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1998 Rice Variety Trials

Dwight G. Kanter, Agronomist
MAFES, Delta Research and Extension Center
Stoneville, Mississippi

Theodore C. Miller, Agronomist
Tri-M Agronomics, LLC
Leland, Mississippi

Joe E. Street, Rice Specialist
MSU Extension Service/MAFES Delta Research and Extension Center
Stoneville, Mississippi

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List of Tables

1998 Rice Variety Performance Trials

In 1998, approximately 266,775 acres of rice were planted in 17 Delta counties of Mississippi compared to 238,237 acres planted in 1997. Bolivar County had the highest planted acreage at 80,750 acres. Essentially all the production in Mississippi was from long grain rice. Lemont continued to be the predominant variety planted on about 74% of the acreage. Estimated acreages planted to other varieties were as follows: Cypress 16%, Kaybonnet 7%, and 3% for other varieties.

The on-farm variety tests represent the final step in the yield evaluation program before a variety is released for commercial production in Mississippi. Conducting these tests on commercial farms across the Delta provides important information on variety performance and adaptability under diverse environmental conditions. These test locations give a partial sampling of actual production situations in the Delta, where practically all Mississippi rice is produced. These multiple locations also permit evaluation of entries for resistance to pests and/or other field related stresses, which often have a greater natural incidence at locations other than at the Delta Research and Extension Center (DREC). Significant sheath blight and kernel smut occurred at some locations in 1998.

Planting dates for the different locations ranged from April 6 to May 19, which are within the typical period for planting rice in the Delta. All tests were planted into conventionally prepared seedbeds. Early season dry weather resulted in most fields needing to be flushed to obtain a stand in 1998. Moderate sheath blight infection developed on susceptible entries at the Lambert test, with light to moderate infestation occurring at the other locations. There was no observed incidence of blast in any of the test locations. Moderate to severe levels of kernel smut occurred at the Lambert location. Light levels of kernel smut were observed on susceptible varieties at several other locations. Hot temperatures during the growing season resulted in lower yields and milling quality at some locations.

Variety selection is one of the most important decisions a rice producer makes as he prepares his production plans each season. The information in this bulletin is intended to assist the producer in this decision making process. Other sources of information may include past production experience with that variety and consulting with local and state rice Extension personnel. Data summarized over locations and years are generally a more reliable indication of future variety performance than individual tests.

Twelve long grain varieties and lines were included in the replicated test at each location. Cocodrie and Madison were the only newly released varieties in 1998. They are both long grain, high yielding semidwarf varieties with good agronomic and processing characteristics released by Louisiana and Texas, respectively. Cocodrie and Madison have been included in the on-farm tests for the past two years.

Test Procedures

Each test consisted of four replications planted at the seven locations. All seven-row plots were drill seeded at an equivalent seeding rate of 90 lb/A at a depth of approximately one-inch. Cultural practices were performed by the cooperator and varied by location. In general, the tests were grown under conditions of high productivity. The field management practices for each location are recorded in the footnotes of Tables 1 through 7.

Agronomic data were collected at appropriate times during the season. Plots were hand-harvested and standard procedures were used in processing the samples for grain and milling yield determinations. Readers may refer to a variety bulletin of a previous year for further details on experimental procedures.

Statistical analyses were performed on the yield data from each location. The least significant difference (LSD) for yield at the 5% probability level has been included in the tables to aid in comparing varieties. If the yields of

any two varieties or lines differ by the LSD value or more, they may be considered significantly different.

The coefficient of variation (CV) provides a general indication of the level of precision of each variety test. Lower CV values indicate greater reliability of the test. LSD and CV values are reported in the footnotes of the first nine tables.

Results

The field performance of each variety in the seven individual tests is presented in Tables 1 through 7. Sheath blight ratings are listed in the location and summary tables. Average test yields ranged from 125 bu/A at Blaine to 161 bu/A at Cleveland. Grain yields of varieties in these tests averaged about the same in 1998 as they did in 1997, which was lower than the 1996 grain yields. This reflected the somewhat adverse weather conditions that affected the rice crops in 1997 and 1998. There were some initial stand problems and irregular emergence within plots at the Lambert and Cleveland locations. However, the rice at all locations emerged and developed into satisfactory stands. Straighthead intensity was light at the Blaine location depending on variety or line susceptibility. The field at this location had silt loam soil and was precision leveled in 1997. Generally, yields, milling quality, and test variability (CV) were better this year than last year across most on-farm tests.

Table 8 provides a seven-location summary of grain yields for all varieties and one experimental line tested. Priscilla ranked second in average yield (160 bu/A) across all seven on-farm locations (Table 9). Cocodrie ranked first in average yield at 165 bu/A (Table 8). It can be seen from the LSD value for the average yield column that Priscilla significantly outyielded all varieties except Cocodrie in the 1998 On-Farm Rice Variety Tests. Table 10 shows Priscilla's milling quality to be close to that of Lemont and that it also has a very heavy grain weight (27.5 gm/1000 seed). It possesses sheath blight tolerance as indicated in the tables and specifically in Table 2 where sheath blight was shown to be heavier at Lambert. Another variety that continues to have an excellent performance record is Lemont. Although Lemont has some shortcomings, it continues to be the variety of choice in Mississippi because of its consistent and dependable productivity.

The average values for milling and agronomic characteristics are summarized in Table 9. Head rice yields in pounds per acre are reported to give the reader a knowledge of a variety's overall performance in terms of whole grain milled rice produced per acre. Both total and whole grain milling yields were lower in 1997 and 1998 than in 1996. Kaybonnet, Cypress, and Cocodrie averaged the highest whole grain milling yields (56.6, 56.5, and 56.2, respectively).

Lodging resistance should be seriously considered when selecting a variety to grow. This is especially important when it occurs early before fields have been drained or when rainy weather persists before harvest. Lodging was worst at the Blaine location, although a fair amount occurred at Lambert. Madison lodged slightly at only one location (Blaine - 2%). The varieties that lodged the most in the 1998 On-farm Rice Variety Test were Drew (32%), Rexmont (18%), Cypress (16%), and Jackson (16%) (Table 9).

The long-term performance of 11 varieties in on-farm tests is presented in Table 10. Two- and multi-year averages are indicated for individual varieties. Data averaged over years are generally more reliable for predicting variety performance for yield and other characteristics. Information on disease reactions of individual varieties is presented in Table 11.

Table 1. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Tunica in Tunica County, Mississippi, 1998.[1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Cocodrie	180	5021	69.5	61.9	41.3

Priscilla	164	4173	66.2	56.6	39.4
Lemont	161	4222	69.5	58.2	41.3
Jackson	160	3649	67.3	50.6	40.6
Cypress	158	4168	66.3	58.8	40.2
Drew	155	4127	67.2	59.0	38.6
Kaybonnet	153	4055	66.9	58.9	38.8
Madison	151	4057	67.8	59.8	39.6
9704083	148	3964	67.7	59.6	41.4
Litton	143	3124	64.1	48.6	37.9
Jefferson	137	3439	69.3	55.3	39.6
Rexmont	137	3077	62.1	50.0	37.0

Table 1. Continued

Table 1. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Tunica in Tunica County, Mississippi, 1998.[1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]	Sheath blight [4]
	(in)	(days after emergence)		%	(gm)	score
Cocodrie	40	72	123	1	25.3	0.3
Priscilla	40	76	117	0	29.7	2.5
Lemont	39	82	117	0	27.0	3.0
Jackson	40	73	113	1	25.0	1.0
Cypress	39	81	125	2	24.9	1.0
Drew	42	82	124	40	21.4	2.0
Kaybonnet	40	79	115	28	21.9	1.0
Madison	36	83	116	0	24.6	2.5
9704083	45	78	120	6	22.7	0.3
Litton	40	80	125	0	24.5	0.5
Jefferson	33	67	104	0	31.8	2.3
Rexmont	35	82	117	15	22.1	1.3

[1]Planting date: May 12; Emerged: May 24. Herbicides: Facet® at 0.67 lb/acre plus Stam® at 4 qt/acre on May 30. Fertilizer: Urea at 65 lb/acre on May 11; 200 lb/acre on June 9; 125 lb/acre on July 10; and 100 lb/acre on July 17. Date(s) flushed: May 12. Permanent flood: June 9. Insecticide: Methyl parathion at 0.5 pt/acre on July 20. Drained field: September 1.

[2]Rough rice at 12% moisture. A difference of 16 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 7.1.

[3]Weight of 1000 kernels.

[4]Sheath blight rating using a scale of 1 (least susceptible) to 9 (most susceptible).

Table 2. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Lambert in Quitman County, Mississippi, 1998. [1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Cocodrie	166	4186	67.5	56.0	39.5
Priscilla	155	3615	64.4	51.8	39.2
Kaybonnet	154	4141	67.6	59.5	40.3
Litton	153	3372	67.0	49.1	37.6
Jefferson	150	3401	67.2	50.2	39.4
Lemont	149	2746	67.4	40.9	40.5
Rexmont	142	3178	63.9	49.8	37.1
9704083	141	3523	68.4	56.0	42.0
Madison	141	3710	67.1	58.4	39.1
Jackson	141	3118	65.5	49.3	38.8
Cypress	137	3607	68.7	58.6	39.8
Drew	127	3317	68.8	58.0	41.8

Table 2. Continued

Table 2. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Lambert in Quitman County, Mississippi, 1998. [1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]	Sheath blight [4]
	(in)	(days after emergence)		%	(gm)	score
Cocodrie	45	84	130	0	23.0	5.5
Priscilla	42	90	132	22	25.8	4.0
Kaybonnet	51	84	121	2	20.1	6.0
Litton	42	89	135	26	25.9	4.5
Jefferson	41	77	117	0	27.1	5.0
Lemont	42	91	129	6	24.9	7.0
Rexmont	40	86	124	21	21.8	6.0
9704083	52	86	128	38	20.2	3.5
Madison	40	93	128	0	23.9	4.0
Jackson	50	85	129	38	22.9	6.0
Cypress	42	89	132	32	23.5	7.0
Drew	52	90	134	78	20.8	5.5

[1]Planting date: April 16; Emerged: May 8. Herbicides: Facet® at 0.5 lb/acre on April 26; Stam® at 3 qt/acre plus Grandstand® at 0.25 pt/acre plus Facet® at 0.25 lb/acre on May 27. Fertilizer: Ammonium sulfate at

100 lb/acre on May 9; urea at 250 lb/acre on June 4, 100 lb/acre on June 12 and June 22. Date(s) flushed: May 14. Permanent flood: June 4. Drained field: September 1.

[2]Rough rice at 12% moisture. A difference of 21 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 10.2.

[3]Weight of 1000 kernels.

[4]Sheath blight rating using a scale of 1 (least susceptible) to 9 (most susceptible).

Table 3. Performance of long grain rice varieties and lines grown on Dundee silt loam soil near Blaine in Sunflower County, Mississippi, 1998. [1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Cocodrie	143	2880	66.0	44.6	37.4
Priscilla	139	2910	65.8	46.8	37.9
Madison	137	2968	66.5	48.0	34.6
Cypress	135	2848	65.2	46.9	35.7
Drew	134	2391	64.9	39.6	36.9
Rexmont	132	1926	62.6	31.6	34.1
Lemont	131	2580	68.3	43.8	37.5
Jefferson	115	2591	65.8	49.7	37.7
9704083	115	2664	67.1	51.6	36.9
Kaybonnet	114	2386	64.0	46.4	36.2
Litton	109	1727	64.5	35.2	33.3
Jackson	105	2009	66.3	42.4	34.4

Table 3. Continued

Table 3. Performance of long grain rice varieties and lines grown on Dundee silt loam soil near Blaine in Sunflower County, Mississippi, 1998. [1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]	Sheath blight [4]
	(in)	(days after emergence)		%	(gm)	score
Cocodrie	44	70	116	61	23.2	4.0
Priscilla	43	72	114	4	28.7	4.0
Madison	39	80	115	2	23.5	3.5
Cypress	44	76	118	74	22.5	3.0
Drew	51	75	116	96	23.8	2.5
Rexmont	40	76	115	76	22.9	3.0

Lemont	42	80	114	18	22.7	4.5
Jefferson	41	64	98	23	25.9	3.0
9704083	53	73	112	60	20.6	1.0
Kaybonnet	52	74	110	50	20.6	3.5
Litton	42	81	120	73	23.7	3.5
Jackson	49	71	110	55	22.7	2.0

[1]Planting date: April 24; Emerged: May 6. Herbicides: Storm® at 1.5 pt/acre plus Basagran® at 1 pt/acre plus crop oil concentrate at 1 pt/acre on May 14. Fertilizer: Urea at 50 lb/acre on May 5; ammonium sulfate at 100 lb/acre on May 14; urea at 100 lb/acre on May 14, 112 lb/acre on June 25, and 100 lb/acre on July 6. Date(s) flushed: May 5. Permanent flood: May 15. Insecticide: Furadan® at 17 lb/acre on June 6. Drained field: August 13.

[2]Rough rice at 12% moisture. A difference of 22 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 12.5.

[3]Weight of 1000 kernels.

[4]Sheath blight rating using a scale of 1 (least susceptible) to 9 (most susceptible).

Table 4. Performance of long grain rice varieties and lines grown on Dowling clay soil near Cleveland, in Bolivar County, Mississippi, 1998.[1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Cocodrie	193	4835	69.4	55.7	40.9
Priscilla	192	4185	68.0	48.3	40.2
Kaybonnet	189	4947	69.0	58.1	41.2
Drew	176	4182	69.8	52.6	38.4
Cypress	166	4226	68.7	56.4	37.8
Jefferson	157	4166	68.5	58.8	41.0
Lemont	156	3662	70.8	52.2	39.5
Madison	152	3849	69.1	56.4	36.1
9704083	149	3882	68.6	58.1	36.2
Litton	144	2889	67.1	44.4	36.7
Rexmont	139	3196	68.5	51.0	34.5
Jackson	134	2226	65.5	36.9	38.7

Table 4. Continued

Table 4. Performance of long grain rice varieties and lines grown on Dowling clay soil near Cleveland, in Bolivar County, Mississippi, 1998.[1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]	Sheath blight [4]

	(in)	(days after emergence)		%	(gm)	score
Cocodrie	45	73	121	0	22.4	4.0
Priscilla	44	74	121	0	25.3	3.0
Kaybonnet	49	75	114	0	19.6	2.5
Drew	50	78	121	0	21.3	2.5
Cypress	42	74	119	0	22.5	3.0
Jefferson	40	64	104	0	27.8	2.0
Lemont	39	79	118	0	24.9	5.0
Madison	39	83	118	0	23.7	4.0
9704083	48	74	113	0	20.6	3.3
Litton	42	79	124	0	22.5	2.5
Rexmont	37	77	117	1	22.6	4.5
Jackson	46	72	120	0	23.4	5.0

[1]Planting date: April 6; Emerged: May 7. Herbicides: Stam® at 2 qt/acre plus Prowl® at 2.4 pt/acre plus Facet® at 0.35 lb/acre plus SoySurf at 1 pt/acre on May 5; 2,4-D at 3 pt/acre on July 23. Fertilizer: Ammonium sulfate at 90 lb/acre on April 25; urea at 200 lb/acre on May 13, 100 lb/acre on June 9, 100 lb/A on June 23, and 100 lb/A on June 29. Permanent flood: May 13. Fungicide: Quadris® at 1 gallon to 12 acres on July 7. Drained field: August 12.

[2]Rough rice at 12% moisture. A difference of 25 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 11.1.

[3]Weight of 1000 kernels.

[4]Sheath blight rating using a scale of 1 (least susceptible) to 9 (most susceptible).

Table 5. Performance of long grain rice varieties and lines grown on Sharkey clay soil at the Delta Research and Extension Center, Stoneville, Mississippi, as part of the on-farm tests,1998. [1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Priscilla	163	4100	68.0	55.7	40.5
Lemont	159	3972	68.0	55.5	40.1
Litton	156	3490	67.1	49.9	37.8
Cocodrie	154	4063	67.2	58.6	37.1
Drew	151	4127	68.0	61.1	41.8
9704083	147	3970	66.7	59.9	40.0
Jefferson	146	3247	67.0	49.3	38.1
Kaybonnet	145	3893	67.4	59.8	41.0
Jackson	136	3216	66.7	52.8	38.9
Cypress	130	3598	67.8	61.6	41.4
Rexmont	129	3179	66.5	54.6	37.6

Madison	124	3220	67.7	57.9	40.6

Table 5. Continued

Table 5. Performance of long grain rice varieties and lines grown on Sharkey clay soil at the Delta Research and Extension Center, Stoneville, Mississippi, as part of the on-farm tests,1998. [1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]
	(in)	(days after emergence)		%	(gm)
Priscilla	43	83	129	0	25.7
Lemont	40	88	126	0	25.3
Litton	41	84	126	0	26.2
Cocodrie	42	79	126	0	23.7
Drew	51	88	129	0	23.0
9704083	50	85	124	0	22.1
Jefferson	41	78	123	0	28.6
Kaybonnet	50	82	122	0	20.3
Jackson	48	83	124	0	22.8
Cypress	41	86	129	0	24.3
Rexmont	38	84	126	0	26.0
Madison	37	89	124	0	24.2

[1]Planting date: May 19; Emerged: May 27. Herbicides: Stam® at 4 qt/acre plus Facet® at 0.67 lb/acre on June 9. Fertilizer: Urea at 289 lb/acre on June 24 and 111 lb/acre on July 20. Date(s) flushed: May 21 and 28, June 15 and 19. Permanent flood: June 25. Drained field: September 21.

[2]Rough rice at 12% moisture. A difference of 19 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 8.8.

[3]Weight of 1000 kernels.

Table 6. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Hollandale in Washington County, Mississippi, 1998. [1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Drew	164	3808	69.4	51.6	42.2
Litton	160	3107	70.6	43.2	39.9
Rexmont	159	3936	69.1	54.9	39.9
Cocodrie	158	4294	69.8	60.4	41.6

Lemont	152	3535	69.8	51.8	42.0
Jackson	152	3361	69.6	49.0	41.8
Kaybonnet	149	3923	69.4	58.5	42.6
Madison	149	3450	68.4	51.5	41.5
Priscilla	146	3687	68.4	56.1	41.7
Cypress	146	3837	69.2	58.5	41.6
9704083	141	3597	67.2	56.9	42.6
Jefferson	115	3202	68.8	62.0	40.6

Table 6. Continued

Table 6. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Hollandale in Washington County, Mississippi, 1998. [1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]
	(in)	(days after emergence)		%	(gm)
Drew	48	86	124	0	22.2
Litton	38	86	126	0	26.6
Rexmont	36	86	124	0	23.2
Cocodrie	38	77	122	0	25.5
Lemont	36	88	123	0	26.1
Jackson	42	78	121	0	26.5
Kaybonnet	48	83	120	0	21.6
Madison	35	88	119	0	25.1
Priscilla	40	83	124	0	30.1
Cypress	38	86	127	0	23.9
9704083	47	82	121	0	22.5
Jefferson	32	72	101	0	30.2

[1]Planting date: May 13; Emerged: May 24. Herbicides: Stam® at 1 qt/acre plus Facet® at 0.5 lb/acre plus Prowl® at 2.4 pt/acre on June 4. Fertilizer: Ammonium sulfate at 100 lb/acre on May 16 and 100 lb/acre on June 8; urea at 200 lb/acre on June 22, and 100 lb/acre on July 15 and July 26. Date(s) flushed: May 16. Permanent flood: June 23. Insecticide: Methyl parathion at 1 pt/acre on September 9. Fungicide: Quadris® at 1 gallon to 12 acres on August 6. Drained field: September 11.

[2]Rough rice at 12% moisture. A difference of 10 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 4.5.

[3]Weight of 1000 kernels.

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Table 7. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Rolling Fork in Issaquena County, Mississippi, 1998. [1]

Variety or line	Grain yield[2]	Milled head rice	Milling yield		Bushel weight
			Total	Whole	
	(bu/A)	(lb/A)	-------(%)-------		(lb)
Jefferson	166	5057	67.7	58.0	40.4
Rexmont	166	5002	67.1	48.6	35.5
Priscilla	163	4960	67.4	50.4	37.1
Madison	161	5007	69.1	55.3	37.8
Cocodrie	160	4840	67.2	55.9	35.9
Kaybonnet	154	4659	67.3	54.7	37.0
Lemont	153	4823	70.2	49.9	40.0
Cypress	146	4353	66.5	54.4	35.6
9704083	145	3711	67.9	56.9	37.9
Jackson	141	4297	67.5	50.2	38.0
Drew	139	4153	66.5	49.9	37.5
Litton	134	3946	65.5	38.4	33.9

Table 7. Continued

Table 7. Performance of long grain rice varieties and lines grown on Sharkey clay soil near Rolling Fork in Issaquena County, Mississippi, 1998. [1]

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]	Sheath blight [4]
	(in)	(days after emergence)		%	(gm)	score
Jefferson	40	63	97	0	28.9	3.5
Rexmont	38	74	117	13	21.6	4.5
Priscilla	43	74	116	0	26.7	4.5
Madison	39	81	116	0	22.4	6.0
Cocodrie	43	71	116	0	22.8	3.5
Kaybonnet	52	73	110	0	19.5	4.0
Lemont	40	81	114	0	24.0	6.5
Cypress	42	78	121	0	21.7	4.3
9704083	50	73	109	0	19.7	2.0
Jackson	49	71	113	18	23.0	3.0
Drew	53	78	117	8	20.6	1.8
Litton	43	78	120	4	22.8	4.5

[1]Planting date: April 23; Emerged: May 6. Herbicides: Roundup Ultra® at 1.5 pt/acre plus Facet® at 0.67 lb/acre on May 2. Fertilizer: Ammonium sulfate at 100 lb/acre on May 11; urea at 200 lb/acre on May 28, 100 lb/acre on June 19 and July 6. Date(s) flushed: May 4 and May 15. Permanent flood: June 1. Fungicide: Quadris® at 1 gallon to 10 acres on July 14. Drained field: August 6.

[2]Rough rice at 12% moisture. A difference of 15 bu/acre is required for one variety to differ from another at the 5% probability level. C.V. = 7.3.

[3]Weight of 1000 kernels.

[4]Sheath blight rating using a scale of 1 (least susceptible) to 9 (most susceptible).

Table 8. Average rough rice yields of long grain varieties and lines evaluated in on-farm tests at seven locations, 1998.

Variety or line	Location			
	Tunica	Lambert	Blaine	Cleveland
Cocodrie	180	166	143	193
Priscilla	164	155	139	192
Lemont	161	149	131	156
Kaybonnet	153	154	114	189
Drew	155	127	134	176
Cypress	158	137	135	166
Madison	151	141	137	152
Rexmont	137	142	132	139
Litton	143	153	109	144
9704083	148	141	115	149
Jefferson	137	150	115	157
Jackson	160	141	105	134
Mean (bu/A)	155	144	125	161
LSD (0.05) (bu/A)	16	21	22	25
CV (%)	7.1	10.2	12.5	11.1
Date Planted (mo/day)	5/12	4/16	4/24	4/6

Table 8. Continued

Table 8. Average rough rice yields of long grain varieties and lines evaluated in on-farm tests at seven locations, 1998.

Variety or line	Location			Average
	Stoneville	Hollandale	Rolling Fork	
Cocodrie	154	158	160	165
Priscilla	163	146	163	160
Lemont	159	152	153	152
Kaybonnet	145	149	154	151
Drew	151	164	139	149
Cypress	130	146	146	145

Madison	124	149	161	145
Rexmont	129	159	166	143
Litton	156	160	134	143
9704083	147	141	145	141
Jefferson	146	115	166	141
Jackson	136	152	141	139
Mean (bu/A)	150	149	146	151
LSD (0.05) (bu/A)	19	10	15	7
CV (%)	8.8	4.5	7.3	9.2
Date Planted (mo/day)	5/19	5/13	4/23	

Table 9. Average agronomic and milling performance of long grain varieties and lines grown at seven on-farm locations, 1998.

Variety or line	Origin[1]	Average yield		Milling yield		Bushel weight
		Rough rice	Head rice	Total	Whole	
		(bu/A)	(lb/A)	-------(%)-------		(lb)
Cocodrie	LA	164	4187	68.1	56.2	39.1
Priscilla	MS	160	3768	66.9	52.2	39.5
Lemont	TX	152	3444			
69.1	50.3	40.1				
Kaybonnet	AR	151	3876	67.4	56.6	39.7
Drew	AR	149	3581	67.8	53.1	39.6
Cypress	LA	145	3692	67.5	56.5	38.9
Madison	TX	145	3608	68.0	55.3	38.5
Rexmont	TX	143	3159	65.7	48.6	36.5
Litton	MS	143	2860	66.6	44.1	36.7
9704083	MS	141	3616	67.7	57.0	39.6
Jefferson	TX	141	3484	67.8	54.8	39.6
Jackson	TX	139	2967	66.9	47.3	38.8
Mean		151	3525	67.7	51.8	39.0
LSD (0.05)		7	211	0.6	1.6	0.9
CV (%)		9.2	11.4	1.8	6.0	4.4

[1]AR = Arkansas, LA = Louisiana, MS = Mississippi, TX = Texas.

[2]Sheath blight rating using a 1 (least susceptible) to 9 (most susceptible) scale.

Table 9. Continued

Table 9. Average agronomic and milling performance of long grain varieties and lines grown at seven on-farm locations, 1998.

Variety or line	Plant height	50% Heading	Maturity	Lodging	1000 seed weight[3]	Sheath blight [2]
	(in)	(days after emergence)		%	(gm)	score
Cocodrie	42	75	122	9	23.7	3.1
Priscilla	42	79	122	4	27.4	2.8
Lemont	40	84	120	3	25.0	4.4
Kaybonnet	49	78	116	11	20.5	2.8
Drew	49	82	124	32	21.9	2.8
Cypress	41	81	124	16	23.3	3.2
Madison	38	85	120	0	23.9	3.3
Rexmont	38	80	120	18	22.9	2.9
Litton	41	83	125	15	24.6	2.7
9704083	49	79	118	15	21.2	1.8
Jefferson	38	69	106	3	28.6	2.5
Jackson	46	76	119	16	23.8	3.1
Mean		79	120			
LSD (0.05(		1.0	2.0			
CV (%)		3.2	2.3			

[1]AR = Arkansas, LA = Louisiana, MS = Mississippi, TX = Texas.

[2]Sheath blight rating using a 1 (least susceptible) to 9 (most susceptible) scale.

Table 10. Annual and average grain yields along with agronmic and milling data averages of rice varieties and lines grown in the Delta on-farm tests from 1988 to 1998. [1]

Variety or line	Grain yield[2]								3-yr[3] avg.	Total tests
	1992	1993	1994	1995	1996	1997	1998	Avg.		
	---------- (bu/A)----------									(no)
Lemont	149	108	139	123	162	150	152	131	155	70
Jackson	159	122	140	133	146	141	139	144	142	70
Cypress	162	112	140	131	144	130	145	138	140	49
LaGrue		132	173	157	170	164	--	159	164	35

Kaybonnet		142	142	153	148	151	148	151	35
Priscilla		177	162	181	172	160	170	171	35
Jefferson			140	151	133	141	141	142	28
Litton				156	142	143	147	147	21
Drew				152	151	149	151	151	21
Cocodrie					145	165	155		14
Madison					135	145	140		14

[1]Test locations were in farmers fields extending from the northern to the southern Delta area.

[2]Rough rice at 12% moisture. Data columns for 1989 to 1991 were omitted but their numbers were included in the average yield and total test numbers.

[3]Average for 1996 to 1998.

[4]Values for milling and agronomic characteristics are accumulated means over all years of testing.

[5]Five-year averages except for Priscilla, Litton, and Drew (3-year); Cocodrie and Madison are two-year averages.

[6]Sheath blight ratings are three-year averages. Two-year data for Cocodrie and Madison.

Table 10. Continued

Table 10. Annual and average grain yields along with agronmic and milling data averages of rice varieties and lines grown in the Delta on-farm tests from 1988 to 1998. [1]

Variety or line	Milling yield [4]		Bushel weight	Plant height	Days to		Lodging	1000 [5] seed weight	Sheath [6] blight
	Total	Whole			Heading	Maturity			
	---(%)---		(lb)	(in)	(no)	(no)	(%)	(gm)	(score)
Lemont	70.5	58.1	42.4	36	88	121	6	25.5	3.2
Jackson	69.3	55.5	41.7	42	80	116	10	22.8	2.9
Cypress	68.9	60.9	41.4	39	84	122	14	22.6	2.9
LaGrue	68.2	55.2	42.6	46	82	124	22	24.6	3.1
Kaybonnet	68.6	59.5	42.1	47	82	116	10	20.2	2.7
Priscilla	68.3	56.1	41.9	40	81	120	3	27.5	2.4
Jefferson	68.4	53.9	40.5	37	74	107	4	27.9	2.7
Litton	68.2	51.2	38.4	39	84	125	9	25.1	2.4
Drew	68.6	58.0	40.9	48	83	124	27	22.0	2.7
Cocodrie	68.1	57.3	39.3	41	79	125	13	23.6	2.9
Madison	68.4	57.6	39.1	37	87	122	1	23.7	3.2

[1]Test locations were in farmers fields extending from the northern to the southern Delta area.

[2]Rough rice at 12% moisture. Data columns for 1989 to 1991 were omitted but their numbers were included

in the average yield and total test numbers.

[3]Average for 1996 to 1998.

[4]Values for milling and agronomic characteristics are accumulated means over all years of testing.

[5]Five-year averages except for Priscilla, Litton, and Drew (3-year); Cocodrie and Madison are two-year averages.

[6]Sheath blight ratings are three-year averages. Two-year data for Cocodrie and Madison.

Table 11. Reactions of rice varieties to common diseases.

Variety	Blast	Sheath blight	Kernel smut	Straighthead	Brown leaf spot
Cypress	MR[1]	VS	S	MR	MS-S
Drew	R	MS	MS	MR	R
Jackson	MR-MS	MS	MS-S	MR	MS
Jefferson	S	S	--	--	--
Katy	R	MS	R	S	MS
Kaybonnet	R	MS	MR	MS	MS
LaGrue	S	MS	S	MS	--
Lemont	MR	VS	R	MR	MS-S
Litton	MR	MS	MS-S	MR	--
Madison	R	VS	MR	--	MR
Cocodrie	MS-S	VS	VS	--	MR
Newbonnet	S	MS	S	MR	MS
Priscilla	MR	MS	MS	--	MS
Rexmont	MS-S	VS	MR-MS	MR	R

[1]Abbreviations: R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, Sdf = semidwarf, Int = intermediate.

Table 11. Continued

Table 11. Reactions of rice varieties to common diseases.

Variety	Narrow brown leaf spot	Leaf smut	Stem rot	Lodging	Plant type

Cypress	VS	S	MS	MR	Sdf
Drew	MS	MS	MS	MR-MS	Int
Jackson	MR	--	MS	MR	Int
Jefferson	--	--	--	R	Sdf
Katy	MR	--	MS	MR-S	Int
Kaybonnet	MR	--	MS	MR-MS	Int
LaGrue	--	--	--	MR-S	Int
Lemont	S	S	MS	R	Sdf
Litton	--	--	--	R	Sdf
Madison	MR	R	--	R	Sdf
Cocodrie	MR	R	--	MR	Sdf
Newbonnet	MS	MS	MS	MR	Int
Priscilla	--	--	--	R	Sdf
Rexmont	MR-MS	--	MS	MR	Sdf

[1]Abbreviations: R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, Sdf = semidwarf, Int = intermediate.