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1985 Rice Performance Trials

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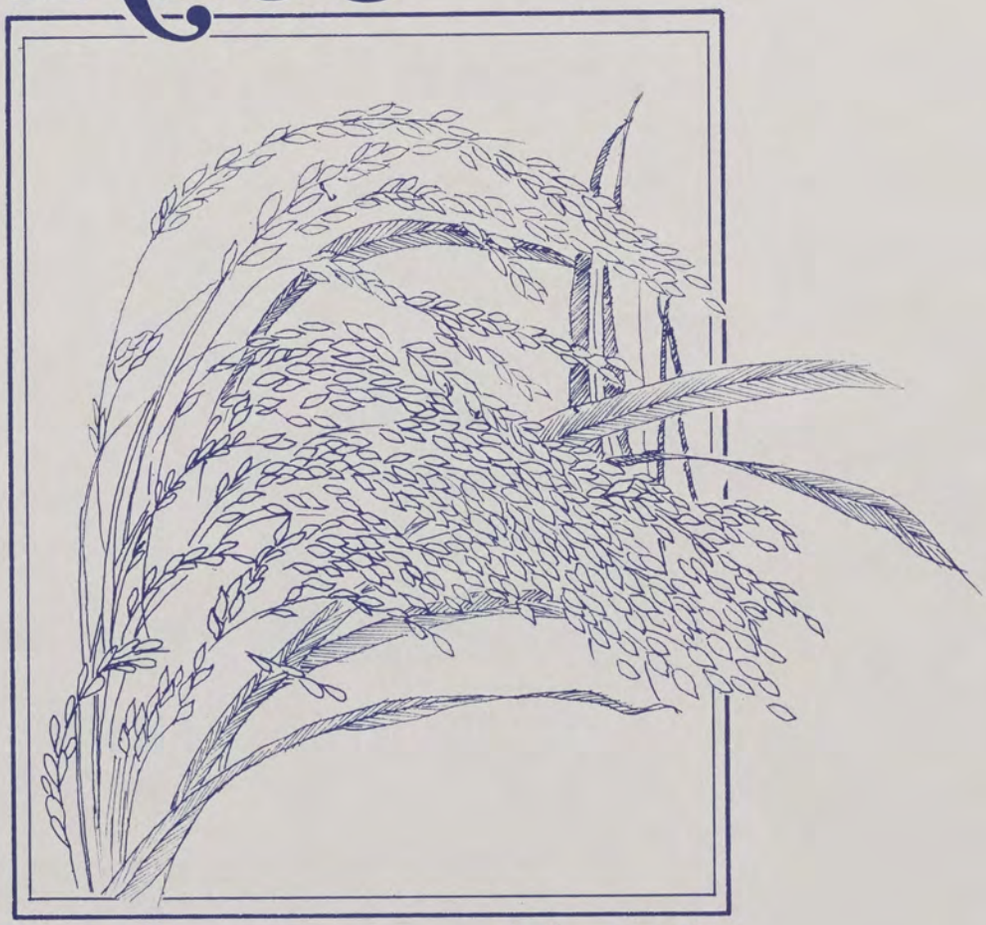

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1985 RICE PERFORMANCE TRIALS

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The following County Agents of the Mississippi Cooperative Extension Service participated in site selection and recorded observations on varieties in the On-Farm Tests:

Dwayne L. Wheeler	Tunica County
Wiley S. Nelms	Quitman County
Joe H. Love and Walter B. ~~Johnson~~ Jackson	Bolivar County
Carl G. Wilbourn	Leflore County
Benjamin F. Corban	Sharkey County

1985 RICE PERFORMANCE TRIALS

More than 200 varieties and advanced experimental lines of rice are tested and evaluated at the Delta Branch Experiment Station each year before deciding on those for inclusion in On-Farm Tests. The On-Farm plantings provide valuable information on adaptability to diverse farm conditions.

In 1985, On-Farm plantings were made through a cooperative arrangement among agricultural extension personnel, Delta Branch rice researchers and prospective growers. Cooperating extension personnel actively participated in recording notes at various growth stages. This arrangement provided extension personnel an opportunity to become acquainted with the advanced breeding materials under local conditions and relieved station researchers of the time and expense of frequent travel to the sites.

Twelve long grain rice varieties and experimental lines were planted at 6 locations (Tunica, Lambert, Merigold, Greenwood, Rolling Fork, and Hollandale) in 1985. Good stands were obtained at all sites except Hollandale where a poor stand occurred because of water-logged soils after planting.

The 1985 rice crop year began with excellent planting conditions throughout the Delta. Disease and bird damage were minimal except for Tunica where birds caused minor injury to early varieties. At Merigold, a moderate infection of sheath blight attacked susceptible entries. Lodging was not a problem in the On-Farm tests but at the Stoneville station most tall, weak strawed varieties were blown down from the effects of hurricane Danny on August 16 and hurricane Elena September 2, 3, and 4 when many varieties were approaching maturity. High temperatures at this time also hastened the ripening process.

Experiments at the Stoneville station included in this report involve early and midseason long grain experimental strains and varieties grown in 3 separate tests.

PROCEDURE

Rice was drill seeded at 90 lb/A with a cone spinner divider planter. Agronomic practices differed by location and are recorded in footnotes to the tables. Entries were arranged in a randomized block design consisting of 4 replications. Each plot contained 7 rows spaced 8 inches apart and 17 feet long. Heading dates for On-Farm tests are given as relative maturity in relation to standard varieties based on 1985 heading dates at the Stoneville station. At harvest, height was recorded in inches to the tips of a group of panicles, the 2 center rows were trimmed to 15 feet, cut by hand and put through a plot thresher for yield determinations. Recognized procedures were used for measuring moisture content of seed to correct for grain and milling yields.

Milling data are based on two samples per entry per test. Samples were milled on a McGill No. 2 mill using 15 and 20 lb equivalent weights on the pressure plate for long and medium grain varieties, respectively. All samples were milled for 30 seconds.

RESULTS

MAFES Delta Branch

Results of the early season, long grain test are given in Table 1 and include the standard varieties Skybonnet, Labelle, Tebonnet, and Bond. Several of the short statured experimental lines significantly outyielded the above listed standard varieties. Strain 8203035 has consistently ranked at or near the top of this test for the past 3 years. Its early maturity and short stiff straw appear to make it a candidate for release as a variety for growers

who require an earlier variety than Newbonnet or Lemont. However, it did not yield as expected in the 1985 On-Farm tests which are presented in a later section. The experimental lines supplied by Alexandria Seed Company (AS) lodged completely at harvest, produced unsatisfactory head rice yields, and their grain yield was not impressive.

Two hundred bushel per acre yields were produced by two F_1 hybrid rices (RX) supplied by the Ring Around Company. Results are presented in Table 2. Hybrid rice is presently of academic interest only since grain quality does not meet U.S. standards. Both hybrids exhibited weak straw. The pure line Chinese variety, Gui Chow, produced almost as high yield as the F_1 hybrids and significantly more than Lemont which is currently the standard for high yield. This indicates that yield ceilings by conventional breeding procedures have not been reached and further progress is possible.

The experimental line, 8303169, and the newly released variety, CB 801, significantly outyielded Lemont and its sister line 8303046 in this test. A brief discussion of CB 801 and the 2 above strains is included at the end of this report.

Variety performance tests at the MAFES, Delta Branch Station usually receive a single application of 120 pounds per acre of nitrogen fertilizer at preflood. The purpose is to accommodate the wide variation in maturity of varieties which prevents optimum timing of midseason fertilizer.

Fertilizer trials at the MAFES, Delta Branch Station using Lemont and Newbonnet have failed to show a consistently significant response to nitrogen above the 120 pound level using the best known method of application. Since the studies had involved only 2 genotypes (varieties), it was decided to evaluate an array of 16 different semi-dwarf lines under a higher nitrogen rate which might distinguish strains more responsive than Lemont and

Newbonnet. The 16 entries received a preplant application of 30 pounds of nitrogen per acre followed by a preflood application of 150 pounds of nitrogen. Results are given in Table 3.

A comparison of some of the entries receiving 180 pounds of nitrogen with those having 120 pounds in adjacent tests (Tables 1, 2 and 3) is summarized below:

	Yield bu/A		% Lodging	
	Nitrogen level		Nitrogen level	
Entry	120 lb	180 lb	120 lb	180 lb
Lemont	135	126	0	0
8303046	133	118	45	70
8303169	160	151	25	85
8303116	155	154	0	48
8303181	161	138	0	90

In all the above instances, yield was depressed at the high fertility level. On the other hand, higher fertility increased the amount of lodging which was not as evident at the lower nitrogen rate. None of the 16 genotypes produced significantly higher yields at the 180 pound level.

Rice varieties vary in yield, milling percent and lodging resistance over years and locations but years are usually considered the more important component. Thus, average performance over years can be a useful indicator of varietal stability. Table 4 presents yields and other averages for major commercial varieties grown at the Delta Branch Station from 1980 through 1985.

The new varieties Newbonnet, Lemont, Skybonnet, and Tebonnet show a clear yield advantage of about 20 bushels per acre over the older forms such as Labelle and Starbonnet. Lemont and Newbonnet are about one week earlier than Starbonnet. Despite good yields, Leah has poor milling properties which make it undesirable. Bond was released by Arkansas in 1983 but has not produced

high yields. This may be partly due to a brittle straw which frequently results in severe lodging near maturity.

ON-FARM TESTS

Tunica

There was a 72 bushel per acre difference in yield among varieties = the largest of any On Farm Test (Table 5). Experimental line 8303046, Newbonnet and Lemont produced the highest yields and were not significantly different from each other. Whole rice milling yields also showed a wide variation from 48 percent for the California variety L202 to 63 percent for Newbonnet.

This was the only test to experience bird damage on early maturing entries. The three tall, early types (Tebonnet, Skybonnet and Labelle) produced low yields; however, two early, semi-dwarf types, similarly affected by bird damage, ranked 5th and 6th in yield.

Lambert

The Lambert test produced the highest average yields of any site in 1985. Lemont and its sister line 8303046 (Table 6) approached the 200 bushel per acre mark. Newbonnet ranked fourth at 177 bushels. Both Lemont and 8303046 were significantly higher yielding than the older varieties Starbonnet and Labelle. High head rice milling yields were obtained from 10 of the 12 entries with Lemont and 8303046 giving 66 percent whole grain rice.

Lambert was the only site where straighthead disease was present. The low yields of Skybonnet and Tebonnet are probably due to this physiological disease since it was estimated that 10 and 30 percent of the panicles in the respective varieties were affected.

Merigold

Table 7 shows that 5 of the 8 early maturing entries produced higher yields at Merigold than the later maturing types such as Lemont and Newbonnet. This is the only site where the early varieties such as L202, Tebonnet and Skybonnet outyielded Lemont and Newbonnet. Lemont suffered some injury from sheath blight which might explain its low yield. Whole rice milling yields varied from a low of 53 percent for L202 to 66 percent for Labelle. Several of the experimental lines produced whole milling yields bordering on the questionable side.

Greenwood

Low yields at this site were attributed to recent land leveling operations which probably reduced the availability of some important plant nutrients. Greenwood test conditions favored later maturing entries such as Newbonnet, Starbonnet and Lemont. Yield and other data are presented in Table 8. Even though a total of 163 pounds per acre of nitrogen was applied in 4 split applications, Newbonnet, the highest yielding entry, produced only 129 bushels per acre. Whole rice milling yields were inconsistent with known varietal characteristics and their performance at the other locations. This might be related to the problem soil previously mentioned but its precise nature has not been identified.

Rolling Fork

Growing conditions at this site were nearly ideal throughout the season with no damage to plots by pests or weather. Overall yield averaged approximately 155 bushels per acre, only slightly below the Lambert site. Table 9 shows that Newbonnet and Lemont varieties yielded in the 165 to 175 bushel range. As expected, Labelle and Starbonnet produced the lowest yields

even though lodging did not occur. Most entries had high whole rice milling yields above 60 percent except for L202 and 8303116.

Hollandale

Newbonnet produced high yields at Hollandale despite water logged conditions shortly after planting. The excess water resulted in poor emergence which made it necessary to discard 2 replications of all 12 entries. In addition, all 4 replications of Labelle and 8203035 were discarded since stands were extremely erratic.

Data presented in Table 10 show that Newbonnet, Lemont and strain number 8303046 produced the highest yields. Plant height was the tallest of all locations with Starbonnet measuring 55 inches. However, there was no lodging in any plot. Whole rice milling yields tended to agree with expectations. Newbonnet, Lemont, Skybonnet and Starbonnet produced over 60 percent whole rice whereas L202 and 2 experimental lines had very low milled yields.

AVERAGE PERFORMANCE ACROSS FIVE ON-FARM LOCATIONS

Table 11 presents average yield and other data for the 12 varieties grown in On Farm Tests in 1985. Hollandale is not included because yield data were not complete for all entries.

The top yields were produced by 8303046, Newbonnet and Lemont. As mentioned earlier, strain 8303046 is to be named and released by USDA breeders in Texas in 1985 or early 1986. Starbonnet and Labelle had the lowest yields and averaged about 20 percent less than the new varieties. Head (whole) rice yields of the 3 best yielding varieties is considered good but most of the experimental strains were disappointing in this respect. All of the named varieties except L202 had at least 60 percent whole rice which is considered an acceptable figure.

Heading dates were summarized from observations made by extension personnel and tend to agree with those recorded for the same varieties at Stoneville. Eight of the 12 entries headed within 85 days after emergence and are considered early maturing. Newbonnet and Lemont were 3 to 4 days earlier than Starbonnet, and 8303046 was 4 days earlier than Lemont.

New Varieties

Mississippi growers may soon be faced with the decision of continuing with Lemont or changing to one of the new experimental lines. Strain 8303046 will be named and released because it is 3 to 4 days earlier than Lemont but similar in other characteristics. The naming and release of a second strain, 8303169, is being justified on grain quality characteristics similar to Newrex and higher yield potential. Newrex grain possesses special characteristics for quick-cook processing and soup manufacturing which make it unique among U.S. rice varieties. Both experimental lines are similar to Lemont in other agronomic characteristics including short height and susceptibility to sheath blight.

CB 801 variety is a recent release by Farms of Texas near Houston. Its short height and narrow, dark green, semi-erect leaves easily distinguish it from other semi dwarf varieties. It has not received extensive testing in Mississippi but in 1985 tests at Stoneville, its performance was impressive.

Data for these new varieties are summarized in Table 12. The upper part of the table presents performance of the experimental lines grown in the uniform nursery at Stoneville over a 2-year period; the middle part of the table compares performance of these lines in three separate Mississippi tests in 1985 and the bottom portion of the table includes CB 801 along with the experimental lines and Lemont in 1985 Stoneville tests.

In general, the experimental line 8303046 has yielded similar to Lemont whereas 8303169 was more erratic. Milling data indicate it is also less stable. Both lines headed earlier than Lemont by 2 to 6 days depending on the test. CB 801 outperformed the experimental lines and Lemont in yield and whole milled rice in 1985. Its resistance to lodging was equal to Lemont and superior to the experimental lines.

Table 1. Performance of early season, long-grain experimental lines and commercial rice varieties grown on a Sharkey clay soil at the MAFES, Delta Branch, 1985.[1/]

Variety or Experimental No.	Av. Yield[2/] (bu/A)	Bushel weight (lb)	Plant height (in)	Days to heading (No.)	Lodging (%)	Milling yield Total (%)	Milling yield Whole (%)	Seedling vigor[3/]
8203035	164	42.6	37	89	0	71	56	P
8303181	161	40.1	39	85	0	67	55	VG
8303116	155	41.8	39	86	0	68	51	P
8003005	148	43.9	45	87	18	68	57	VG
8403113	145	42.6	44	84	0	71	60	VG
AS 2056	141	43.1	44	83	100	70	55	VG
8303089	140	42.4	40	91	0	70	60	P
8003009	138	44.1	42	91	0	68	54	VG
8303046	136	41.7	41	93	45	70	57	F
L202	135	40.4	40	86	93	69	53	G
Skybonnet	124	43.1	48	91	8	70	62	VG
AS 2055	121	43.5	55	84	100	70	50	VG
Tebonnet	121	42.7	53	91	63	70	60	VG
Labelle	114	42.1	51	86	100	69	57	VG
8203129	106	43.3	43	84	0	71	53	VG
Bond	64	42.2	44	89	100	67	48	VG

1/ Planting date: April 17, emerged May 1; Herbicide: Propanil (Stam®) 3 lb ai/A + thiobencarb (Bolero®) 3 lb ai/A applied early post May 7 and May 18; Fertilizer: Nitrogen in the form of urea applied at 120 lb/A preflood June 5; Flood: Permanent flood established June 5; Insecticide: 0.5 lb ai/A Carbofuran (Furadan®) applied June 27.

2/ Rough rice at 12% moisture. A difference of 19 bushels per acre is required for one variety to differ significantly from another. CV = 9.03%.

3/ VG = Very Good; G = Good; F = Fair; P = Poor.

Table 2. Performance of mid-season state and commercial varieties and experimental lines grown on a Sharkey clay soil at the MAFES, Delta Branch Station, 1985.[1/]

Variety or Experimental No.	Av. Yield[2/] (bu/A)	Bushel wt (lb)	Plant height (in)	Days to heading (No.)	Lodging (%)	Milling yield Total (%)	Milling yield Whole (%)	Seedling[3/] vigor
RX 2415	204	38.5	42	88	93	66	25	VG
RX 2411	200	37.8	43	86	90	64	32	VG
Gui Chow	194	42.8	41	103	5	73	65	F
8303169	160	41.5	36	91	25	69	57	P
CB801	151	43.4	35	99	0	70	64	G
8403126	150	42.9	36	93	0	70	62	P
8302048	146	43.0	40	92	0	71	60	G
8403144	145	42.3	37	93	0	70	62	P
8401164	144	44.3	40	97	0	71	60	VG
8303043	140	41.4	38	92	0	70	55	P
Lemont	135	42.8	35	96	0	71	60	G
8003050	135	42.7	40	92	0	70	60	P
8303046	133	42.0	38	92	18	70	59	P
8302051	122	44.1	43	93	0	69	53	VG
Starbonnet	111	43.2	50	102	0	68	62	VG
Bellevue	93	44.2	55	100	14	70	63	VG

1/ Planting date: April 17, emerged May 1; Herbicide: Propanil (Stam®) 3 lb ai/A + thiobencarb (Bolero®) 3 lb ai/A applied early post May 7 and May 28; Fertilizer: Nitrogen in the form of urea applied at 120 lb/A preflood June 5; Flood: Permanent flood established June 5; Insecticide: 0.5 lb ai/A Carbofuran (Furadan®) applied June 27.

2/ Rough rice at 12% moisture. A difference of 22 bushels per acre is required for one variety to differ significantly from another. CV = 10.42.

3/ VG = Very Good; G = Good; F = Fair; P = Poor.

Table 3. Performance of long grain short stature state and commercial varieties and experimental lines grown under high soil fertility levels on Sharkey clay soil at the MAFES Delta Branch Station, 1985[1/].

Variety or Experimental No.	Avg. yield[2/]	Bushel wt.	Plant height	Days to heading	Lodging	Milling Yield		Seedling vigor[3/]
						Total	Whole	
	(bu/A)	(lb)	(in)	(no)	(%)	(%)		
8303116	154	42.2	37	85	48	71	58	G
CB801	153	45.0	35	98	0	72	66	G
8303169	151	41.8	36	90	85	69	57	G
8403144	151	42.5	38	93	0	71	63	G
8403126	150	43.5	37	93	0	72	63	G
8203035	139	43.2	35	88	0	71	56	G
8303181	138	38.8	37	86	90	69	55	G
8403113	132	44.3	42	84	34	71	55	G
Lemont	126	42.7	39	96	0	71	61	G
8401164	130	45.4	42	99	0	71	58	G
L202	125	39.9	39	87	70	67	49	G
8003050	122	43.3	41	93	10	69	58	G
8303046	118	42.2	38	93	70	70	57	G
8403043	114	42.4	38	93	78	71	61	G
8203129	108	45.4	40	90	90	70	61	G
8303129	99	44.7	37	84	0	71	58	G

1/ Planting date: April 19, emerged May 1. Herbicide: Propanil (Stam®) 3 lb ai/A + thiobencarb (Bolero®) 3 lb ai/A applied early post May 7 and May 28; Fertilizer: nitrogen in the form of urea applied at 30 lb/A preplant incorporated plus 150 lb/A preflood; Flood: permanent flood established June 5; Insecticide: 0.5 lb ai/A carbofuran (Furadan®) applied June 27.

2/ Rough rice at 12% moisture. A difference of 23 bushels per acre is required for one variety to differ significantly from another. CV = 12.1%.

3/ VG = very good; G = good; F = fair; P = poor.

Table 4. Average performance of rice varieties tested at the MAFES, Delta Branch Station during all or part of the period 1980-1985.

Variety	Av. yield[1] 1981-1985	Av. yield[1] 1980-1985	Milling yield Total	Milling yield Whole[2]	Bushel weight	Plant height	Lodging	Days to heading
	(bu/A)		(%)		(lb)	(in)	(%)	(no)
Newbonnet	140	143	69.1	56.9	45	41	9	96
Lemont	134	134	71.3	55.4	44	32	0	97
Skybonnet	135	133	72.3	58.9	45	42	5	91
Tebonnet	137	135	70.8	54.2	45	45	23	89
Leah	140	138	70.8	43.4	45	36	0	89
Labelle	124	120	71.6	53.5	46	44	20	86
Lebonnet	117	116	70.3	52.8	44	43	30	94
Starbonnet	113	114	69.1	55.6	45	46	7	103
Bond[3]	112	---	68.2	54.6	44	39	34	84

1/ Rough rice at 12% moisture.

2/ 1983 data excluded.

3/ Not tested in 1980.

Table 5. Performance of long grain rice varieties and experimental lines grown on a Sharkey clay soil at Tunica, MS, Eddie Rial Farm, 1985[1/].

Variety or line	Avg. yield[2/] (bu/A)	Bushel weight (lb)	Plant height (in)	Relative maturity[3/]	Milling Yield Total (%)	Milling Yield Whole (%)
8303046	183	43.6	35	SS	71	61
Newbonnet	170	45.0	41	SS	71	63
Lemont	168	44.7	36	SS	72	62
8303116[4/]	148	43.3	34	SS	70	54
8403113[4/]	147	43.2	39	VSS	69	56
Starbonnet	142	44.8	51	MS	69	60
8303181	138	41.9	34	VSS	70	57
L202	137	41.9	35	VSS	69	48
8203035	134	44.0	33	SS	71	51
Tebonnet[4/]	120	44.2	47	VSS	71	58
Skybonnet[4/]	114	44.5	45	VSS	70	59
Labelle[4/]	111	44.6	48	VSS	69	54

1/ Planting date: April 16, emerged April 30. Herbicide: Propanil (Stam®) 3 lb ai/A early post plus 4 lb ai 10 days later. Fertilizer: Nitrogen in the form of urea at the rate of 68 lbs/A preplant, 36 lbs prior to midseason, 36 lbs at midseason and 36 lbs post midseason.

2/ Rough rice at 12% moisture. A difference of 31 bushels is required for one variety to differ significantly from another. CV = 15%.

3/ VSS = Very Short Season e.g. Labelle; SS = Short Season e.g. Lebonnet; MS = Midseason e.g. Starbonnet

4/ Approximately 15% bird damage.

Table 6. Performance of 12 long grain rice varieties and experimental lines grown on a Forestdale Silt Loam soil at Lambert, MS, Anderson Farms, 1985[1/].

Variety or line	Avg. yield[2/] (bu/A)	Bushel weight (lb)	Plant height (in)	Relative maturity[3/]	Milling Yield Total (%)	Milling Yield Whole (%)
8303046	192	43.4	37	SS	72	66
Lemont	187	44.5	36	SS	73	66
8203035	179	44.4	33	SS	73	62
Newbonnet	177	44.1	43	SS	71	64
8303181	172	43.2	32	VSS	73	62
8403113	170	44.1	36	VSS	72	60
L202	170	42.5	34	VSS	70	54
8303116	169	43.7	33	SS	72	58
Labelle	156	45.3	49	VSS	72	64
Starbonnet	146	43.6	49	MS	70	64
Skybonnet	143[4/]	45.4	43	VSS	73	65
Tebonnet	139[5/]	45.6	46	VSS	74	62

1/ Planting date: April 9, emerged April 21. Herbicide: Propanil (Stam®) 4 lb ai/A; Propanil (Stam®) 3 lb ai/A + thiobencarb (Bolero®) 2 lb ai/A. Fertilizer nitrogen: 95 lb/A (preflood) May 19; 38 lb/A and 51 lb/A split at midseason. Flood: May 20. Insecticide: 0.5 ai lb/A Carbofuran (Furadan®).

2/ Rough rice at 12% moisture. A difference of 27 bu per acre is required for one variety to differ significantly from another. CV = 11.4%.

3/ VSS = Very Short Season e.g. Labelle; SS = Short Season e.g. Lebonnet; MS = Midseason e.g. Starbonnet.

4/ Approximately 10% straighthead.

5/ Approximately 30% straighthead.

Table 7. Performance of rice varieties and experimental lines grown on a Brittain silt loam soil at Merigold, MS, William Peacock Farm, 1985.[1/]

Variety or line	Av. yield[2/] (bu/A)	Bushel weight (lb)	Plant height (in)	Relative maturity[3/]	Milling yield Total (%)	Milling yield Whole (%)
L 202	151	42.7	31	VSS	68	53
Tebonnet	150	44.8	46	VSS	72	62
Skybonnet	143	45.6	43	VSS	71	63
8303181	143	43.7	29	VSS	69	57
8303116	142	43.7	30	SS	70	53
8303046	141	44.5	32	SS	70	60
Newbonnet	140	43.8	37	SS	69	56
Lemont	124	43.6	30	SS	68	60
8203035	119	45.0	27	SS	70	61
Labelle	114	45.9	46	VSS	71	66
8403113	103	45.0	35	VSS	73	57
Starbonnet	94	43.8	42	MS	67	61

1/ Planting date: April 11, emerged May 1; Herbicide: Liquid molinate (Ordram®) 3 lb ai/A preplant incorporated, propanil (Stam®) 4 lb ai/A early post, Granular Ordram around edge of field; Fungicide: benomyl (Benlate®) 1 lb ai/A; Insecticide: carbofuran (Furadan®) 0.5 lb ai/A; Fertilizer: 99 lbs/A nitrogen preflood May 18 and 81 lbs/A at midseason; Flood: May 18.

2/ Rough rice at 12% moisture. A difference of 10 bushels per acre is required for one variety to differ significantly from another. C.V. = 5.4%.

3/ VSS = Very Short Season e.g. Labelle; SS = Short Season e.g. Lebonnet; MS = Midseason e.g. Starbonnet.

Table 8. Performance of 12 long grain rice varieties and experimental lines grown on an Alligator clay soil near Greenwood, MS, Bobby Poe Farm, 1985.[1/]

Variety or line	Average yield[2/] (bu/A)	Bushel weight (lb)	Plant height (in)	Relative maturity[3/]	Milling yield Total (%)	Milling yield Whole (%)
Newbonnet	129	45.1	40	SS	72	59
Starbonnet	127	44.2	45	MS	72	69
Lemont	126	45.4	32	SS	74	59
Tebonnet	119	44.9	45	VSS	73	56
8303046	116	45.2	33	SS	74	62
8303116	113	44.0	30	SS	73	54
L202	110	42.0	33	VSS	70	51
8303181	107	43.1	32	VSS	72	60
Labelle	104	44.8	43	VSS	71	59
8203035	101	43.9	29	SS	73	54
8403113	98	43.9	34	VSS	72	43
Skybonnet	96	45.0	40	VSS	73	52

1/ Planting date: April 18, emerged May 2; Herbicide: Propanil (Stam®) 3 lb ai/A May 7; granular molinate (Ordram®) 4 lb ai/A June 8, MCPA 1 lb ai/A June 30; Insecticide: Carbofuran (Furadan®) 0.5 lb ai/A; Methyl parathion 0.25 lb ai/A August 9; Fertilizer: Nitrogen in the form of ammonium sulfate at the rate of 21 lbs/A in flood water June 8, 37 lbs/A, in the form of urea June 10 and June 21 plus 68 lbs/A in the form of urea July 10.

2/ Rough rice at 12% moisture. A difference of 17 bushels per acre is required for one variety to differ significantly from another. CV = 10.2%.

3/ VSS = Very Short Season e.g. Labelle; SS = Short Season e.g. Lebonnet; MS = Mid-Season e.g. Starbonnet.

Table 9. Performance of rice varieties and experimental lines grown on a Sharkey clay soil at Rolling Fork, MS, Carter Brothers Farm, 1985.[1/]

Variety or line	Av. yield[2/] (bu/A)	Bushel weight (lb)	Plant height (in)	Relative maturity[3/]	Milling yield Total (%)	Milling yield Whole (%)
Newbonnet	175	44.6	42	SS	71	63
8303181	170	43.9	31	VSS	71	63
8303046	166	45.5	33	SS	72	63
Lemont	165	45.4	33	SS	73	61
8303116	165	44.4	32	SS	71	56
8403113	157	45.3	35	VSS	72	62
Skybonnet	156	45.7	42	VSS	71	65
Tebonnet	155	45.5	44	VSS	73	64
L 202	148	43.0	32	VSS	69	55
8203035	144	45.7	29	SS	72	63
Labelle	140	45.9	44	VSS	72	64
Starbonnet	131	44.1	48	MS	69	59

1/ Planting date: April 10, emerged April 28; Herbicide: propanil (Stam®) 3 lb ai/A plus pendimethalin (Prowl®) 1 lb/A preflood, midseason, acifluorfen (Blazer®) 0.19 lb/A; Fertilizer: nitrogen: preplant = 10 lb/A as N=Sol, Preflood - 100 lb/A as urea, Midseason - 100 lb/A as urea split twice. Flood: May 16.

2/ Rough rice at 12% moisture. A difference of 21 bushels per acre is required for one variety to differ significantly from another. C.V. = 9.1%.

3/ VSS = Very Short Season e.g. Labelle; SS = Short Season e.g. Lebonnet; MS = Midseason e.g. Starbonnet.

Table 10. Yield and rank of commercial varieties and experimental lines grown on a Sharkey clay soil at Hollandale, MS, Leo Williams Farm, 1985.1/

Variety or experimental no.	Average yield2/ (bu/A)	Bushel weight (lbs)	Plant height (in)	Milling Yield Total (%)	Milling Yield Whole (%)
Newbonnet	206	43.7	49	72	63
Lemont	172	43.7	37	74	61
8303046	169	43.7	39	73	58
L 202	165	42.1	39	72	53
Skybonnet	165	43.0	50	72	61
8303116	164	43.2	36	72	43
8403113	161	43.7	41	72	45
Tebonnet	150	42.8	54	73	58
Starbonnet	143	42.2	55	70	62
8303181	135	39.6	37	72	55

1/ Planting date: April 19; Herbicide: Propanil (Stam®) 3 lb ai/A plus 2,4,5-T 3/8 lb/A early post; Insecticide: Carbofuran (Furadan®) 0.5 lb ai/A; Fungicide: benomyl (Benlate®) 1 lb ai/A applied twice; Fertilizer: nitrogen in the form of urea applied at 90 lb/A preflood plus 90 lb/A split at midseason.

2/ Rough rice at 12% moisture.

Table 11. Average performance of 12 rice varieties and lines grown in 5 on-farm tests, 1985.1/

Variety or line	Yield1/	Milling yield		Bushel weight	Plant height	Days to heading2/
		Total	Whole			
	(bu/A)	(%)		(lb)	(in)	(no.)
8303046	160	72	62	44.4	34	87
Newbonnet	158	71	61	44.5	41	92
Lemont	154	72	62	44.7	33	91
8303116	147	71	55	43.8	32	84
8303181	146	71	60	43.2	32	84
L202	143	69	52	42.4	33	82
Tebonnet	137	73	59	45.0	46	83
8203035	135	72	58	44.6	30	85
8403113	135	72	56	44.3	36	83
Skybonnet	130	72	61	45.2	43	85
Starbonnet	128	69	62	44.1	47	95
Labelle	125	71	61	45.3	46	82

1/ Rough rice at 12% moisture.
2/ Average of observations made by MCES personnel.

Table 12. Performance of lines 8303046, 83030169 and variety CB 801 compared with Lemont.

1983-1985 Mississippi Uniform Tests

Variety	Yield (bu/A)			% Whole Rice			No. Days to Head		
	1984	1985	Av.	1984	1985	Av.	1984	1985	Av.
Lemont	161	142	152	60	60	60	105	96	101
8303046	159	150	155	64	59	62	104	92	89
8303169	135	135	135	67	57	62	102	91	97

1985 Mississippi Uniform, State and On Farm Tests

Variety	Yield (bu/A) by Test				% Whole Rice				No. Days to Head			
	Unif.	State	On Farm	Av.	Unif.	State	On Farm	Av.	Unif.	State	On Farm	Av.
Lemont	142	131	154	142	61	61	62	61	96	96	91	94
8303046	150	126	160	145	57	58	62	59	91	93	87	90
8303169	135	156	--	146	63	57	--	60	84	91	--	88

1985 State Tests, Delta Branch Station

Variety	Yield (bu/A)	Height (in)	Days to Head (No.)	Lodging (%)	Whole Rice (%)
CB 801	152	35	99	0	65
Lemont	131	37	96	0	61
8303046	126	38	93	44	58
8303169	156	36	91	55	57

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