Registration of ‘Cheniere’ Rice

‘Cheniere’ (Oryza sativa L.) (Reg. no. CV-120, PI 634719, NSSL 428621.52) is a high-yielding, early maturing, semidwarf long-grain rice cultivar developed at the Rice Research Station at Crowley, LA, by the Louisiana State University Agricultural Center (LSU AgCenter) in cooperation with the USDA-ARS, the Arkansas Agricultural Experiment Station, the Mississippi Agricultural and Forestry Experiment Station, the Florida Agricultural Experiment Station, and the Texas Agricultural Experiment Station. Cheniere was officially released by the LSU AgCenter in 2002.

Cheniere was developed from the cross ‘Newbonnet’/‘Katy’/3’/L-202’/Lemont’/’L-202’ made at the Rice Research Station in 1994 (94CR112). Newbonnet is a high yielding, conventional height, long-grain rice cultivar, while Katy is a tall, early, blast-resistant long-grain rice cultivar. Both of these cultivars were developed by the Arkansas Agricultural Experiment Station in Stuttgart, AR (Johnston et al., 1984, Moldenhauer et al., 1990). L-202 is a semidwarf, very early long-grain rice cultivar released by the Rice Experiment Station in Biggs, CA (Tseng et al., 1984). Lemont is a high yielding, semidwarf, long-grain cultivar developed by the USDA-ARS in conjunction with the Texas A&M University Agricultural Research and Extension Center, Beaumont, TX (Bollich et al., 1985).

Cheniere started as a bulk of F5 seeds of panicle row 9828209 in 1998. It was tested in the preliminary yield trials (PY) in Crowley, LA, as entry PY709, in 1999 and entered into the Cooperative Uniform Regional Rice Nurseries (URRN) in 2000 with the designation of RU0002174. The line was also evaluated in the Louisiana Commercial-Advanced test during 2001–2002.

Cheniere has a semidwarf plant type and good lodging resistance. The average plant height of Cheniere in 26 trials is 70 cm compared with 93 cm for both Cocodrie and Cypress. In 28 trials, the average number of days from emergence to 50% heading for Cheniere is 84 d as compared with 81 d for Cocodrie and 85 d for Cypress.

Cheniere has an excellent grain yield and good milling yield. In 27 statewide and regional trials during 1999 through 2002, average grain yield of Cheniere was 8903 kg ha$^{-1}$ at 120 g kg$^{-1}$ moisture compared with 8803 and 7841 kg ha$^{-1}$ for Cocodrie and Cypress, respectively. In 10 state and regional tests (1999–2002), average ratoon yield for Cheniere is 1285 kg ha$^{-1}$ at 120 g kg$^{-1}$ moisture compared with 1794 kg ha$^{-1}$ and 1700 kg ha$^{-1}$ for Cocodrie and Cypress, respectively. When evaluated in 20 state and regional tests from 1999–2002, milling yields (mg g$^{-1}$ whole milled rice to mg g$^{-1}$ total milled rice) at 120 g kg$^{-1}$ moisture were 607:698 for Cheniere, 612:689 for Cocodrie, and 636:698 for Cypress. A comparison of kernel dimensions of Cheniere with other commercial long-grain cultivars indicates that it has a similar long grain size. Brown rice dimensions for Cheniere were 7.18 mm L, 2.15 mm W, thickness 1.67 mm, L/W 3.34, and kernel weight 18.8 mg compared with 7.13, 2.14, 1.67, 3.33, and 19.4 for Cocodrie and 7.09, 2.23, 1.68, 3.18, and 20.2 for Cypress. Average apparent amylose content of rice was 22.1% for Cheniere, 21.7% for Cocodrie, and 21.6% for Cypress.

The leaves, lemma, and palea of Cheniere at heading and the color fades as grains approach maturity. The apiculus is light purple observed in certain environments. The spikelet is straw-colored and some short awns have been observed. The endosperm of Cheniere is nonaromatic, nonglutinous, and covered by a light brown pericarp.

Cheniere is susceptible to sheath blight (Rhizoctonia solani Kühn) and blast [caused by Pyricularia oryzae Syd. & P. H. Syd.]. However, Cheniere has a physiological disorder straightthead, rating a scale of 0 = immune, 9 = highly susceptible, compared with a rating of 3.7 and 3.3, compared with Cocodrie and Cypress, respectively.

Off-types observed and removed from 10/712,896; Filed 13 Nov. 2003). Breeder and Foundation seed of Cheniere will be maintained by the Louisiana Agricultural Experiment Station, Louisiana Agricultural Experiment Station, Rice Research Station, 1373 Caffey Road, Rayne, LA 70578. Requests for seed must be made to the author until 20 yr from the date of release by Louisiana State University Agricultural Center (2002), at which time offspring will also be available from the NPGS.


References


