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CALIFORNIA RICE VARIETIES:

Description and Performance Summary of the 1985 and Multiyear Statewide Rice Variety Tests in California

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This report describes the results of the 1985 regional rice variety testing program. A total of 13 uniform rice variety tests were conducted in nine locations from Butte to Stanislaus County. Twenty-five to 32 entries including commercially grown "standards" and experimental lines were planted in each of three maturity classes for a total of 87 entries. Three tests, one of each maturity group, were conducted at the Rice Experiment station at Biggs by the California Cooperative Rice Research Foundation Incorporated. The remaining tests used the typical cultural practices for the grower thus testing agronomic performance under a wide range of production practices and locations. The maturity groups and locations were as follows:

Very Early Maturity Group - Three uniform tests were conducted 1) at the Rice Experiment Station (Butte County), 2) the Lauppe Ranch (Natomas District, Sutter County), and 3) the Hoffman Ranch (Stanislaus County). Twenty experimental lines and ten commercially available varieties were included.

Early Maturity Group - Five uniform tests were conducted 1) at the Rice Experiment Station (Butte County), 2) the Wylie Ranch (Colusa County), 3) the Mohammed Ranch (Yuba County), 4) William Geer and Son (Yolo County), and 5) the Grell Ranch (Butte County). Twenty-one experimental lines and eleven commercially available varieties were included.

Late Maturity Group - Three uniform late maturity tests were conducted 1) at the Rice Experiment Station (Butte County), 2) the Terhel Ranch (Colusa County) and 3) on the Tennis Ranch (Sutter County). Twenty-two experimental lines and three commercially available varieties were included.

Long Grain Group - Two uniform long grain tests were conducted 1) at the Rice Experiment Station (Butte County) and 2) at William Geer and Son (Yolo County). Twenty-four experimental lines and one commercially available variety were included.

Performance characteristics measured for each cultivar were seedling vigor, days to 50% heading, plant height, lodging, grain moisture at harvest and grain yield at 14% moisture. Seedling vigor was subjectively rated by visual observation on a scale of 1 (poor) to 5 (excellent) at 21-28 days after planting. Seedling vigor is a measure of the overall plant health, height and stand at emergence through the water. Days to 50% heading was determined when 50% of the heads were free of the boot. Plant height was determined at harvest by measuring from the soil surface to the tip of the panicle. Plant lodging was rated visually at harvest on a scale of 1 (no lodging) to 99 (all plants lodged). This method does not characterize time of lodging which is more highly correlated with grain yield.

County trials were harvested with a SWECO 324 plot combine and on-station tests were harvested with an Allis-Chalmers plot combine. A 7.5 x 20 foot swath was harvested in the off-station tests and a 10 x 15 foot swath was harvested at Biggs both with a harvested area of 0.0034 acres. Grain was subsampled for moisture determination at harvest and grain yield adjusted to 14% moisture.

Agronomic Performance Summary of 1985 and Multiyear Varietal Entries by Maturity Group

Varietal performance summaries are presented by location for each maturity group followed by an over-location summary and a multiyear and multilocation grain yield summary. Only the yields of commercial varieties or very advanced experimental cultivars are summarized in the multiyear multilocation tables. Comparative yield is expressed as the percentage of a standard variety based on equivalent location and year means and may not reflect the mean yield of a given variety over all locations and years.

The long grain tests are reported by location followed only by an overlocation summary. Multiyear and multilocation yield summaries are not reported for the long grain tests.

Summary of the Very Early Rice Variety Tests
(<90 days to 50% heading at Biggs)

The 1985 very early maturity tests were conducted at the three locations described above. The Stanislaus County test was not included in the analysis due to severe nitrogen stress as the result of under-fertilization. Varietal standards included California Belle, Calmochi-101, L-202, M-101, M-201 and M-202 at Biggs. Earlirose 83, CBR31, M-9, and S-201 were added to the remaining locations. Fifteen experimental cultivars were new in the 1985 off-station trials and five had been tested previously. Grain types included seven short grain, nine medium grain and four long grain.

Tables 2 and 3 show the agronomic performance of these lines at each location and Table 4 gives the over-location summary. Six experimental cultivars, two short and four medium grain, exceeded 10,000 pounds per acre in yield and the top ten entries in yield were all advanced breeding lines. M-201 was the leading commercial entry (9750 lb/a). M-202 was the lowest entry in yield in the Sutter County test. We have no explanation for this poor performance of M-202 as it has been one of the leading, if not the highest yielding, at all other locations and years tested. Moisture at harvest varied from 13.1% for experimental 84-Y-103 to 20.4% for M-201. The Sutter test was very dry at harvest averaging 14.7% moisture whereas the test on the Rice Experiment Station averaged 18.0%. Seedling vigor was very good with an overall vigor rating for both locations of 4.8%. Both M-202 and Calmochi-101 showed excellent vigor (5.0) while California Belle had the lowest (4.0). The long grains, as a general rule, showed the lowest vigor ratings. No experimental cultivars headed earlier than M-101 (84 days). Calmochi-101 was one day later than M-101 at 85 days. L-202 and 84-Y-354, both long grains, headed the latest (96 days). California Belle was the tallest entry (97 cm) while L-202, along with one other advanced long grain line, was the shortest (75 cm). M-101 and Calmochi-101 showed the most

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[2]The California rice variety improvement program is conducted jointly by the California Cooperative Rice Research Foundation, Inc. (CCRRFI), the United States Department of Agriculture (USDA-ARS) and the University of California. The program is supported in part by grant funds from the Rice Research Board.

lodging at 41% and 39% respectively. None of the highest yielding entries lodged more than 6% indicating the progress being made on improved straw strength.

Table 6 shows the over year and location yields for the very early varieties. All entries were not tested at each location and/or every year therefore means cannot be directly compared. Common year-location entries, however, can be compared to give relative yield expressed as a percent of the standard, M-101. All commercial varieties, excepting California Belle, produced greater yields than M-101, with the three highest being M-202 (112%), S-201 (111%), and Calmochi-101 (110%).

Summary of the Early Rice Variety Tests
(90-97 days to 50% heading at Biggs)

The 1985 early maturity tests were conducted in the five locations described above. Twenty experimental lines and six commercial standards, M-202, M-201, S-201, L-202, M-101 and California Belle, were included at the Rice Experiment Station. Six additional cultivars, Calmochi-101, Calmochi-202, M-9, Earlirose 83, CBR31 and M-302, were added to the off-station tests. Experimental lines in these tests included four short grain, ten medium grain and six long grain types. Fifteen entries were new and five had been previously tested off-station.

The agronomic performance of these cultivars at each location are given in Tables 6 through 10. Table 11 shows the five location performance summary. M-202 (9930 lb/a), M-201 (9560 lb/a) and S-201 (9140 lb/a) ranked 1, 4 and 11 in yield respectively in this test. All others in the top twenty were advanced experimental lines. 84-Y-149, a medium grain under consideration for release as a very early variety ranked second. Moisture at harvest averaged 19.4% for all entries with California Belle and three experimental long grains the lowest (16.1-16.4%) and several cultivars, including M-201, the highest moisture (21.1-21.4%). Seedling vigor was generally good with little difference among all entries. Days to 50% heading ranged from 83 days for M-101 to 99 days for one experimental line. Plant height ranged from 77 cm for L-202 to 100 cm for California Belle. Lodging was greatest for M-101 (50%) and least for L-202 (3%).

Table 12 summarizes the agronomic performance of the thirteen commercial varieties tested in the four off-station locations (not all were tested at the Rice Experiment Station). M-202 was the leading entry for yield (9870 lb/a) followed closely by 84-Y-149 (9810 lb/a). California Belle showed the lowest yield (8020 lb/a). Calmochi-101 had the lowest moisture at harvest (13.0%) and M-302 the highest (22.4%). There was no significant difference between entries for seedling vigor. Earlirose 83 (ER83) headed at 79 days, four days before M-101 at 83 days and five days before Calmochi-101 at 84 days.

Table 13 shows the over year and location yields for the early varieties. L-202 and M-202 were first tested in 1983, thus no data are listed for prior years nor can location means be directly compared for these two varieties. Relative yields based on similar locations show that M-201 and M-202 have produced 110% of M-9 yields for 20 and 12 location-year tests respectively.

L-202 (103%) and S-201 (106%) have both exceeded M-9 yields whereas Calmochi-202 has produced slightly less yield (98%, than M-9.

Summary of the Intermediate and Late Variety Tests
(>105 days to 50% heading at Biggs)

The 1985 late maturity tests were conducted at the three locations described above and included twenty-two experimental lines and three commercial varieties. Table 14, 15 and 16 show the agronomic performance of these cultivars at each location and Table 17 gives the over-location averages for the three tests. Eleven experimental lines were new in 1985 and eleven others had been included previously in off-station tests. The three standard commercial varieties included were: M-7, M-302 and M-401. Seven short, thirteen medium, and two long grain advanced lines were tested.

The leading commercial variety in the late test, M-401 (9660 lb/a), ranked eleventh. Seven of the top ten yielding cultivars in 1985 were also in the top ten in 1984 (one other ranked 12th in 1984) and two were new. Both short and medium grain types were represented among this group. Experimental line 82-Y-79 ranked first in 1984 and second in 1985. Many of these cultivars ranked above the late variety standard, M-7, in yield. None of the long grain entries in the late test ranked in the top twenty. Advanced line 83-Y-414, an aromatic rice, was significantly lower in yield than all others but is under consideration to compete in specialty markets. Grain moisture at harvest varied from 17.1% for the long grain line, 84-Y-607, to 21.8% for M-7. Seedling vigor was uniformly good (4.0 or above) excepting for the aromatic, 83-Y-414, which had a rating of 2.6. Previously, we have observed some sensitivity of this cultivar to seedling emergence through the water. Days to 50% heading varied from 96 (84-Y-532) to 114 (M-7). The average heading date for all entries was 105 days as compared to 103 days for M-302, the intermediate maturity standard, indicating that new releases in this group will likely be earlier than the traditional late semi-dwarfs, M-401 and M-7. Plant height ranged from 84 to 98 cm and lodging resistance was generally good.

Table 18 is a summary of yields for the late varieties and includes the aromatic long grain 83-Y-414. All entries were not tested at each location in every year so location means may not be compared directly. Using M-7 as a standard (100%) all varieties were within 2% of each other in yield except 83-Y-414, which was 91% of M-7.

Summary of the Long Grain Test

The 1985 long grain tests were conducted at the two locations previously described. Twenty-four experimental lines and one commercial standard, L-202, were included. All 24 advanced breeding lines were new to the test in 1985. Tables 19 and 20 give the agronomic performance of these cultivars at each location and Table 21 gives the overlocation summary. Three varieties were significantly higher than L-202 in yield. L-202 was the last to reach 50% heading, some cultivars being nearly two weeks earlier to flowering. Plant height and lodging varied considerably among these entries.

CHARACTERISTICS OF PUBLICLY DEVELOPED RICE VARIETIES* - 1985

GRAIN TYPE	MATURITY	SEED WIDELY AVAILABLE	COMMENTS
SHORT GRAIN			
S-201	Early	1981	High yield potential, excellent seedling vigor, similar to M-201 in maturity and in resistance to blanking; has good pearl shape.
MEDIUM GRAIN			
M-101	Very Early	1981	Earliest variety; excellent seedling vigor; good resistance to blanking. Yields less than other varieties at normal planting dates. Suggested only for special conditions such as cold areas and/or late planting dates. To minimize reduction in head rice, which is generally low, harvest at 25% moisture.
M9	Early	1979	High yield potential; not adapted to colder areas or to very early seeding; mixed maturity of seed on panicles. Somewhat difficult to thresh cleanly--special combine adjustments may be necessary. Should be obsolete when M-202 seed is available.
M-201	Early	1984	Same maturity as M9 but with higher yield potential; 2-3 inches shorter than M9 with excellent resistance to lodging and appears to be more responsive to nitrogen. Threshes very easily, reduce reel and cylinder speed to minimize shatter and enhance head rice. Has replaced M9 in all but the cooler rice growing areas; best resistance to stem rot but susceptible to aggregate sheath spot.
M-202	Early	1987	Is intended to replace M9 in the cooler rice growing areas where M-201 is not adapted and for later seeding dates. Approximately two days earlier and 2 inches shorter than M9 with higher yield potential; intermediate lodging resistance; similar to M9 in seedling vigor, resistance to blanking and threshability.
M-302	Intermediate	1983	Is 8 to 10 days later than M-201; has good seedling vigor and resistance to blanking. Can be used to spread planting and harvest seasons.
M7	Late	1979	Good field and milling yield potential; good seedling vigor and resistance to blanking; excellent lodging resistance. Good resistance to stem rot and best on aggregate sheath spot.
M-401	Late	1983	Is a premium quality rice and <u>not a replacement for M7</u>. Has high yield potential; M7 maturity; is more sensitive to blanking, lodging and damage from early drainage than M7; therefore use somewhat less N than on other short stature varieties. Has large bold seeds.
LONG GRAIN			
L-202	Early	1986	Good yield potential in warmer areas; not adapted to colder areas; shortest of current varieties; excellent resistance to lodging and appears to be highly responsive to nitrogen. Seedling vigor fair; requires careful water management. Threshes easily so reduce cylinder speed to minimum to enhance head rice; has good cooking qualities.
SWEET			
Calmochi-101**	Very Early	1987	A sweet rice 15 days earlier than Calmochi-202; has desirable larger seed and improved cooking quality; excellent resistance to low temperature blanking; has rough leaves and hulls; no awns. Foundation seed available in 1986.
Calmochi-202**	Early	1983	A sweet rice similar to S-201 in growth characteristics but two days later. Has smaller seeds. Yields about 8% less than S-201.

*Proper management of the short stature varieties to obtain high yield include: (1) managing water depth and other factors to obtain a dense stand; (2) good weed control; (3) adequate nitrogen fertilization; (4) drain as late as possible before harvest.

**Calmochi varieties should not be grown unless arrangements have first been made with marketing agency.

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Table 2. Performance summary of the very early rice experimental lines and varieties, Butte County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
5	84-Y-170	M	11000	19.0	5.0	88	97	1
14	83-Y-14	S	10970	20.1	5.0	91	96	5
3	83-Y-141	M	10900	22.8	4.9	96	93	1
9	84-Y-9	M	10880	18.1	5.0	87	93	6
12	84-Y-278	M	10820	20.6	5.0	89	93	1
7	84-Y-169	M	10780	18.1	5.0	87	94	1
8	84-Y-192	M	10710	18.4	5.0	92	93	1
4	84-Y-149	M	10710	18.4	5.0	88	98	1
16	84-Y-99	S	10510	18.3	4.8	87	88	12
20	84-Y-350	L	10490	14.7	4.9	86	97	1
10	M-202	M	10470	19.5	5.0	92	94	1
6	84-Y-147	M	10370	17.4	5.0	86	94	1
2	M-201	M	10300	23.2	5.0	97	90	1
18	84-Y-104	S	10250	17.4	4.9	90	87	1
15	83-Y-116	S	10150	18.6	4.9	89	91	1
13	84-Y-103	S	10090	16.1	4.9	90	82	1
11	84-Y-11	M	9870	17.6	5.0	85	92	26
24	(P3849 + P3925)	L	9580	16.3	5.0	89	90	1
22	L-202	L	9560	17.9	5.0	96	81	1
19	84-Y-117	S	9540	17.5	4.8	85	92	49
26	Calif. Belle	L	9200	15.6	4.9	91	106	2
17	84-Y-110	S	9100	17.0	4.9	87	93	35
21	Cal Mochi-101	W	9080	17.3	5.0	84	92	76
1	M-101	M	8810	17.0	5.0	83	94	80
23	84-Y-399	L	8580	14.0	4.4	86	94	1
25	84-Y-554	L	7890	16.7	4.7	95	79	1
GRAND MEAN			10020	18.0	4.9	89	92	12
CV			7.9	8.6	1.8	2.1	3.4	97.8
LSD (.05)			1120	2.2	0.1	3	4	16

Conducted by the Rice Experiment Station, Butte County, near Biggs.
Planting date: 2 replications planted April 30, 2 replications planted May 23, data an average of all replications.
[1]S = short; M = medium; L = long; W = waxy.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 3. Performance summary of the very early rice experimental lines and varieties, Sutter County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
15	83-Y-116	S	10230	12.3	4.9	90	76	2
14	83-Y-14	S	9840	13.5	5.0	95	86	2
13	84-Y-103	S	9550	10.1	4.8	88	72	1
3	83-Y-141	M	9470	17.3	4.9	94	83	1
24	(P3849 + P3925)	L	9400	13.6	5.0	87	81	1
5	84-Y-170	M	9300	17.1	4.9	89	82	1
12	84-Y-278	M	9230	18.4	4.6	90	79	1
2	M-201	M	9190	17.6	4.6	93	73	1
28B	S-201	S	9180	14.5	4.6	96	78	1
6	84-Y-147	M	9170	16.7	4.9	89	82	1
21	Cal Mochi-101	W	9170	9.6	5.0	86	81	1
22	L-202	L	9100	15.2	4.4	96	70	1
26	Calif. Belle	L	9090	14.4	3.0	91	87	1
7	84-Y-169	M	9050	17.6	4.6	92	81	1
16	84-Y-99	S	9030	12.0	4.8	85	75	1
4	84-Y-149	M	9030	16.9	4.5	88	79	1
18	84-Y-104	S	8880	9.9	5.0	86	73	1
27A	M-9	M	8860	17.1	4.9	94	81	2
30D	CBR 31	L	8810	14.1	4.1	88	86	1
1	M-101	M	8760	16.4	4.9	86	80	1
17	84-Y-110	S	8740	13.7	4.8	91	79	1
20	84-Y-350	L	8730	12.9	4.8	83	82	1
19	84-Y-117	S	8680	13.6	4.1	87	77	1
29C	ER 83	M	8520	14.3	4.4	84	82	1
11	84-Y-11	M	8320	16.1	5.0	87	83	1
25	84-Y-354	L	8250	13.7	4.8	97	70	1
8	84-Y-192	M	8200	16.5	4.8	92	77	1
9	84-Y-9	M	8180	16.5	4.8	87	80	1
23	84-Y-399	L	8180	13.1	3.8	85	84	1
10	M-202	M	8130	17.0	5.0	91	78	1
GRAND MEAN			8940	14.7	4.6	89	79	1
CV			4.4	3.2	8.1	1.0	4.1	58.2
LSD (.05)			550	0.7	0.5	1	5	NS

Cooperator and location: Lauppe and Son, Natomas
Planting date: May 3, 1985
[1]S = short; M = medium; L = long; W = waxy.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 4. Performance summary of the very early rice experimental lines and varieties, means of two locations (Butte and Sutter Counties).

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
14	83-Y-14	S	10410	16.8	5.0	93	91	3
15	83-Y-116	S	10190	15.5	4.9	89	83	2
3	83-Y-141	M	10180	20.0	4.9	95	88	1
5	84-Y-170	M	10150	18.1	4.9	88	89	1
12	84-Y-278	M	10030	19.5	4.8	89	86	1
7	84-Y-169	M	9920	17.9	4.8	89	87	1
4	84-Y-149	M	9870	17.6	4.7	88	88	1
13	84-Y-103	S	9820	15.1	4.8	89	77	1
6	84-Y-147	M	9770	17.0	4.9	88	88	1
16	84-Y-99	S	9770	15.1	4.8	86	81	6
2	M-201	M	9750	20.4	4.8	95	81	1
20	84-Y-350	L	9610	13.8	4.8	84	90	1
18	84-Y-104	S	9570	13.6	5.0	88	80	1
9	84-Y-9	M	9530	17.3	4.9	87	86	3
24	(P3849 + P3925)	L	9490	15.0	5.0	88	85	1
8	84-Y-192	M	9460	17.4	4.9	92	85	1
22	L-202	L	9330	16.5	4.7	96	75	1
10	M-202	M	9300	18.3	5.0	91	86	1
26	Calif. Belle	L	9140	15.0	4.0	91	97	1
21	Cal Mochi-101	W	9130	13.5	5.0	85	86	39
19	84-Y-117	S	9110	15.6	4.4	86	85	25
11	84-Y-11	M	9090	16.9	5.0	86	87	14
17	84-Y-110	S	8920	15.3	4.8	89	86	18
1	M-101	M	8780	16.7	4.9	84	87	41
23	84-Y-399	L	8380	13.5	4.1	85	89	1
25	84-Y-354	L	8070	15.2	4.7	96	75	1
GRAND MEAN			9490	16.3	4.8	89	85	6
CV			6.6	7.0	5.4	1.6	3.7	126.9
LSD (.05)			610	1.1	0.3	1	3	8

[1] S = short; M = medium; L = long; W = waxy.
[2] Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3] Subjective rating of 1-99 where 1 = 1% lodging and 99 = 99% lodged.

Table 5. Grain yield summary of the very early experimental lines and varieties by location and years.

County location	Year	Varieties					
		M-9	M-101	S-201	M-202	California Bell	Calmochi-101
Butte	1981	6710	7930	10060	-	-	
	1982	9500	9840	-	9930	-	
	1983	11220	9920	-	10790	-	10650
	1984	8690	7180	-	9690	7970	8950
	1985	-	8810	-	10470	9200	9080
Location mean		9030	8740	10060	10220	8590	9560
Sacramento	1981	7700	5330	8020	-	-	-
	1982	8990	8420	8390	9200	6400	-
	1983	9860	9000	10090	11160	8480	9730
	1984	9900	9600	10370	11520	8750	11130
	1985	8860	8760	9180	8130	9090	9170
Location mean		9060	8220	9210	10000	8180	10010
San Joaquin	1981	9270	8690	9780	-	-	-
	1982	-	-	-	-	-	-
	1983	-	-	-	-	-	-
	1984	7650	8070	7320	8460	7280	8880
	1985	-	-	-	-	-	-
Location mean		8410	8380	8550	8460	7280	8880
Location-years mean		8930	8460	9150	9930	8170	9660
Yield as % of M-101[1]		106	100	111	112	96	110
Number of tests		11	-	8	9	7	7

[1] Based on equivalent location-year means and may not reflect mean of all locations and years for M-101

Table 6. Performance summary of the early rice experimental lines and varieties, Butte County, 1985

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
33	84-Y-149	M	10160	17.5	5.0	92	96	1
29	M-202	M	10150	17.6	5.0	94	96	5
51	84-Y-257	M	10040	20.2	4.8	100	91	1
30	M-201	M	9940	21.0	4.9	99	90	1
52	84-Y-52	M	9910	19.0	4.8	98	96	1
43	84-Y-265	M	9580	19.1	4.8	97	95	1
40	83-Y-270	M	9350	18.5	5.0	99	93	1
49	84-Y-722	L	9320	15.6	5.0	94	85	1
42	84-Y-298	M	9250	20.3	4.9	99	87	1
36	84-Y-209	S	9200	21.2	4.8	101	93	1
54	84-Y-316	M	9040	19.1	4.9	99	88	1
45	84-Y-348	L	9010	16.7	4.8	97	86	1
48	84-Y-714	L	8970	16.3	4.9	96	86	1
46	84-Y-371	L	8910	14.7	4.6	95	104	1
53	Calif. Belle	L	8780	14.2	5.0	93	107	2
35	84-Y-254	S	8740	20.3	5.0	100	88	1
47	84-Y-437	L	8700	16.0	4.9	97	90	1
44	L-202	L	8650	17.5	4.9	99	81	1
39	83-Y-266	M	8610	21.9	4.9	101	91	1
31	S-201	S	8510	20.8	5.0	103	91	1
34	84-Y-7	M	8400	21.0	4.9	100	91	1
32	M-101	M	8030	15.0	5.0	85	96	85
50	84-Y-723	L	8000	19.0	5.0	100	85	1
37	83-Y-37	M	7480	19.7	4.9	101	94	1
41	84-Y-240	S	7140	20.7	5.0	102	87	1
38	84-Y-229	S	6780	21.1	5.0	102	93	1
GRAND MEAN			8870	18.6	4.9	98	91	4
CV			12.0	7.1	2.0	1.8	4.4	70.0
LSD (.05)			1500	1.9	0.1	2	6	4

Conducted by the Rice Experiment Station, Butte County, near Biggs
Planting date: 2 replications planted May 1; 2 replications planted May 22; data an average of all replications.

[1] S = short; M = medium; L = long.
[2] Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3] Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 7. Performance Summary of the early rice experimental lines and varieties, Butte County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Days to 50% heading	Plant height (cm)	Lodging[2] (1-99)
33	84-Y-149	M	9450	25.6	82	91	1
29	M-202	M	9280	26.7	81	86	1
54	84-Y-316	M	8960	26.8	85	84	1
40	83-Y-270	M	8840	25.5	85	91	2
42	84-Y-298	M	8790	27.5	85	80	1
57	Cal Mochi-101	W	8630	18.9	78	78	8
39	83-Y-266	M	8610	28.7	86	85	1
31	S-201	S	8590	29.1	85	83	1
52	84-Y-52	M	8570	25.9	83	82	1
35	84-Y-254	S	8560	28.2	85	83	1
55	M-9	M	8560	29.0	85	89	18
60	ER 83	M	8500	17.2	76	89	44
37	83-Y-37	M	8490	26.7	87	89	1
59	CBR 31	L	8450	20.0	83	95	1
38	84-Y-229	S	8410	29.8	85	83	1
30	M-201	M	8400	27.2	85	79	1
51	84-Y-257	M	8380	26.6	84	85	1
36	84-Y-209	S	8340	31.0	85	87	1
34	84-Y-7	M	8310	28.5	86	83	1
56	M-302	M	8310	29.7	90	92	1
32	M-101	M	8310	24.7	78	87	22
43	84-Y-265	M	8290	25.2	85	87	1
50	84-Y-723	L	8260	26.1	88	79	1
58	Cal Mochi-202	W	8210	31.7	83	90	1
41	84-Y-240	S	7920	30.3	89	84	1
44	L-202	L	7920	23.0	85	75	1
49	84-Y-722	L	7900	24.5	85	80	1
45	84-Y-348	L	7880	22.3	87	79	1
48	84-Y-714	L	7870	25.5	86	79	1
53	Calif. Belle	L	7840	22.1	79	90	37
47	84-Y-437	L	7720	22.3	87	80	1
46	84-Y-371	L	7660	22.5	86	91	1
GRAND MEAN			8380	25.9	84	85	5
CV			4.3	3.7	2.3	4.4	230.9
LSD (.05)			500	1.4	3	5	16

Cooperator and location: R. & L. Grell, Richvale
Planting date: May 14, 1985
[1]S = short; M = medium; L = long; W = waxy
[2]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 8. Performance summary of the early rice experimental lines and varieties, Glenn County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
57	Cal Mochi-101	W	11320	11.3	3.5	86	95	2
33	84-Y-149	M	10990	19.4	3.5	89	93	1
29	M-202	M	10890	18.6	3.6	91	93	1
51	84-Y-257	M	10800	20.1	3.8	95	87	1
36	84-Y-209	S	10730	19.9	3.8	100	93	1
60	ER 83	M	10720	14.5	3.7	80	94	27
35	84-Y-254	S	10700	18.4	3.7	99	85	1
30	M-201	M	10680	21.4	3.6	95	88	1
52	84-Y-52	M	10610	20.2	3.6	95	85	1
40	83-Y-270	M	10450	18.6	3.7	99	91	2
31	S-201	S	10450	19.2	3.8	101	92	1
39	83-Y-266	M	10420	20.0	3.8	100	92	4
42	84-Y-298	M	10390	21.1	3.9	96	88	2
55	M-9	M	10210	20.9	3.7	93	95	48
50	84-Y-723	L	10200	16.5	3.6	96	89	1
37	83-Y-37	M	10100	18.9	3.8	99	90	1
43	84-Y-265	M	10030	19.3	3.7	95	95	9
54	84-Y-316	M	9970	20.3	3.7	100	89	1
49	84-Y-722	L	9820	15.4	3.6	93	81	2
41	84-Y-240	S	9690	19.0	3.7	100	85	1
32	M-101	M	9690	16.3	3.6	82	91	6
44	L-202	L	9580	16.9	3.7	96	78	1
59	CBR 31	L	9490	13.8	3.8	90	102	3
48	84-Y-714	L	9480	16.4	3.5	94	82	1
46	84-Y-371	L	9420	15.0	3.6	93	107	1
34	84-Y-7	M	9420	20.5	3.8	100	91	2
45	84-Y-348	L	9330	14.6	3.8	93	85	1
58	Cal Mochi-202	W	9270	20.4	3.8	100	97	1
38	84-Y-229	S	9150	19.7	3.7	101	95	1
56	M-302	M	9150	21.5	3.8	102	91	1
47	84-Y-437	L	8980	14.6	3.7	94	86	1
53	Calif. Belle	L	8420	14.1	3.7	90	103	9
GRAND MEAN			10020	18.0	3.7	95	91	4
CV			5.0	5.0	6.4	1.2	4.2	197.3
LSD (.05)			700	1.3	NS	2	5	12

Cooperator and location : Wylie Farming, Norman
Planting date: May 8, 1985
[1]S = short; M = medium; L = long; W = waxy
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 9. Performance summary of the early rice experimental lines and varieties, Yolo County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
47	84-Y-437	L	11090	14.0	4.0	96	89	23
45	84-Y-348	L	11080	13.8	3.9	99	87	38
35	84-Y-254	S	10670	11.3	3.7	99	90	75
36	84-Y-209	S	10570	11.4	3.7	103	92	75
54	84-Y-316	M	10450	15.3	3.8	100	91	80
46	84-Y-371	L	10260	14.1	3.7	99	106	39
42	84-Y-298	M	10130	16.6	3.8	97	89	24
44	L-202	L	10080	14.6	3.9	102	79	9
51	84-Y-257	M	10080	15.6	3.7	101	92	85
29	M-202	M	10070	15.9	3.9	97	96	95
30	M-201	M	10060	15.5	3.5	98	89	44
41	84-Y-240	S	9830	9.8	3.9	102	91	76
50	84-Y-723	L	9770	14.2	3.8	101	90	35
33	84-Y-149	M	9680	16.2	4.1	91	98	85
31	S-201	S	9540	11.3	3.7	104	94	78
37	83-Y-37	M	9470	15.8	3.6	100	91	79
40	83-Y-270	M	9440	14.2	3.7	100	97	96
52	84-Y-52	M	9340	14.9	3.5	98	89	84
34	84-Y-7	M	9300	14.9	3.7	100	95	68
38	84-Y-229	S	9170	12.6	3.7	101	99	58
49	84-Y-722	L	9040	13.3	3.9	98	85	93
32	M-101	M	8820	15.1	3.6	84	98	96
56	M-302	M	8760	13.9	3.6	106	96	76
43	84-Y-265	M	8730	14.3	3.6	97	96	89
48	84-Y-714	L	8720	13.2	3.8	101	84	84
57	Cal Mochi-101	W	8690	9.0	3.7	87	94	99
60	ER 83	M	8660	13.9	3.8	82	98	99
58	Cal Mochi-202	L	8600	11.8	3.8	103	101	43
59	CBR 31	L	8550	15.7	3.7	92	105	51
55	M-9	M	8480	15.6	3.7	98	99	99
39	83-Y-266	M	8370	13.9	3.8	102	91	92
53	Calif. Belle	L	8240	15.6	3.7	92	106	53
GRAND MEAN			9490	14.0	3.7	98	94	69
CV			7.7	6.8	7.0	1.8	3.5	20.8
LSD (.05)			1030	1.3	NS	3	5	20

Cooperator and location: Bill and Don Geer, District 108
Planting date: May 7, 1985
[1]S = short; M = medium; L = long; W = waxy
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 10. Performance summary of the early rice experimental lines and varieties, Yuba County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
39	83-Y-266	M	9360	21.7	5	97	84	1
29	M-202	M	9240	19.3	5	92	86	4
33	84-Y-149	M	9110	19.5	5	89	89	1
42	84-Y-298	M	9040	21.2	5	95	77	1
52	84-Y-52	M	8950	20.3	4	95	83	1
57	Cal Mochi-101	W	8910	12.8	5	84	86	43
55	M-9	M	8880	21.1	5	95	86	3
51	84-Y-257	M	8760	21.4	5	96	84	1
40	83-Y-270	M	8740	19.1	4	98	82	1
30	M-201	M	8730	21.6	5	94	75	1
43	84-Y-265	M	8710	21.8	5	97	82	1
35	84-Y-254	S	8680	20.9	5	99	79	1
31	S-201	S	8640	23.1	5	99	82	1
54	84-Y-316	M	8520	20.0	5	97	79	1
60	ER 83	M	8500	13.3	5	80	86	80
32	M-101	M	8270	17.6	5	86	90	40
34	84-Y-7	M	8250	22.4	5	99	83	1
38	84-Y-229	S	8230	22.2	5	99	82	1
45	84-Y-348	L	8200	14.9	4	89	82	1
59	CBR 31	L	8110	16.6	5	89	97	1
47	84-Y-437	L	7970	14.9	5	93	82	1
36	84-Y-209	S	7870	24.3	5	101	82	1
49	84-Y-722	L	7850	16.4	5	92	78	1
37	83-Y-37	M	7810	20.5	4	99	85	1
53	Calif. Belle	L	7580	15.1	5	86	95	1
48	84-Y-714	L	7560	17.9	4	96	72	1
41	84-Y-240	S	7530	20.8	5	100	77	1
58	Cal Mochi-202	W	7530	20.5	5	99	86	1
50	84-Y-723	L	7520	19.1	5	98	76	1
46	84-Y-371	L	7290	16.3	5	92	88	1
56	M-302	M	7270	24.4	5	101	81	1
44	L-202	L	6900	17.2	5	95	70	1
GRAND MEAN			8270	19.3	5	94	83	6
CV			3.7	4.9	8.2	1.5	4.0	161.6
LSD (.05)			430	1.3	NS	2	5	14

Cooperator and location: Bob Mohammed, District 10
Planting date: May 2, 1985
[1]S = short; M = medium; L = long; W = waxy
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 11. Performance summary of the early rice experimental lines and varieties, means of five locations (Butte, Butte (RES), Glenn, Yolo and Yuba Counties).

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
29	M-202	M	9930	19.6	4.4	91	92	21
33	84-Y-149	M	9880	19.7	4.5	89	94	18
51	84-Y-257	M	9610	20.8	4.4	95	88	18
30	M-201	M	9560	21.3	4.3	94	84	10
42	84-Y-298	M	9520	21.3	4.5	94	84	6
52	84-Y-52	M	9480	20.1	4.2	94	87	18
35	84-Y-254	S	9470	19.8	4.5	96	85	16
54	84-Y-316	M	9390	20.3	4.4	96	86	17
40	83-Y-270	M	9360	19.2	4.3	96	91	20
36	84-Y-209	S	9340	21.5	4.4	98	89	16
31	S-201	S	9140	20.7	4.5	98	88	16
45	84-Y-348	L	9100	16.4	4.4	93	84	8
39	83-Y-266	M	9080	21.2	4.4	97	88	20
43	84-Y-265	M	9070	19.9	4.4	94	91	20
47	84-Y-437	L	8890	16.4	4.5	93	85	5
49	84-Y-722	L	8790	17.0	4.4	92	82	19
50	84-Y-723	L	8750	19.0	4.4	96	84	8
34	84-Y-7	M	8730	21.4	4.5	97	88	14
46	84-Y-371	L	8710	16.5	4.3	93	99	9
37	83-Y-37	M	8670	20.3	4.3	97	90	17
44	L-202	L	8620	17.8	4.4	95	77	3
32	M-101	M	8620	17.7	4.4	83	92	50
48	84-Y-714	L	8520	17.8	4.3	94	81	18
41	84-Y-240	S	8420	20.1	4.4	99	85	16
38	84-Y-229	S	8350	21.1	4.5	97	90	12
53	Calif. Belle	L	8170	16.2	4.4	88	100	20
GRAND MEAN			9050	19.4	4.4	94	88	16
CV			7.1	5.1	5.4	1.7	4.0	55.6
LSD (.05)			400	0.6	0.1	1	2	5

[1]S = short; M = medium; L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = 1% lodging and 99 = 99% lodged.

Table 12. Performance summary of the early commercial varieties, means of four locations (Butte, Glenn, Yolo and Yuba Counties).

1985 entry no.	Cultivar description	Grain[1] type	Grain yield @ 14% moisture (lbs/a)	Grain moisture at harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
29	M-202	M	9870	20.1	4.2	90	90	25
33	84-Y-149[4]	M	9810	20.2	4.2	88	93	22
30	M-201	M	9470	21.4	4.0	93	83	12
57	Calmochi-101	W	9390	13.0	4.1	84	88	38
31	S-201	S	9310	20.7	4.2	97	88	20
60	ER83	M	9100	14.7	4.2	79	92	63
55	M-9	M	9030	21.7	4.1	93	92	42
32	M-101	M	8770	18.4	4.1	83	91	41
59	CBR 31	L	8650	16.5	4.2	89	100	14
44	L-202	L	8620	17.9	4.2	95	75	3
58	Calmochi-202	W	8400	21.1	4.2	96	93	11
56	M-302	M	8370	22.4	4.1	100	90	20
53	Calif. Belle	L	8020	16.7	4.1	87	99	25
CV			5.3	12.1	0.2	2.5	2.9	64
LSD (.05)			680	3.3	NS	3	4	24

[1] S = short; M = medium; L = long; W = waxy
[2] Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence
[3] Subjective rating of 1-99 where 1 = none and 99 = 99% lodged
[4] Release pending

Table 13. Grain yield summary of the early experimental lines and varieties by location and year

County location	Year	Varieties					
		M-9	S-201	Calmochi 202	M-201	L-202	M-202
Butte	1981	7510	9410	8490	10540	-	-
	1982	8560	9910	9720	9640	-	-
	1983	10210	11100	10250	10010	9700	10200
	1984	7330	9150	9170	10470	10020	8800
	1985	8560	8590	8210	8400	7920	9280
Location mean		8430	9630	9170	9810	9210	9430
Yuba	1981	8960	9740	9140	10050	-	-
	1982	9480	8940	8080	9310	-	-
	1983	9220	8740	7940	8710	8020	9440
	1984	7550	7870	6970	8900	9720	9190
	1985	8880	8640	7530	8730	6900	9240
Location mean		8820	8790	7930	9140	8210	9290
Yolo	1981	8670	9470	7720	9570	-	-
	1982	9210	9100	9170	10360	-	-
	1983	10170	9590	8470	11190	11530	11220
	1984	8050	8610	8630	9090	8470	8630
	1985	8480	9540	8600	10060	10080	10070
Location mean		8920	9260	8520	10050	10030	9970
Colusa-Glenn	1981	8510	9710	8020	9090	-	-
	1982	8240	8990	7750	9100	-	-
	1983	9170	9600	8850	8790	8120	9530
	1984	7540	7650	8360	9950	8770	9110
	1985	10210	10450	9270	10680	9580	10890
Location mean		8730	9280	8450	9520	8820	9840
Location-years mean		8730	9240	8520	9630	9070	9630
Yield as % of M-9[1]		100	106	98	110	103	110
Number of tests		-	20	20	20	12	12

[1] Based on equivalent location-year means and may not reflect mean of all locations and years for M-9

Table 14. Performance summary of the late rice experimental lines and varieties, Butte County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
75	83-Y-565	M	11560	20.4	4.9	108	102	1
67	84-Y-492	S	11550	20.2	5.0	110	101	1
68	84-Y-480	S	11290	20.8	5.0	109	97	1
65	84-Y-494	S	11160	20.9	4.9	112	90	1
76	83-Y-568	M	11160	21.4	4.9	109	100	2
66	80-Y-393	M	11120	24.0	5.0	113	98	1
71	84-Y-532	M	11110	18.6	5.0	106	98	1
69	82-Y-550	M	11010	20.8	5.0	115	99	1
81	84-Y-544	M	11000	19.6	4.9	107	96	2
73	82-Y-495	M	10900	21.0	5.0	110	99	1
78	83-Y-487	S	10860	24.2	5.0	114	95	1
70	84-Y-481	S	10740	20.9	5.0	111	97	1
64	83-Y-502	S	10740	21.6	5.0	114	88	1
79	82-Y-79	M	10720	24.0	5.0	116	99	1
63	M-401	M	10720	24.0	5.0	114	100	5
80	83-Y-552	M	10720	21.1	5.0	111	98	1
62	M-302	M	10640	20.0	5.0	109	99	1
72	84-Y-531	M	10630	18.1	5.0	107	93	1
77	83-Y-477	S	10540	22.1	5.0	116	97	1
82	84-Y-558	M	10190	19.7	5.0	107	100	1
85	84-Y-607	L	10130	15.7	4.9	104	99	1
74	84-Y-578	M	9820	23.5	5.0	118	100	1
61	M-7	M	9540	23.9	5.0	120	94	1
84	83-Y-414	L	8940	15.7	4.2	106	88	1
83	84-Y-569	M	8230	19.9	5.0	117	91	1
GRAND MEAN			10600	20.9	5.0	111	97	1
CV			4.6	3.9	0.9	1.1	2.8	124.7
LSD (.05)			690	1.2	0.1	2	4	NS

Conducted by the Rice Experiment Station, Butte County, near Biggs
Planting date: April 29, 1985
[1]S = short; M = medium; L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 15. Performance summary of the late rice experimental lines and varieties, Colusa County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
76	83-Y-568	M	8860	16.5	3.5	104	92	1
63	M-401	M	8620	15.6	3.8	113	94	1
69	82-Y-550	M	8490	17.2	3.7	108	95	1
66	80-Y-393	M	8480	16.8	3.9	110	94	1
64	83-Y-502	S	8380	12.4	3.5	108	91	2
78	83-Y-487	S	8320	15.0	3.8	106	93	1
74	84-Y-578	M	8310	18.1	3.7	108	99	1
79	82-Y-79	M	8210	17.6	3.7	109	98	1
83	84-Y-569	M	7950	17.5	4.0	115	86	1
70	84-Y-481	S	7830	14.8	3.7	104	97	1
77	83-Y-477	S	7780	15.9	3.7	107	93	1
80	83-Y-552	M	7780	16.2	3.5	108	90	1
68	84-Y-480	S	7620	14.5	3.7	102	94	1
61	M-7	M	7370	18.6	3.5	115	92	1
73	82-Y-495	M	7350	16.4	3.8	102	99	1
67	84-Y-492	S	7170	13.8	3.7	102	94	1
62	M-302	M	7150	16.7	3.3	103	97	1
82	84-Y-558	M	6990	17.1	3.3	101	94	1
85	84-Y-607	L	6900	15.9	3.5	99	90	1
75	83-Y-565	M	6760	16.6	3.6	100	96	1
81	84-Y-544	M	6650	16.4	3.6	100	91	1
72	84-Y-531	M	6280	16.2	3.7	100	89	1
65	84-Y-494	S	6270	14.3	3.6	98	90	1
71	84-Y-532	M	6200	16.4	3.6	95	93	1
84	83-Y-414	L	4170	15.8	1.3	105	80	1
GRAND MEAN			7440	16.1	3.5	105	93	1
CV			9.2	4.2	6.5	1.2	4.1	11.3
LSD (.05)			960	1.0	0.3	2	5	0

Cooperator and location: Terhel Farms, Inc., Colusa
Planting date: May 1, 1985
[1]S = short; M = medium; L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 16. Performance summary of the late rice experimental lines and varieties, Sutter County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
79	82-Y-79	M	11510	20.8	4.2	104	91	2
64	83-Y-502	S	11210	17.5	4.0	102	83	12
67	84-Y-492	S	11140	19.0	4.3	98	92	9
81	84-Y-544	M	11020	20.0	4.3	95	93	2
66	80-Y-395	M	11010	18.7	4.5	102	97	75
72	84-Y-531	M	11010	20.2	3.8	94	87	4
62	M-302	M	10980	19.7	4.3	98	95	30
80	83-Y-552	M	10780	18.9	4.3	100	92	91
77	83-Y-477	S	10750	19.4	4.2	100	90	27
74	84-Y-578	M	10730	21.7	4.5	100	94	37
68	84-Y-480	S	10620	19.6	4.5	95	89	16
73	82-Y-495	M	10530	21.2	4.7	96	91	2
75	83-Y-565	M	10480	20.3	4.0	94	90	4
85	84-Y-607	L	10430	19.7	4.5	95	95	1
76	83-Y-568	M	10420	19.4	4.5	99	85	31
82	84-Y-558	M	10300	20.8	4.0	94	92	3
65	84-Y-494	S	10200	19.3	4.5	92	87	4
70	84-Y-481	S	10190	20.7	4.3	100	91	34
83	84-Y-569	M	10190	22.0	4.7	106	88	1
78	83-Y-487	S	9990	20.2	4.3	99	91	34
69	82-Y-550	M	9940	20.4	4.5	104	89	73
61	M-7	M	9940	22.8	4.3	106	90	1
63	M-401	M	9650	18.1	4.8	105	92	78
71	84-Y-532	M	9220	19.5	4.5	88	89	68
84	83-Y-414	L	8940	20.5	2.3	99	85	1
GRAND MEAN			10450	20.0	4.3	99	90	26
CV			6.1	5.5	9.6	1.4	3.3	85.0
LSD (.05)			1040	1.8	0.7	2	5	36

Cooperator and location: Tennis Brothers, Sutter Basin
Planting date: May 9, 1985
[1]S = short; M = medium; L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 17. Performance summary of the late rice experimental lines and varieties, means of three locations (Butte, Colusa and Sutter Counties).

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
66	80-Y-393	M	10200	19.8	4.5	108	96	26
79	82-Y-79	M	10150	20.8	4.3	110	96	1
76	83-Y-568	M	10150	19.1	4.3	104	92	11
64	83-Y-502	S	10110	17.2	4.2	108	87	5
67	84-Y-492	S	9950	17.7	4.3	103	96	4
68	84-Y-460	S	9840	18.3	4.4	102	93	6
69	82-Y-550	M	9810	19.5	4.4	109	94	25
80	83-Y-552	M	9760	18.7	4.3	106	93	31
78	83-Y-487	S	9720	19.8	4.4	107	93	12
77	83-Y-477	S	9690	19.2	4.3	107	93	10
63	M-401	M	9660	19.3	4.6	111	95	28
74	84-Y-578	M	9620	21.1	4.4	109	98	13
75	83-Y-565	M	9600	19.1	4.2	101	96	2
73	82-Y-495	M	9590	19.5	4.5	102	96	1
62	M-302	M	9590	16.8	4.2	103	97	11
70	84-Y-461	S	9590	18.8	4.3	105	95	12
81	84-Y-544	M	9560	18.7	4.3	101	93	2
72	84-Y-531	M	9310	18.2	4.2	100	90	2
65	84-Y-494	S	9210	18.1	4.3	100	89	2
82	84-Y-558	M	9160	19.2	4.1	101	95	2
85	84-Y-607	L	9150	17.1	4.3	99	95	1
61	M-7	L	8950	21.8	4.3	114	92	1
71	84-Y-532	M	8840	18.2	4.3	96	93	23
83	84-Y-569	M	8790	19.8	4.5	113	89	1
84	83-Y-414	L (aromatic)	7350	17.3	2.6	104	84	1
GRAND MEAN			9490	19.0	4.3	105	93	9
CV			6.0	4.2	5.6	1.2	3.3	111.0
LSD (.05)			460	0.6	0.2	1	2	8

[1]S = short; M = medium; L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = 1% lodging and 99 = 99% lodged.

Table 18. Grain yield summary of the late experimental lines and varieties by location and year.

County, location	Year	Varieties			
		M-7	M-302	M-401	83-Y-414
Butte	1981	10130	9680	10030	-
	1982	10630	10550	9170	-
	1983	9520	9690	11230	-
	1984	8320	8810	6360	9800
	1985	9540	10640	10720	8940
Location mean		9630	9870	9500	9370
Glenn-Colusa	1981	9530	8920	9910	-
	1982	8950	8160	6740	-
	1983	6900	7940	8090	-
	1984	8010	7940	9380	5060
	1985	7370	7150	8620	4170
Location mean		8150	8020	8550	4610
Sutter	1981	10030	10550	11620	-
	1982	8820	9720	9500	-
	1983	9570	9360	9660	-
	1984	8110	8640	8070	9760
	1985	9940	10980	9650	8940
Location mean		9290	9850	9700	9350
Location-years mean		9020	9250	9250	7780
Yield as % of M-7[1]		-	102	102	91
Number of tests		15	15	15	6

[1]Based on equivalent location-year means and may not reflect mean of all locations and years for M-7.

Table 19. Performance summary of the long grain rice experimental lines and varieties, Butte County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
725	8452881	L	10270	16.8	4.9	88	90	1
724	8452870	L	10220	17.0	4.6	90	88	1
723	8452869	L	9940	18.3	4.7	91	83	1
715	84H1990	L	9850	18.6	4.9	92	91	1
717	8449680	L	9760	15.4	4.8	90	81	1
702	84-Y-345	L	9670	19.0	4.8	91	86	1
712	84H1815	L	9570	21.6	5.0	92	85	1
721	8449726	L	9560	16.7	4.8	91	81	1
718	8449681	L	9550	15.2	4.9	87	83	1
713	84H1924	L	9510	19.4	4.9	96	85	1
709	84-Y-456	L	9420	20.8	4.5	99	85	1
714	84H1986	L	9350	18.9	4.8	92	87	1
719	8449683	L	9330	14.9	4.8	86	84	1
706	84-Y-388	L	9190	15.3	4.5	89	89	1
722	84497	L	9120	16.5	4.8	85	90	1
711	84H1378	L	9100	17.0	4.9	91	90	1
710	84H1376	L	9010	16.5	5.0	88	89	1
703	84-Y-407	L	8900	15.9	4.9	94	91	1
705	84-Y-385	L	8830	17.5	4.8	90	96	1
720	8449707	L	8700	15.4	4.7	90	84	1
708	84-Y-445	L	8690	20.7	4.5	100	91	1
707	84-Y-357	L	8670	16.6	4.7	91	90	1
701	L-202	L	8630	20.5	4.9	98	83	1
704	84-Y-405	L	7870	17.0	5.0	95	85	1
716	8449565	L	7760	15.3	4.8	87	89	38
GRAND MEAN			9220	17.5	4.8	91	87	2
CV			5.5	7.4	3.3	2.1	2.9	223.9
LSD (.05)			720	1.8	0.2	3	4	8

Conducted by the Rice Experiment Station, Butte County, near Biggs
Planting date: 2 replications planted May 2, 2 replications planted May 21, data an average of all replications

[1] L = long.
[2] Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3] Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 20. Performance summary of the long grain rice experimental lines and varieties, Yolo County, 1985.

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
706	84-Y-388	L	11190	13.1	3.2	87	92	9
702	84-Y-345	L	11040	11.6	3.7	90	87	16
705	84-Y-385	L	10820	13.6	3.6	84	102	78
713	84H1924	L	10650	13.4	3.5	98	89	10
721	8449726	L	10570	12.1	3.4	91	82	30
701	L-202	L	10500	14.3	3.4	101	83	5
718	8449681	L	10490	11.9	3.3	86	85	34
707	84-Y-357	L	10490	12.3	3.2	88	94	2
719	8449683	L	10480	12.3	2.9	85	87	19
717	8449680	L	10360	12.3	3.0	89	82	40
714	84H1986	L	10240	13.1	3.5	94	88	5
725	8452881	L	10170	12.4	3.3	85	88	44
710	84H1376	L	10030	12.3	3.5	86	92	46
715	84H1990	L	9930	12.8	3.5	93	92	40
724	8452870	L	9920	12.3	3.5	86	88	88
711	84H1378	L	9510	12.6	3.5	92	98	59
720	8449707	L	9370	11.9	3.4	89	89	68
712	84H1815	L	9320	13.3	3.3	95	85	58
722	84497	L	9290	11.4	3.3	86	95	88
704	84-Y-405	L	9240	9.9	3.3	101	86	2
723	8452869	L	9090	12.1	3.3	86	86	83
703	84-Y-407	L	8760	15.5	3.7	98	89	1
709	84-Y-456	L	7860	17.7	3.3	95	83	1
716	8449565	L	7580	15.3	3.7	83	88	82
708	84-Y-445	L	7250	16.8	3.3	88	90	1
GRAND MEAN			9770	13.0	3.4	90	89	36
CV			6.2	5.0	4.7	5.6	3.2	32.2
LSD (.05)			860	0.9	0.2	7	4	16

Cooperator and location: Bill and Don Geer, District 108
Planting date: May 7, 1985
[1]L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = none and 99 = 99% lodged.

Table 21. Performance summary of the long grain rice experimental lines and varieties, means of two locations (Butte and Yolo Counties).

1985 Entry no.	Cultivar description	Grain[1] type	Grain yield @14% moisture (lbs/acre)	Grain moisture @ harvest (%)	Seedling[2] vigor (1-5)	Days to 50% heading	Plant height (cm)	Lodging[3] (1-99)
702	84-Y-345	L	10350	15.3	4.3	90	86	9
725	8452881	L	10220	14.6	4.1	86	89	22
706	84-Y-388	L	10190	14.2	3.8	88	90	5
713	84H1924	L	10080	16.4	4.2	97	87	6
724	8452870	L	10070	14.7	4.0	88	88	44
721	8449726	L	10070	14.4	4.1	91	81	16
717	8449680	L	10060	13.9	3.8	89	82	21
718	8449681	L	10020	13.6	4.1	86	84	17
719	8449683	L	9900	13.6	3.9	86	85	10
715	84H1990	L	9890	15.7	4.2	93	91	21
705	84-Y-385	L	9820	15.5	4.2	87	99	39
714	84H1986	L	9790	16.0	4.2	93	88	3
707	84-Y-357	L	9580	14.4	4.0	89	92	2
701	L-202	L	9570	17.4	4.2	99	83	3
710	84H1376	L	9520	14.4	4.2	87	91	24
723	8452869	L	9510	15.2	4.0	89	85	42
712	84H1815	L	9450	17.5	4.2	93	85	29
711	84H1378	L	9310	14.8	4.3	91	94	30
722	84497	L	9210	13.9	4.1	86	92	44
720	8449707	L	9030	13.6	4.1	90	86	34
703	84-Y-407	L	8830	15.7	4.3	96	90	1
709	84-Y-456	L	8640	19.3	3.9	97	84	1
704	84-Y-405	L	8560	13.5	4.2	98	85	2
708	84-Y-445	L	7970	18.7	3.9	94	91	1
716	844956S	L	7670	15.3	4.3	85	89	60
GRAND MEAN			9490	15.3	4.1	91	88	19
CV			5.9	6.7	3.9	4.2	3.1	47.2
LSD (.05)			560	1.0	0.2	4	3	9

[1]S = short; M = medium; L = long.
[2]Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
[3]Subjective rating of 1-99 where 1 = 1% lodging and 99 = 99% lodged.