Registration of 'Sureno' Sorghum

'SURENO' SORGHUM [Sorghum bicolor (L.) Moench] (Reg. no. CV-129, PI 561472), is a dual-purpose food grain and forage variety with exceptional tortilla-quality grain, yield potential, and resistance to preharvest grain molds, maize weevil [Sitophilus zeamais (Motschulsky)] (1), and sorghum downy mildew caused by Pathotype 1 of Peronosclerospora sorghi (Weston & Uppal) C.G. Shaw. It was developed cooperatively by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Texas Agricultural Experiment Station (TAES), and Honduran Ministry of Natural Resources (MNR) and was jointly released in 1985 by MNR and the International Sorghum and Millet Program (INTSORMIL) of the Title XII Collaborative Research Support Program of the Agency for International Development of the United States of America.

Sureno was derived from the cross [(SC423 × CS3541) × E35-1]-2, which was made by ICRISAT. It then was distributed to the ICRISAT regional office in Mexico, and from there it was sent to TAES. The open-pollinated variety was introduced into Honduras in 1982 from TAES as an entry in the 1982 Grain Weathering Test. It was mass-selected for lodging resistance and tested for yield by scientists in the Honduran National Sorghum Program and designated 82GW-210. Other institutions have selected in progeny of this cross and assigned different designations (M62650, ICSV110, and VG146) to their selections.

Sureno is photoperiod insensitive and flowers in 72 days. It has a height of 2.1 m and is genetically dw, Dw, Dw, dw+. Sureno has tan plant color (pp gg) and tan-colored glumes that cover half of the caryopsis. The lemma is awnless. Panicle shape is elliptical and semicom pact with pubescent racio banches. The caryopsis has a white translucent pericarp (RR yy ZZ B,B,p,q p,s SS), a mass of 28 mg, and normal endosperm texture and type. Sureno has excellent cereal quality properties for tortillas (2), an unleavened bread made using an alkali cooking process. Other traits that enhance its cereal quality are high levels of resistance to preharvest grain molds and moderate resistance to maize weevil, attributed to kernel hardness and small seed size. Sureno is resistant to Pathotype 1 of P. sorghi, the organism causing sorghum downy mildew. Sureno has juicy sweet culms and the leaf midrib appears dull or green. Its coleoptile color is green (rs rs). Lodging may occur under high plant densities (>200,000 plants ha-1), narrow row spacing (≤0.50 m between rows), or when grain yields are high. However, the application of N reduces lodging (3).

On-farm testing throughout sorghum production areas in Honduras during 1983 and 1984 indicated that Sureno was adapted to an array of environments and that grain yields were superior in both favorable and stressful environments. It also responds to N fertilizers, which, in contrast to local landrace sorghum populations, makes improved agronomical technologies economically feasible. Sureno is recommended for lowland and hillside subsistence farmers who have adopted soil conservation practices such as terracing. Sureno performs best when sown pure stand or in relay with maize in the postrera planting season (August–September). Because of its lateness, Sureno is not recommended for the primera season (May–June), in which photoperiod-sensitive varieties are preferred. Breeder seed can be obtained from D.T. Rosenow in Lubbock, TX, or from the Sorghum Project at the Panamerican Agricultural School, in Honduras.

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References and Notes


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Registration of 'Rely' Wheat Multiline

'RELY' (Reg. no. CV-777, PI 542401) is a soft white winter wheat (Triticum aestivum L.) multiline intended to replace 'Crew' multiline. Developed by R.E. Allan, Rely was jointly released in July 1991 by the USDA-ARS, Agricultural Research Center of Washington, and Agricultural Experiment Station of Oregon.

Rely is an awnless, semidwarf wheat comprised of 10 closely related and phenotypically similar lines, which express seedling resistance to one or more races of stripe rust (caused by Puccinia striiformis Westend.). The 10 components are backcross derivatives whose recurrent parents were 'Omar' or semidwarf lines of Omar parentage. The pedigrees of the components are: 'Tres'/Tyee', PI 559707; Tyee, PI 559708; Tres/'Suwon 92/6*Omar//2629/2*Omar, PI 559710; Tres/Suwon 92'/6*Omar//2629/2*Omar, PI 559711; Tres/Tyee, PI 559708; Tres/'Suwon 92/6*Omar//2629/2*Omar, PI 559711; Tres/CI 13253/5*Omar/Ministe'/2*Omar, PI 559712; Tres/CI 13253/5*Omar/Ministe'/2*Omar, PI 559715; Tres/CI 13253/5*Omar/Ministe'/2*Omar, PI 559712; Tres//Suwon 92/6*Omar/'Ibis'//2*Omar, PI 559711; Tres/Suwon 92/6*Omar/Druchamp/'2*Omar, PI 559713; and Tres/'Cappelle', PI 559716. All components were F2-derived F3 lines, that when they were initially blended for testing. The components were F3 lines when blended to produce breeder seed. They were mixed in nearly equal kernel number proportions based on the different kernel weights of each line. All components are awnless–white glume Bth7, semidwarfs with kernels that are white, short, soft, ovate; germ is small; crease is midwide, shallow; cheeks are rounded; brush is midlong to short. The 10 components generally vary <3 d in heading date and <0.06 m in plant height.

Rely is heterogeneous for resistance to diseases caused by P. striiformis, Puccinia recondita Roberge ex Desmaz. and Erysiphe graminis DC. f. sp. tritici Em. Marchal. Among the components of Rely, 7 to 10 have race-specific resistance to the currently predominant races of P. striiformis. Seven components are either uniform or mixed for resistance to newer stripe rust races that attack the Tres gene for resistance. Tests indicate that Rely usually expresses higher field resistance to stripe rust than the multiline 'Crew'. In four tests, the flag

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