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Registration of 'Cocodrie' Rice

'Cocodrie' (*Oryza sativa* L.) (Reg. no. CV-111, PI 606331) is a high-yielding, very early maturing long-grain rice developed at the Rice Research Station at Crowley, LA, by the Louisiana State University Agricultural Center 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. Cocodrie was officially released 1 March 1998.

Cocodrie originated from the cross 'Cypress'// 'L-202'/'Tebonnet' made at the Rice Research Station in 1990. Cypress is an early maturing, semidwarf long-grain cultivar developed by the Rice Research Station (2). L-202 is an early maturing, semidwarf long-grain cultivar developed by the California Cooperative Rice Research Foundation at the Rice Experiment Station, Biggs, CA (3). Tebonnet is a very early conventional height, long-grain cultivar developed by the Arkansas Agricultural Experiment Station at the Rice Research and Extension Center, Stuttgart, AR (1). Cocodrie originated from an F_3 bulk of a single progeny row in the breeding nursery at Crowley in 1993, selection 9314924. It was evaluated in the preliminary yield nursery (experimental designation 9402511) in 1994 and entered in the Cooperative Uniform Regional Rice Nurseries (URRN) and the Louisiana Advanced Yield tests in 1995 with the designation RU 9502008.

Cocodrie has a semidwarf plant type and is similar in height to Cypress. In the URRN grown in Arkansas, Louisiana, Mississippi, and Texas from 1995–1997, the average height of Cocodrie was 96 cm and that of Cypress, 'Drew', and 'Jodon' was 96, 113, and 98 cm, respectively. The flag leaf of Cocodrie is narrow and normally remains erect through harvest maturity. Average days from emergence to heading are 82 for Cocodrie, 86 for Cypress, 86 for Drew, and 83 for Jodon (URRN, 1995–1997).

The leaves, lemma, and palea of Cocodrie are glabrous. The spikelet is straw-colored and can be awned or awnless. The apiculus is purple at heading, but the color fades as the grain approaches maturity. The grain is nonaromatic and non-glutinous and has a light brown pericarp. The average crop yield of Cocodrie in the URRN from 1995 to 1997 was 8481 kg ha⁻¹, compared with 8174 for Drew, 8110 for Cypress, and 7498 for Jodon. In the Louisiana advanced yield tests conducted across six locations during 1995 to 1997, Cocodrie produced main crop yields of 9107 kg ha⁻¹, compared with 8238 for Cypress.

Milling yields (mg g⁻¹ whole kernel/mg g⁻¹ total milled rice) at 120 g kg⁻¹ moisture (1995–1997 URRN average) were 597:694 (60–69%) for Cocodrie, 597:691 (60–69%) for Drew, 616:704 (62–70%) for Cypress, and 560:684 (56–68%) for Jodon. Individual kernel dimensions for Cocodrie and Cypress are shown in Table 1.

Rice quality evaluations from the USDA-ARS laboratory at Beaumont indicate that Cocodrie has typical U.S. long-grain rice cooking quality characteristics as described by Webb et al. (4). Cocodrie has an average apparent starch amylose content of 221 g kg⁻¹ and an intermediate gelatinization temperature (70–75°C), as indicated by an average alkali spreading reaction of 3.6 in 1.7% KOH.

Cocodrie is similar to Cypress in susceptibility to rice blast

Table 1. Paddy, brown, and milled grain dimensions and weight of Cocodrie and Cypress rice grown at Crowley, LA, in 1998.

Cultivar	Length (L)	Width (W)	Thickness	L/W Ratio	Weight
	mm				mg
	Paddy Rice				
Cocodrie	9.33	2.52	1.94	3.70	25.6
Cypress	9.34	2.49	1.96	3.75	24.6
	Brown Rice				
Cocodrie	7.14	2.20	1.77	3.25	20.6
Cypress	7.08	2.19	1.78	3.23	20.2
	Milled Rice				
Cocodrie	7.10	2.17	1.74	3.27	20.2
Cypress	6.95	2.16	1.74	3.22	19.8

and sheath blight. It is moderately susceptible to rice blast [caused by *Pyricularia grisea* (Cooke) Sacc.] race IB-49, resistant to races IB-1 and IE-1, and highly resistant to races IB-45, IB-54, IC-17, IG-1, and IH-1. It is susceptible to sheath blight (caused by *Rhizoctonia solani* Kuhn), resistant to narrow brown leaf spot (caused by *Cercospora janseana* (Racib.) O. Const.), moderately susceptible to leaf smut (caused by *Entyloma oryzae* Syd. & P. Syd.), and moderately susceptible to the physiological disorder straighthead.

Variants observed and removed from increase fields of Cocodrie included any combination of the following: taller, pubescent, earlier, later, intermediate and medium-grain shape, and gold hull. The total number of variants numbered fewer than 1 per 5000 plants.

U.S. plant variety protection of Cocodrie has been applied for (PVP Certificate no. 9900148). Breeder and Foundation seed of Cocodrie will be maintained by the Louisiana State University Agricultural Center, Louisiana Agricultural Experiment Station, Rice Research Station, P.O. Box 1429, Crowley, LA 70527-1429. Limited quantities of seed are available upon request to the corresponding author.

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References and Notes

- Kuenzel, K.A., T.H. Johnston, F.N. Lee, B.R. Wells, S.E. Henry, and R.H. Dilday. 1985. Registration of 'Tebonnet' rice. Crop Sci. 25:1126–1127.
- Linscombe, S.D., F. Jodari, K.S. McKenzie, P.K. Bollich, L.M. White, D.E. Groth, and R.T. Dunand. 1993. Registration of 'Cypress' rice. Crop Sci. 33:355.
- Tseng, S.T., H.L. Carnahan, C.W. Johnson, J.J. Oster, J.E. Hill, and S.C. Scardaci. 1984. Registration of 'L 202' rice. Crop Sci. 24:1213–1214.
- Webb, B.D., C.N. Bollich, H.L. Carnahan, K.A. Kuenzel, and K.S. McKenzie. 1985. Utilization characteristics and qualities of United States rice. p. 25–35. In Rice grain quality and marketing. IRRI, Manila, Philippines.
- S.D. Linscombe, F. Jodari, P.K. Bollich, D.E. Groth, L.M. White, Q.R. Chu, and R.T. Dunand. Rice Res. Stn, P.O. Box 1429, Crowley, LA 70527-1429; and D.E. Sanders, Louisiana Coop. Ext. Serv., P.O. Box 25100, Baton Rouge, LA 70894-5100. Approved for publication by the Director of the Louisiana Agricultural Experiment Station, Manuscript no. 98-86-0543. Research supported in part by the Louisiana Rice Research Board. Registration by CSSA. Accepted 31 May 1999. *Corresponding author (slinscombe@agctr.lsu.edu).

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Registration of 'Boggs' Soybean

'Boggs' soybean [*Glycine max* (L.) Merr.] (Reg. no. CV-403, PI 602597) was developed by the Georgia Agricultural

Experiment Stations and released in April of 1997 because of its disease and nematode resistance and high productivity. Boggs was derived from an F₅ plant from the cross G81-152 × 'Coker 6738' (4). G81-152 was derived from the cross D74-7741 × 'Coker 237' (5). D74-7741 is a Maturity Group VI breeding line that was selected from the cross 'Forrest' × D70-3001 (2). D70-3001 is a Maturity Group VI breeding line from the same cross as 'Centennial' (3). The generations were advanced by the single pod-bulk method to the F₅ generation in Georgia and Puerto Rico. The line was tested in Georgia for disease resistance, agronomic performance, and seed yield from 1990 to 1997. It was evaluated in the Uniform Soybean Tests, Southern Region (Uniform Group VI) from 1993 to 1996 (10). It is adapted to the southeastern USA where Maturity Group VI soybean cultivars are commonly grown. It was tested under the experimental designation G89-2223.

Boggs has a determinate growth habit, white flowers, tawny pubescence, and tan pod walls. Seeds are yellow with shiny seed coats and black hila. Boggs is classified as Maturity Group VI (relative maturity 6.9) and matures 2 d later than 'Brim' and 6 d later than 'Dillon' (1, 9). It averages 76 cm in plant height compared to 88 cm for Brim and Dillon; and plant lodging score (where 1 = all plants upright to 5 = all plants prostrate) was similar for Boggs (score of 2.0) and Brim (score of 1.9) and somewhat less for Dillon (score of 1.6) (8, 10). Seed quality (score of 1.6 where 1 = excellent to 5 = poor) and seed weight (140 mg seed⁻¹) of Boggs are similar to Brim. Seed of Boggs averages 10 g kg⁻¹ more oil and similar protein to Brim. Boggs averaged 2 and 3% higher in seed yield across 47 southern U.S. environments than Brim and Dillon, respectively (8, 10).

Boggs is resistant to southern stem canker [caused by *Diaportha phaseolorum* (Cooke & Ellis.) Sacc. var. *meridionalis* F.A. Fern] and bacterial pustule [caused by *Xanthomonas campestris* pv. *glycines* (Nakano) Dye]. It has resistance to the southern [*Meloidogyne incognita* (Kofoid & White) Chitwood] and javanese [*M. javanica* (Treub) Chitwood] root-knot nematodes (6,7,10). It is susceptible to the peanut root-knot nematode [*M. arenaria* (Neal) Chitwood] and to the prevalent races of frogeye leaf spot (caused by *Cercospora sojina* K. Hara). Boggs is resistant to Race 3 of the soybean cyst nematode (*Heterodera glycines* Ichinohe) (6, 7, 10) and the reniform nematode (*Rotylenchulus reniformis* Linford & Oliveira) (unpublished data, R.D. Riggs and R.T. Robbins, Univ. of Arkansas). Boggs has produced good yields in Georgia in fields infested with Columbia lance nematode (*Hoplolaimus columbus* Sher) (8).

Breeder seed of Boggs was provided to the Georgia Seed Development Commission in 1996. The Georgia Agricultural Experiment Stations will be responsible for the maintenance of breeder seed. The University of Georgia Research Foundation, Inc., has licensed the marketing rights of Boggs to Southern Elite Genetics Association, Inc. Small quantities of seed for research purposes can be obtained from the corresponding author. U.S. plant variety protection of Boggs has been applied for (PVP Certificate no. 9800101).

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References and Notes

1. Burton, J.W., T.E. Carter, Jr., and E.B. Huie. 1994. Registration of 'Brim' soybean. *Crop Sci.* 34:301.
2. Hartwig, E.E., and J.M. Epps. 1973. Registration of 'Forrest' soybeans. *Crop Sci.* 13:287.
3. Hartwig, E.E., and J.M. Epps. 1977. Registration of Centennial soybeans. *Crop Sci.* 17:979.

4. Hartwig, E.E., and D.J. Gray. 1991. The Uniform Soybean Tests-Southern region 1990. USDA-ARS, Stoneville, MS.
5. Krainak, J.T., J.L. Strachan, and C.D. Sultzer. 1997. The PVP database online. Available at <http://probe.nalusda.gov:8300/cgi-bin/browse/pvp> (ACEDB version 4.3; posted 31 Dec. 1997).
6. Raymer, P.L., J.L. Day, A.E. Coy, S.H. Baker, W.D. Branch, and M.G. Stephenson. 1995. The 1994 field crops performance tests: Soybean, peanut, cotton, tobacco, sorghum, and summer annual forages. *Georgia Agric. Exp. Stn. Res. Rep.* 633.
7. Raymer, P.L., J.L. Day, A.E. Coy, S.H. Baker, W.D. Branch, and M.G. Stephenson. 1996. The 1995 field crops performance tests: Soybean, peanut, cotton, tobacco, sorghum, grain millet, and summer annual forages. *Georgia Agric. Exp. Stn. Res. Rep.* 639.
8. Raymer, P.L., J.L. Day, A.E. Coy, S.H. Baker, W.D. Branch, and S.S. LaHue. 1998. The 1997 field crops performance tests: Soybean, peanut, cotton, tobacco, sorghum, grain millet, and summer annual forages. *Georgia Agric. Exp. Stn. Res. Rep.* 648.
9. Shipe, E.R., J.D. Mueller, S.A. Lewis, P.F. Williams, Jr., and J.P. Tomkins. 1997. Registration of 'Dillon' soybean. *Crop Sci.* 37:1983.
10. Tyler, J.M., and P.P. Bell. 1997. Uniform Soybean Tests-Southern States 1996. USDA-ARS Stoneville, MS.
11. H.R. Boerma, G.B. Rowan, and E.D. Wood, Dep. of Crop & Soil Sciences and R.S. Hussey and S.L. Finnerty, Dep. of Plant Pathology, Univ. of Georgia, Athens, GA 30602; and D.V. Phillips, Dep. of Plant Pathology, Georgia Exp. Stn., Griffin, GA 30223. Contribution from the Georgia Agric. Exp. Stn., Athens, GA. The research was supported by state and Hatch funds allocated to the Georgia Agric. Exp. Stn. and grants from the Georgia Agric. Commodity Commission for Soybeans. Registration by CSSA. Accepted 31 May 1999. *Corresponding author (rboerma@arches.uga.edu)

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Registration of 'Delsoy 5710' Soybean

'Delsoy 5710' soybean [*Glycine max* (L.) Merr.] (Reg. no. CV-404, PI 607528) was developed by the Missouri Agricultural Experiment Station and released in February 1998. Delsoy 5710 is a Maturity Group V cultivar with resistance to all known races of soybean cyst nematode (SCN) (*Heterodera glycines* Ichinohe).

Delsoy 5710 was developed at the Delta Center of the University of Missouri, Portageville, MO. It was selected from the cross Hartz '5164' × 'Hartwig' (1). Hartz 5164 originated from 'Bedford' × (D70-3115 × HX37-3-16) (2). The F₁ was grown in Puerto Rico and the F₂ generation was planted in a cyst nematode nursery at the Rhodes Farm of the University of Missouri near Clarkton, MO. Two pods were picked from each of the selected F₂ plants and bulked. The F₃ generation was advanced in Puerto Rico and the F₄ was planted in the cyst nematode nursery. Individual plants were harvested and ten seeds from each plant were screened in the greenhouse for reaction to various races of SCN. Highly resistant F₅ progenies were evaluated for various agronomic characters and uniform progenies were composited for yield testing and seed increase. Delsoy 5710 was evaluated under the designation S92-1679 and compared against the check cultivars in both SCN-infested and noninfested fields in Missouri. Based on 15 state trials, conducted over a three-year period, Delsoy 5710 yielded 3522 kg ha⁻¹, compared with 3167 kg ha⁻¹ of Hartwig, 3328 kg ha⁻¹ of 'Delsoy 5500', and 3120 kg ha⁻¹ of 'Hutcheson'. In three trials conducted in the SCN-infested fields at the Rhodes Farm, Delsoy 5710 yielded 8% greater than Hartwig and more than twice that of the SCN-susceptible Hutcheson.

Delsoy 5710 is a late Maturity Group V (relative maturity 5.8) cultivar that matures 3 to 4 d later than Hutcheson. It is determinate in growth habit and is 10 cm taller than Hutcheson. Delsoy 5710 has white flowers and tawny pubescence. Delsoy 5710 is highly resistant to SCN Races 1, 2, 3, 4, 5, 6,