Registration of 'Jasmine 85' Rice

'Jasmine 85' rice (Oryza sativa L.) (Reg. no. CV-107, PI 595927), a midseason aromatic (scented) long-grain cultivar with medium grain cooking quality, was developed at the International Rice Research Institute (IRRI), Los Baños, Philippines. It was officially released in 1989 by the USDA-ARS and the Texas Agricultural Experiment Station in cooperation with the Agricultural Experiment Stations of the Univ. of Arkansas, Louisiana State Univ., and Mississippi State Univ., and IRRI (1).

Jasmine 85 (IR841-85) was derived from the cross IR262/'Khao Dawk Mali-105', which was made in 1966. Khao Dawk Mali 105, the leading aromatic cultivar produced in Thailand (2), is tall (about 150 cm), photoperiod-sensitive, and not adapted for production in the USA. IR262 was derived from the cross 'Peta' × 'Tai-chung Native 1'. Jasmine 85 possesses the semidwarf gene found in IR262, but it is intermediate in height (110 cm) between typical U.S. semidwarfs such as 'Gulfmont' (96 cm) and standard height cultivars such as Katy (117 cm). It is similar to 'Cypress' in its moderate susceptibility to lodging, according to experimental plot data from Texas trials. At maturity, the spikelet is straw-colored, awnless, and the apiculus is colorless. Plants have erect tillers and upright flag leaves. The leaves, lemma, and palea are pubescent. There is no anthocyanin pigment in any Jasmine 85 plant parts. The number of days to 50% flowering (102) averaged 11 d later than Katy, which is among the latest of the commercial southern rice cultivars such as Cypress, and Katy.

In regional tests conducted during 1988 to 1994, average grain yield (120 g kg\(^{-1}\) moisture) of Jasmine 85 (entry RL8803197) was 6450 kg ha\(^{-1}\), compared with 4488, 6643, 6700, and 5972 kg ha\(^{-1}\) for 'Della', Gulfmont, Cypress, and Katy, respectively. In these trials, the milling yield (mg g\(^{-1}\) whole milled kernels : mg g\(^{-1}\) total milled rice) of Jasmine 85 (501:680) averaged less than that of Della (568:697), Gulfmont (612:708), Cypress (617:702), and Katy (591:685). Brown rice kernels of Jasmine 85 in 1994 averaged 7.07 mm in length, 2.29 mm in width, 1.77 mm in thickness, and 22.35 mg in weight, compared with 7.37 mm, 2.25 mm, 1.77 mm, and 22.0 mg, respectively, for Lemon. Although Jasmine 85 grains possess the dimensions of a typical long-grain rice, cooking properties are similar to a medium-grain type. The endosperm of Jasmine 85 is nonglutinous, aromatic, and covered by a light brown pericarp. Unlike Della, a typical long-grain aromatic, Jasmine 85 has a lower apparent amylose content (167 g kg\(^{-1}\)) and a low gelatinization temperature (65–68°C), as indicated by alkali spreading values of 6 to 7 in 17 g kg\(^{-1}\) KOH solution. Jasmine 85 is an aromatic rice possessing the flavor and aroma of the premium Basmati-type rices of India and Pakistan and the fragrant rices of Thailand. In a 1992 comparative study conducted in Texas, Jasmine 85 averaged 965 ng g\(^{-1}\) of 2-acetyl-1-pyrroline, the principal aroma compound, compared with 920 ng g\(^{-1}\) for Della and 817 ng g\(^{-1}\) for imported Thai Jasmine. Typically, cooked grains of Jasmine 85, like those of the fragrant rices of Thailand, are soft in texture and cohesive, with cooked kernels tending to cling together.

Jasmine 85 is highly resistant, with disease ratings of 2 or less (on a scale of 0 to 9 for symptomless to killed, respectively) to all races of the rice blast pathogen (Pyricularia grisea (Cooke) Sacc.) currently found in the USA. It is moderately susceptible (rating of 4) to race 18B-54, which was last isolated from a commercial rice field in 1963. Jasmine 85 is moderately resistant to sheath blight (caused by Rhizoctonia solani Kühn), with disease ratings in Texas of 4 or less, compared with 7 or greater for Gulfmont (on a scale of 0 to 9 for symptomless to collapsed culms, respectively). Jasmine 85 is very susceptible to the physiological disease straighthead, and moderately susceptible to panicle blight, another physiological disease of undetermined causes. It is highly resistant to narrow brown leaf spot (caused by Curvularia oryzae Miyake; syn. C. janeous (Racch.) O. Const.) and leaf smut (caused by Entyloma oryzae Syd. & P. Syd.). Jasmine 85 is moderately susceptible to brown leaf spot (caused by Bipolaris oryzae (Breda de Haan) Shoemaker), similar to Della but less resistant than Gulfmont, Cypress, and Katy.

Breeder seed of Jasmine 85 will be maintained by the Texas A&M University System Agricultural Research and Extension Center at Beaumont. Foundation seed will be available from the Texas Rice Improvement Association, 1509 Imes Rd., Beaumont, TX 77713-8530. Limited quantities of seed will be available upon request from the corresponding author for at least 5 yr. Recipients of seed are asked to make appropriate recognition of source of Jasmine 85 if it is used in the development of a new cultivar, germplasm, parental line, or genetic stock.

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References and Notes


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Registration of 'Drew' Rice

'Drew' rice (Oryza sativa L.) (Reg. no. CV-108, PI 596758) is a blast-resistant, high-yielding, midseason, long-grain cultivar developed cooperatively by the Arkansas Agricultural Experiment Station and the USDA-ARS. Drew was officially released in 1996 by the Agricultural Experiment Stations of the University of Arkansas, University of Florida, Louisiana State University, Mississippi State University, University of Missouri, Texas A&M University, and by the USDA-ARS.

Drew originated from the cross 'Newbonnet'/''Katy' (cross no. 865019), made at the Rice Research and Extension Center, Stuttgart, AR, in 1986. Newbonnet, released in 1983 (2), is a high-yielding, excellent milling cultivar, but it is susceptible to rice blast.