'Minco' and 'Cope'. Sunup has been as resistant to lodging as Dawn or Rise in spite of its taller height.

Sunup has performed well throughout western Nebraska and has a good yield record on black fallow, notill, early, and late seeding. Sunup has a seed size larger than Rise, and matured 12 d earlier than Rise. It has not been tested outside Nebraska but should be adapted to areas north of Nebraska.

Foundation seed will be produced and distributed by the Foundation Seed Division, University of Nebraska-Lincoln. The Foundation Seed Division will also maintain breeder seed. Seed classes will be breeder, foundation, registered, and certified.

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References and Notes
1. Dep. of Agronomy, Univ. of Nebraska-Lincoln, Lincoln, NE 68583-0915. Contribution from Agric. Res. Division, University of Nebraska, Lincoln as manuscript no. 8936. Registration by CSSA. Accepted 30 Sept. 1989.

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REGISTRATION OF 'KATY' RICE

‘KATY’ (Oryza sativa L.) (Reg. no. 78, PI 527707) is a rice blast (Pyricularia oryzae Cav.) resistant, midseason, high yielding, long grain cultivar developed cooperatively by the Arkansas Agricultural Experiment Station and the USDA-ARS. It was officially released in 1989 by the Agricultural Experiment Stations of the University of Arkansas, the University of Florida, Louisiana State University, Mississippi State University, the University of Missouri, and by the USDA-ARS.

Katy originated from the cross ‘Bonnet 73’/CI9722/’Starbonnet’/Tetep/3’/Lebonnet’ (cross no. 79GS30) made at the Rice Research and Extension Center, Stuttgart, AR, in 1979. Bonnet 73, Starbonnet, and Lebonnet have been previously described (4,5,2). CI9722 is a short-strawed Starbonnet selection made at Stuttgart, AR. Tetep (PI 280682) is a plant introduction from Vietnam. The experimental designation for early evaluation was STG83L1830 starting with F1, seed from the 1983 panicle row LI830. Katy was tested in the Arkansas Rice Performance Trials and the Cooperative Regional Uniform Rice Nursery (1986–1988) under the experimental designation RU8601179.

Katy has resistance to the eight international rice blast races for which it has been evaluated. On a disease rating scale of 0 = immune and 9 = maximum disease, Katy rated 2, 1, 2, 1, 1, 1, and 1 for Races IB-1, IB-45, IB-49, IB-54, IC-17, ID-13, IH-1, and IG-1, respectively. Katy is slightly more tolerant to sheath blight (Rhizoctonia solani Kuhn) than other southern long-grain cultivars and rates a 5 in artificially inoculated tests. ‘Newbonnet’ (3) and ‘Lemont’ (1) rate a 6 and 8, respectively. Katy rates a 6 on the disease scale for strawhead (a physiological disorder) and requires special water management when grown on straighthead susceptible soils.

Rough rice grain yields of Katy, Newbonnet, and Lemont averaged 6968, 7115, and 7358 kg ha⁻¹ (120 g kg⁻¹ or 12% moisture), respectively, in 30 Arkansas and Cooperative Regional Uniform Rice Nursery tests conducted in Arkansas, Louisiana, Mississippi, and Texas from 1985 to 1988. Data from 21 Arkansas tests during the same period showed that Katy’s average grain yield of 7359 kg ha⁻¹ compared favorably with those of Newbonnet and Lemont at 7348 and 7543 kg ha⁻¹, respectively.

Katy has the same maturity as Newbonnet and Lemont, approximately 130 d in Arkansas. Plant height for Katy and Newbonnet averaged 113 and 110 cm, respectively. Plants of Katy are similar in color to Starbonnet, but they have more erect leaves and greater straw strength. On a relative straw strength (lodging) scale (0 = erect, 9 = flat) Katy, Newbonnet, and Starbonnet rate a 3, 2, and 4, respectively. Katy has glabrous lemma, palea, and leaf blades. Grains may have colorless or purple apiculi and awns on the lemma at maturity. The hulls are straw colored. Occasionally, culms of Katy will have purple internodes, but usually they are green in color.

Milling yields (mg g⁻¹ whole kernel:mg g⁻¹ total milled rice) at 120 mg g⁻¹ moisture for Katy, Newbonnet, and Lemont from 1984 to 1988 averaged 594:705, 623:713, and 579:727, respectively. Individual kernel dimensions for Katy, Starbonnet, and Newbonnet, respectively, averaged as follows for rough rice: length—9.3, 9.1, and 9.4 mm; width—2.4, 2.5, and 2.5 mm; length/width ratio—3.9, 3.7, and 3.8; and thickness—1.9, 1.9, and 1.9 mm. Corresponding brown rice measurements averaged as follows: length—7.2, 7.1, and 7.3 mm; width—2.1, 2.1, and 2.1 mm; length/width ratio—3.5, 3.3, and 3.5; and thickness—1.6, 1.6, and 1.7 mm. The averages were as follows for whole kernel milled rice: length—6.7, 6.9, and 7.2 mm; width—2.0, 2.1, and 2.1 mm; length/width ratio—3.3, 3.3, and 3.5; and thickness—1.6, 1.6, and 1.7 mm. Average individual kernel weights for Katy, Starbonnet, and Newbonnet, respectively, were as follows: rough rice—20.8, 20.9, and 23.3 mg; brown rice—16.9, 16.9, and 18.9 mg; and milled rice—15.7, 15.9, and 18.1 mg. Kernel dimensions and weights indicate that Katy kernels are comparable in size to those of Starbonnet.

The endosperm of Katy kernels is nonglutinous, nonamoratic, and covered by a light brown pericarp. Results from the Cooperative Regional Rice Quality Laboratory at Beaumont, TX indicate that Katy has typical U.S. long-grain rice quality characteristics as described by Webb et al. (6). Katy has an average starch amylose content of 227 g kg⁻¹ and an intermediate gelatinization temperature (70–75 °C) as indicated by an average 17 g kg⁻¹KOH spreading reaction of 2.8.

Breeder seed used to establish the 16 hectare foundation seed field in 1988 came from a bulk of 134 panicle rows selected from the 1700 panicle rows grown in 1987. The 134 selected panicle rows were also grown in family blocks during 1988, and 120 blocks were selected and harvested in bulk to produce future breeder seed. The field of Katy was rogued several times throughout the season. A few taller, shorter, earlier, and/or later plants as well as a possible gold-hulled, medium, intermediate and/or very long-grain and other off-type plants may still be encountered in the variety.

Breeder and foundation seed of Katy will be maintained by the University of Arkansas Rice Research and Extension Center, P.O. Box 351, Stuttgart, AR 72160.

Application for plant variety protection of Katy is not being made.


References and Notes