being produced by the Genetic Enhancement Division, ICRISAT Asia Center, and is available to public and private seed agencies in India.

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The authors gratefully acknowledge the contribution of scientists of the All India Coordinated Pearl Millet Improvement Project in the multiloational evaluation of agronomic performance and disease resistance of ICMV 88904, and of V. Mahalakshmi of ICRISAT for developing the drought-tolerance screening procedure and providing the threshing percentage data used in selecting the parental progenies of ICMV 88904.

Published in *Crop Sci.* 37:1022-1023 (1997).

Registration of 'CD-II' Crested Wheatgrass

'CD-II' crested wheatgrass (Reg. no. CV-24, PI 594024) is a 10-clone synthetic derived from the cultivar Hycrest (1), which is a hybrid between induced tetraploid *Agropyron cristatum* (L.) Gaertner and natural tetraploid *A. desertorum* (Fisch. ex Link) Schultes. CD-II was developed by a research team at the USDA-ARS Forage and Range Research Laboratory, Utah State University, Logan, UT, and was released on 25 Jan. 1996 in cooperation with the Utah Agricultural Experiment Station and the USDA-NRCS. CD-II was evaluated as Hycrest-II.

A breeding program was initiated in 1985 to improve the Hycrest breeding population. The base population was derived from 100 clonal lines, which were selected from a Hycrest foundation seed-increase block consisting of 40 000 spaced plants. Selection was based primarily on vegetative vigor and absence of purple leaves during the early spring, tolerance to diseases and insects, and leafiness.

The 100 clonal lines were evaluated a second time in a 10-replicate crossing block for the same vegetative characters, as well as for individual seed weight and emergence of polycross seedlots from deep seedings. Polycross progenies from 30 selected clonal lines were bulked in equal quantities to form a breeding population, which was advanced through two additional breeding cycles of selection for leafiness, vegetative vigor, and seedling vigor. Polycross seed from 10 clonal lines selected from the final breeding cycle was bulked to form breeder seed.

CD-II has been distinguished from Hycrest on the basis of random amplified polymorphic DNA (RAPD) fingerprinting profiles. It was selected for improved leafiness and produces significantly more forage under cold temperatures in the growth chamber than Hycrest. Seedling vigor of CD-II on a field site near Logan, UT, was significantly greater than Hycrest. Under more xeric conditions, ease of stand establishment, forage yield, and persistence were comparable to Hycrest and were significantly greater than 'Nordan' and 'Fairway', particularly during and

immediately following establishment. The cultivar produces from 670 to 900 kg seed ha⁻¹ on sites receiving 400 to 450 mm of annual precipitation with no supplemental irrigation. CD-II produces abundant forage during the spring and early summer, and it is recommended for semiarid range sites in the Intermountain Region and Great Plains receiving 200 to 450 mm annual precipitation at altitudes up to 2200 m. When drilled under dryland range conditions, a seeding rate of 7 to 9 kg ha⁻¹ is recommended.

Breeder, foundation, and certified seed classes of CD-II will be recognized. Breeder seed will be maintained by the USDA-ARS Forage and Range Research Laboratory at Logan, UT. Rights for production and sales of foundation and/or certified seed will be awarded. Protection under the U.S. Plant Variety Protection Act of 1994 is pending (Application no. 9600240), with the requirement that seed of CD-II can be marketed only as a class of certified seed. Genetic material of this release will be deposited in the National Plant Germplasm System, where it will be available for research purposes, including development and commercialization of new cultivars.

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Published in *Crop Sci.* 37:1023 (1997).