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COMPREHENSIVE RESEARCH ON RICE
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PROJECT TITLE: Cooperative Extension Rice Variety Adaptation and Cultural Practice Research

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OBJECTIVES AND EXPERIMENTS CONDUCTED BY LOCATION TO ACCOMPLISH OBJECTIVES:

Objective I

To evaluate newly developed cultivars and existing varieties in on-farm trials under grower conditions in cooperation with the Rice Experiment Station for the purpose of new variety development and release. Cultivar trials were conducted by maturity group at different locations in the Sacramento Valley. Several experimental cultivars were evaluated at each location within these groups to compare their performance in different environments of the rice-growing region. All sites were water seeded.

Very Early Maturity Group: Two uniform trials for each of the advanced and experimental lines were conducted at each of the following on-farm sites: the Lauppe Ranch (south Sutter County), the Erdman Ranch (District 108, Yolo County), and at the Rehman Ranch (south Yolo County). In addition to the three on-farm sites, two additional tests were conducted at the Rice Experiment Station (RES) in Butte County. The Advanced test at each site included 12 entries (8 commercial varieties and four advanced breeding lines) in four replications. The Preliminary tests included 44 entries (eight commercial varieties as checks and 36 preliminary breeding lines) in two replications.

Early Maturity Group: Two uniform tests were conducted at each of the following on-farm sites: the Larrabee Ranch (Glenn County), the Dennis Ranch (Colusa County), and the Bosworth Ranch (District 10, Yuba County). Two additional trials, Advanced and Preliminary, were conducted at the RES. The Advanced test at each site included 12 entries (eight commercial varieties and 4 advanced breeding lines) in four replications. The Preliminary tests included 48 entries (eight commercial varieties and 40 preliminary breeding lines) in two replications.

Intermediate and Late Maturity Group: Two uniform tests were conducted at each of the following on-farm sites: the Wiley Ranch (Glenn County) and the Schohr Ranch (Butte County). Two additional tests were conducted at the RES. The Advanced test at each site included 12 entries (eight commercial varieties and four advanced breeding lines) in four replications. The Preliminary tests included 24 entries (six commercial varieties and 18 preliminary breeding lines) in two replications.

Objective II

Extension-Based Equipment and Service: A centrally-based equipment pool is maintained by Project RM-2 to provide services for planting, fertilizing, treatment application, and harvesting of rice and to provide professional technical assistance to UC research project leaders engaged in rice.

To provide professional technical assistance to other UC research project leaders, we assisted in approximately 30 trials including the 16 variety tests. Equipment from the UCCE-based pool for planting and harvesting field experiments was used at 12 sites at different times during the season. The most heavily used equipment was the ALMACO combine. Both of the rice combines were maintained according to the established maintenance schedules.

The ALMACO rice combine was used to harvest all 16 statewide trials, and RES trials were harvested with their ALMACO combine. The SWECO harvester was used to harvest a small trial of test plots at the RES.

Objective III

Extension Education: We disseminated research-based information to California rice producers, dryer operators, millers and the general public through four winter grower meetings, field demonstrations, personal communication, and other printed material. We hosted the annual Rice Breeder's Field Tour. The UCCE rice website is online and new materials are being added as they become available.

SUMMARY OF 2018 RESEARCH BY OBJECTIVE

Objective I - Rice Variety Evaluation

Eight uniform advanced breeding line trials and eight preliminary breeding line trials were conducted throughout the major rice producing areas of California. The rice breeders at the RES conducted six additional tests, two from each of the three maturity groups. Many of the experimental lines have been tested and screened in previous years and many lines were in advanced stages (2 or more years) of testing. The RES provided the seed for public varieties and experimental cultivars. No proprietary lines were tested.

The following analyses provide single-location yield summaries for the advanced and preliminary line tests and over-location agronomic performance summaries for each entry in each maturity category. For quick reference, grain yields of selected commercially available varieties tested in very early, early and intermediate-late tests across years and locations are summarized in Tables 6, 12 and 17. An Agronomy Progress Report, to be published early next year, will provide agronomic performance results for all entries in each experiment.

Very Early Maturity Tests (< 90 days to 50% heading at Biggs): Eight commercial varieties and four advanced breeding lines were compared in four very early advanced tests. The preliminary tests evaluated eight commercial varieties and 36 preliminary lines in separate tests at each location. Commercial varieties at each location included S102, CA201, CH201, CH202, CM101, CM203, M104, M105, M205, M206, M209, M210, A202, CJ201, L206, and L207.

Grain yields in the advanced tests averaged 9,390 overall, 9,530 lbs/ac at Biggs-RES, 9,810 lbs/ac at Sutter, 10,450 lbs/ac at Yolo and 7,810 lbs/ac at South Yolo (Tables 1-5). The three highest yielding entries, on average, were short grain line 10Y2043, long grain line 14Y1006, and long grain L207 (10,260, 10,260, and 9,940 lbs/ac respectively). The top yielding commercial varieties L207, CJ201, M201 and M105 ranked third, fifth, sixth, and seventh respectively. Averaged across four locations, cultivar yields in the preliminary tests ranged from 9,700 to 5,780 lbs/ac (Table 1). The average grain

moisture at harvest was 18.2%, average lodging 8%, average days to 50% heading 84, average seedling vigor 4.7, and average plant height 94 cm. Field preparation and planting were average with all trials completed in late May. Harvest was completed within the normal time frame. Yields were up 4.6% from 2017.

Comparing the commercial standard entries over a 5-year period and across locations, M104, M105, and S102 were the three highest yielding varieties (Table 6).

Early Maturity Tests (90-97 days to 50% heading at Biggs): Eight commercial varieties and 4 advanced lines were compared in four early advanced tests. The preliminary tests included eight commercial varieties and 40 preliminary lines evaluated in separate tests at each location. Commercial varieties at each location were S102, CA201, CH201, CH202, CM101, CM203, M104, M105, M205, M206, M209, M210, A202, CJ201, L206, and L207.

Yields in the advanced line tests averaged 9,180 lbs/ac overall, 9,850 lbs/ac at the RES, 8,630 lbs/ac at Butte, 9,040 lbs/ac at Colusa, and 9,190 lbs/ac at Yuba (Tables 7-11). Advanced long grain 14Y1006 was the highest yielding entry (9,930 lbs/ac) when averaged over four locations in 2018 (Table 7). Advanced short grain line 10Y2043, long grain L207, and medium grain premium quality 12Y2175 yielded second, third, and fourth respectively. The yield of commercial varieties CJ201, M209, M206, M210, and M105 ranked fifth, sixth, seventh, eighth, and ninth over all of the locations (Table 7). Average days to 50% heading was 82. The commercial standard M206 averaged 81 days over four locations. In the preliminary tests CM203 was the highest yielding commercial variety with twelve experimental lines yielding higher.

L207 was the highest yielding commercial variety (10,080 lbs/ac) followed by M209 (9,422 lbs/ac) and M206 (9,356 lbs/ac) when averaged over the last 5 years and across locations (Table 12).

Intermediate-Late Maturity Tests (> 97 days to 50% heading at Biggs) - Eight commercial varieties and four advanced lines were compared in three intermediate-late tests. The preliminary tests included six commercial varieties and 18 preliminary lines that were evaluated in separate tests at each location. Commercial varieties at each location included S102, CA201, CH201, CH202, CM203, M105, M205, M206, M209, M210, A202, CJ201, L206, and L207.

Yields in the advanced line tests averaged 9,900 lbs/ac overall, 9,970 lbs/ac at the RES, 10,030 lbs/ac at Butte, and 9,740 lbs/ac at Glenn (Tables 13-15). The 2018 advanced over location average yield increased 920 lbs/ac (9.3%) compared to the 2017 average. In the advanced tests, L207 was the highest yielding commercial variety (10,440 lbs/ac), ranking second overall. CJ201 and M209 were the next highest yielding commercial varieties across locations, ranking fifth and sixth respectively (Table 13). The medium grain entry 12Y2175 was the highest yielding advanced entry across all locations at 10,960 lbs/ac. Average days to 50% heading was 82. Advance line 12Y2175 was the latest variety at 86 days to reach 50% heading at all locations.

Averaged over the last 5 years and across locations, L206 is the highest yielding (9,469 lbs/ac) commercial variety closely followed by M209 at 9,420 lbs/ac (Table 17).

Objective II - Assistance to Other Projects

Both the UC SWECO and ALMACO plot combines were serviced and maintained during the harvest season. The ALMACO was used to harvest all rice trials, with the SWECO being used to harvest a small trial of test plots.

The rice equipment pool including a precision Clampco fertilizer applicator, SWECO 324 plot combine, ALMACO SP40 plot combine, moisture meters, remote temperature stations, and other equipment were available for use along with personnel to provided technical assistance for numerous field experiments in

2018. Equipment from the UCCE-based pool for planting and harvesting field experiments was used at 12 sites at different times during the season. The ALMACO was used to harvest 16 variety tests, five kernel smut, and 12 various trials at the RES. Over 1,700 experimental plots were harvested in 2018. In addition to equipment assistance to other projects, labor from this project was used to plant, collect samples, and monitor growth in several field experiments. Assistance was also provided to four winter rice growers meetings, the RES Rice Field Day, the annual Rice Breeder's field tour, and to the several UC campus based Rice Research Board meetings held each year.

The following extension education materials were designed, formatted and printed with support from this project:

1. The Annual Agronomy Progress Report No. 325 "California Rice Varieties: Description and Performance Summary of the 2017 Multiyear Statewide Rice Variety Tests in California".
2. The UCCE website is online and is continually being updated.

Recent relevant Publications and Reports:

1. Espe, M. H. Yang, K.G. Cassman, N. Guilpart, H. Sharifi, and B.A. Linquist (2016) Estimating yield potential in temperate high-yielding, direct-seeded rice US rice production systems. Field Crops Research 193:123-132.
2. Espe, M, K.G. Cassman, H.Yang, N. Guilpart, P. Grassini, J. Van Wart, M. Anders, D. Beighley, D. Harrell; S. Linscombe, K. McKenzie, R. Mutters, L.T. Wilson, B.A. Linquist. (2016) Yield gap analysis of US rice production systems shows opportunities for improvement. Field Crops Research 196:276-283.
3. Sharifi, H., R.J. Hijmans, J.E. Hill, B. Linquist. (2017) Using stage-dependent temperature parameters to improve phenological model prediction accuracy in rice (Oryza sativa) models. Crop Science 57:444-453.
4. Espe, M.B., J.E. Hill, K. McKenzie, R.J. Hijmans, L.A. Espino, R. Mutters, M. Lienfelder-Miles; C. van Kessel, B.A. Linquist. (2017) Point stresses during reproductive stage rather than warming seasonal temperature determines yield in temperate rice. Global Change Biology 23:4386-4395 DOI: 10.1111/gcb.13719.

CONCISE GENERAL SUMMARY OF CURRENT YEAR'S RESULTS:

Sixteen on-farm rice variety evaluation trials were conducted throughout the rice growing region of California, with standard varieties compared to preliminary and advanced lines across a range of environments, cultural practices and disease levels. Six similar tests were conducted at the RES in Biggs, CA. Average yields across varieties and locations in the advanced line tests ranged from 9,390 lbs/acre in the very early tests to 9,180 lbs/acre in the early tests. In the intermediate/late tests the advanced lines average yield was 9,900 lbs/acre. Field preparation and planting were completed in late May. Several advanced lines in 2018 produced high yields as well as demonstrating important breeding goals aside from yield (disease resistance, grain quality, specialty types, etc.). Testing advanced and preliminary lines under a variety of conditions remains a critical aspect of releasing varieties adapted to changing cultural practices, markets, and pests.

Project RM-2 was involved in the planting, sampling and harvesting of more than 12 trial sites throughout the rice growing areas. This project was also involved in several educational activities including the winter rice grower meetings, the RES rice field day, promoting work through fact sheets and publications, and updating of the UCCE rice website.

Table 1. 2018 Four Location Very Early Rice Variety Trials

Advanced Lines and Varieties

				Single Location Yields												
		Over All Ave Grain Yield at 14% Moisture lbs/ac		Biggs		Sutter		Yolo		South Yolo						
Variety	Grain Type	**Yield**	**Rank**	Yield	Rank	Yield	Rank	Yield	Rank	Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
10Y2043	S	**10260**	**1**	10190	3	10660	1	11520	2	8680	1	17.8	4.8	81	33	92
14Y1006	L	**10260**	**2**	10620	2	10500	2	11500	3	8430	2	17.1	4.8	81	2	92
L-207	L	**9940**	**3**	9900	5	10240	4	11600	1	8010	5	18.0	4.8	85	3	101
12Y2175	M	**9680**	**4**	10930	1	9920	6	10710	5	7170	11	19.2	4.8	89	4	96
CJ-201	L	**9630**	**5**	10080	4	10400	3	11070	4	6970	12	16.3	4.8	89	21	89
M-210	M	**9130**	**6**	8570	11	10110	5	10020	7	7830	6	19.7	4.7	83	6	95
M-105	M	**9090**	**7**	8600	10	9540	7	10010	8	8210	4	19.6	4.6	80	4	96
L-206	L	**9060**	**8**	9770	6	9330	9	9890	9	7260	10	16.6	4.6	84	6	87
M-209	M	**9040**	**9**	9710	7	9090	12	9790	10	7580	9	19.4	4.6	89	1	92
M-206	M	**9020**	**10**	9090	8	9250	11	10090	6	7640	8	19.6	4.7	85	8	95
17Y3000	M	**8930**	**11**	9040	9	9380	8	9650	11	7650	7	19.6	4.6	84	6	94
S-102	S	**8740**	**12**	7890	12	9260	10	9490	12	8320	3	15.3	4.8	79	8	95
MEAN		**9390**		9530		9810		10450		7810		18.2	4.7	84	8	94
CV		**4.9**		6.7		3.4		4.0		5.0		6.0	9.3	1.8	84.8	8.6
LSD (.05)		**794**		923		484		607		562		2.5	0.3	1.8	21.3	4.2

Preliminary Lines and Varieties

15Y2100	S	**9700**	**1**	9050	20	10240	3	10970	2	8530	8	15.3	4.8	87	29	96
17Y3014	M	**9650**	**2**	9260	15	10560	2	10140	18	8630	6	17.3	4.8	85	39	99
17Y1007	L	**9640**	**3**	10190	5	10160	4	10700	6	7520	34	15.9	4.8	82	1	98
16Y127	L	**9610**	**4**	10010	6	9760	11	10490	10	8180	19	15.7	4.9	87	3	97
17Y1087	L	**9590**	**5**	10390	3	11020	1	10170	16	6800	42	15.7	4.9	83	2	96
17Y1002	L	**9590**	**6**	9330	14	10070	6	10830	3	8110	22	16.4	4.9	82	2	106
16Y2028	S	**9550**	**7**	8450	32	10110	5	10780	4	8870	3	16.7	4.8	86	64	97
17Y1100	L	**9520**	**8**	10880	1	9640	14	10520	9	7050	39	17.2	4.9	89	15	97
15Y2112	S	**9450**	**9**	9340	13	9370	28	10710	5	8360	16	20.8	4.8	89	62	94
17Y3082	M	**9390**	**10**	9650	9	9910	9	9850	28	8170	21	18.1	4.8	86	18	94
17P2216	S	**9390**	**11**	8700	27	9770	10	10360	12	8730	5	17.4	4.8	84	16	94
14Y3143	M	**9370**	**12**	8630	29	9580	20	10040	23	9230	1	17.7	4.8	86	5	97
16Y2127	S	**9370**	**13**	8580	31	9360	29	10660	7	8870	2	17.0	4.8	84	3	92
17Y2087	S	**9370**	**14**	8790	26	9150	34	11040	1	8490	10	18.0	4.9	86	9	91
16Y3019	M	**9320**	**15**	9190	17	10020	7	9910	26	8180	20	18.8	4.8	85	7	98
17Y3023	M	**9300**	**16**	8350	33	9960	8	10410	11	8490	11	16.6	4.8	86	16	97
CM-203	S	**9230**	**17**	8980	21	9630	15	9860	27	8420	13	17.5	4.8	84	23	98
17Y3042	M	**9220**	**18**	8810	24	9660	13	10000	24	8400	14	16.9	4.8	85	6	97
17Y3047	M	**9200**	**19**	9540	11	9220	33	10250	13	7790	31	17.0	4.8	86	5	91
17P3035	M	**9190**	**20**	8650	28	9610	18	10090	21	8400	15	16.4	4.9	83	78	99
17Y3114	M	**9170**	**21**	8970	22	9490	23	10180	15	8020	26	18.3	4.8	87	16	99
17Y3119	M	**9100**	**22**	9260	16	9410	25	10050	22	7670	32	17.5	4.9	85	14	92
17Y3043	M	**9100**	**23**	9540	10	9710	12	9190	36	7940	28	17.8	4.9	87	5	91
15Y2024	S	**9070**	**24**	8280	35	9440	24	10640	8	7930	29	16.8	4.7	89	34	94
13Y3152	M	**9030**	**25**	9160	19	9620	16	9060	37	8280	17	17.0	4.8	88	6	96
17Y2140	S	**9020**	**26**	8180	36	9520	21	10130	19	8260	18	17.5	4.8	87	44	95
17Y3131	M	**9010**	**27**	9170	18	9400	26	9670	32	7810	30	17.6	4.8	86	7	95
15Y3036	M	**9010**	**28**	8800	25	9500	22	9730	31	8010	27	17.0	4.9	83	3	93
A-202	L	**8990**	**29**	9540	12	9590	19	9610	33	7210	37	15.8	4.9	86	1	96
17P3450	M	**8960**	**30**	8610	30	9620	17	10240	14	7360	35	16.5	4.8	84	17	93
M-104	M	**8920**	**31**	7670	38	9390	27	9780	29	8830	4	15.1	4.8	78	15	90
CH-202	S	**8920**	**32**	8340	34	8810	37	9930	25	8590	7	16.2	4.8	86	63	87
17Y3150	M	**8830**	**33**	10380	4	9110	35	9050	38	6810	41	18.0	4.8	89	0	97
CH-201	S	**8830**	**34**	7880	37	9300	30	10100	20	8040	23	15.5	4.8	88	56	90
15Y3171	M	**8810**	**35**	10500	2	9260	32	9250	35	6240	43	17.0	4.8	91	19	88
16Y2058	S	**8750**	**36**	7600	39	8730	38	10160	17	8500	9	16.4	4.8	85	27	98
15Y2153	M	**8750**	**37**	9920	8	8930	36	9010	39	7120	38	18.9	4.8	91	5	94
M-205	M	**8720**	**38**	8910	23	9270	31	9760	30	6940	40	18.2	4.8	92	1	90
89Y235	S	**8320**	**39**	7240	40	8290	39	9330	34	8440	12	15.8	4.8	82	72	96
17Y1063	L	**8230**	**40**	9940	7	8140	40	8770	40	6070	44	18.4	4.8	84	26	103
CM-101	S	**7510**	**41**	6390	41	7110	42	8500	41	8020	25	14.1	4.8	80	11	92
CA-201	S	**7350**	**42**	6190	42	7920	41	7970	42	7310	36	16.5	4.8	86	49	93
17Y2096	S	**6170**	**43**	4700	44	4960	44	6990	43	8030	24	16.4	4.8	85	76	101
17Y2098	S	**5780**	**44**	4960	43	5360	43	5250	44	7530	33	16.7	4.8	84	66	105
MEAN		**8930**		8750		9240		9780		7960		17.0	4.8	86	23	95
CV		**5.4**		6.7		3.5		5.0		6.0		8.1	1.3	2.8	63.0	9.7
LSD (.05)		**1120**		1186		659		986		961		2.4	0.1	3.1	27.7	2.4

S = short; M = medium; L = long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 2. 2018 Biggs Very Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
12Y2175	M	10930	1	18.5	4.9	80	5	102
14Y1006	L	10620	2	14.8	4.9	73	3	97
10Y2043	S	10190	3	14.4	4.9	72	49	95
CJ-201	L	10080	4	14.0	4.9	79	0	90
L-207	L	9900	5	14.1	4.9	75	0	111
L-206	L	9770	6	14.5	5.0	75	1	94
M-209	M	9710	7	18.8	4.9	79	0	103
M-206	M	9090	8	18.4	4.9	75	24	104
17Y3000	M	9040	9	18.0	4.9	75	15	103
M-105	M	8600	10	17.7	4.9	73	11	99
M-210	M	8570	11	18.6	4.9	75	14	99
S-102	S	7890	12	10.7	4.9	71	18	98
MEAN		9530		16.0	4.9	75	12	99
CV		6.7		6.2	1.0	1.2	88.5	3.8
LSD (.05)		923		1.4	0.1	1.3	14.7	5.4

Preliminary Lines and Varieties

17Y1100	L	10880	1	15.5	4.9	78	50	104
15Y3171	M	10500	2	19.0	4.9	82	0	96
17Y1087	L	10390	3	14.4	5.0	76	0	102
17Y3150	M	10380	4	19.4	4.9	77	0	100
17Y1007	L	10190	5	14.3	5.0	74	0	100
16Y127	L	10010	6	15.2	5.0	77	0	107
17Y1063	L	9940	7	18.9	5.0	78	8	106
15Y2153	M	9920	8	20.7	4.9	85	0	100
17Y3082	M	9650	9	18.9	4.9	75	25	103
17Y3043	M	9540	10	18.9	4.9	76	0	99
17Y3047	M	9540	11	16.5	4.9	77	0	94
A-202	L	9540	12	15.4	5.0	77	0	103
15Y2112	S	9340	13	19.8	5.0	79	13	99
17Y1002	L	9330	14	15.7	5.0	74	3	110
17Y3014	M	9260	15	18.0	4.9	75	35	108
17Y3119	M	9260	16	17.7	4.9	75	5	95
16Y3019	M	9190	17	18.7	4.9	76	5	102
17Y3131	M	9170	18	18.3	4.9	78	0	102
13Y3152	M	9160	19	17.6	5.0	76	0	102
15Y2100	S	9050	20	13.7	4.9	79	0	102
CM-203	S	8980	21	15.2	5.0	75	40	101
17Y3114	M	8970	22	18.2	4.9	76	40	108
M-205	M	8910	23	18.1	4.9	81	0	94
17Y3042	M	8810	24	17.0	4.9	75	3	107
15Y3036	M	8800	25	16.5	5.0	75	3	99
17Y2087	S	8790	26	16.5	4.9	77	0	92
17P2216	S	8700	27	16.2	4.9	75	5	97
17P3035	M	8650	28	16.5	5.0	74	85	103
14Y3143	M	8630	29	17.5	5.0	76	15	101
17P3450	M	8610	30	16.8	4.9	75	5	94
16Y2127	S	8580	31	15.5	5.0	77	0	95
16Y2028	S	8450	32	13.8	5.0	76	60	95
17Y3023	M	8350	33	17.5	4.9	75	10	105
CH-202	S	8340	34	12.8	4.9	75	25	90
15Y2024	S	8280	35	13.5	4.9	78	0	94
17Y2140	S	8180	36	15.6	4.9	77	0	100
CH-201	S	7880	37	11.9	4.9	78	40	94
M-104	M	7670	38	15.6	4.9	71	15	93
16Y2058	S	7600	39	15.2	5.0	77	20	104
89Y235	S	7240	40	14.8	4.9	75	85	104
CM-101	S	6390	41	10.7	5.0	72	20	91
CA-201	S	6190	42	16.6	4.9	76	30	99
17Y2098	S	4960	43	15.4	4.9	78	60	106
17Y2096	S	4700	44	16.2	4.9	78	100	103
MEAN		8750		16.4	4.9	76	18	100
CV		6.7		4.2	1.5	1.2	90.5	4.1
LSD (.05)		1186		1.4	0.1	1.8	33.3	8.2

S = short; M = medium; L = long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 3. 2018 Sutter Very Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
10Y2043	S	10660	1	22.3	4.8	81	71	89
14Y1006	L	10500	2	21.0	4.8	84	5	89
CJ-201	L	10400	3	17.8	4.9	91	80	87
L-207	L	10240	4	20.7	4.8	85	11	98
M-210	M	10110	5	26.0	4.8	83	4	95
12Y2175	M	9920	6	24.0	4.8	88	3	92
M-105	M	9540	7	25.1	4.8	80	1	94
17Y3000	M	9380	8	25.6	4.8	84	3	92
L-206	L	9330	9	18.8	4.8	84	5	83
S-102	S	9260	10	18.3	4.8	80	8	96
M-206	M	9250	11	25.9	4.8	84	3	94
M-209	M	9090	12	25.1	4.8	88	3	88
MEAN		9810		22.6	4.8	84	16	91
CV		3.4		5.8	1.2	1.0	48.7	3.5
LSD (.05)		484		1.9	0.1	1.2	11.4	4.6

Preliminary Lines and Varieties

17Y1087	L	11020	1	18.3	4.8	83	5	100
17Y3014	M	10560	2	21.7	4.8	84	45	99
15Y2100	S	10240	3	17.9	4.7	89	85	94
17Y1007	L	10160	4	19.6	4.8	82	0	95
16Y2028	S	10110	5	20.8	4.8	89	95	102
17Y1002	L	10070	6	19.3	4.9	82	3	101
16Y3019	M	10020	7	25.0	4.8	83	10	99
17Y3023	M	9960	8	22.5	4.7	85	30	97
17Y3082	M	9910	9	25.7	4.8	82	18	95
17P2216	S	9770	10	21.6	4.8	85	53	92
16Y127	L	9760	11	20.0	4.8	89	5	91
17Y3043	M	9710	12	21.7	4.8	84	10	88
17Y3042	M	9660	13	22.2	4.8	84	3	95
17Y1100	L	9640	14	21.7	5.0	89	10	95
CM-203	S	9630	15	23.5	4.8	85	18	97
13Y3152	M	9620	16	22.5	4.8	88	3	96
17P3450	M	9620	17	21.4	4.8	82	33	91
17P3035	M	9610	18	21.5	4.9	82	95	102
A-202	L	9590	19	19.9	4.8	87	3	93
14Y3143	M	9580	20	24.1	4.8	87	3	98
17Y2140	S	9520	21	22.9	4.8	90	93	93
15Y3036	M	9500	22	22.6	4.8	88	5	91
17Y3114	M	9490	23	24.4	4.8	86	13	96
15Y2024	S	9440	24	21.7	4.7	90	55	93
17Y3119	M	9410	25	23.4	4.9	84	10	94
17Y3131	M	9400	26	22.8	4.8	84	8	96
M-104	M	9390	27	18.1	4.8	77	30	93
15Y2112	S	9370	28	26.2	4.8	89	90	94
16Y2127	S	9360	29	20.0	4.8	87	3	91
CH-201	S	9300	30	16.5	4.9	90	93	87
M-205	M	9270	31	24.2	4.8	90	0	91
15Y3171	M	9260	32	19.3	4.9	89	75	86
17Y3047	M	9220	33	21.7	4.9	85	3	89
17Y2087	S	9150	34	23.2	4.9	89	8	91
17Y3150	M	9110	35	22.1	4.8	88	0	97
15Y2153	M	8930	36	21.4	4.8	90	20	91
CH-202	S	8810	37	20.6	4.8	88	95	85
16Y2058	S	8730	38	20.4	4.8	88	58	98
89Y235	S	8290	39	16.9	4.8	83	98	96
17Y1063	L	8140	40	20.3	4.8	82	45	102
CA-201	S	7920	41	18.3	4.9	88	80	90
CM-101	S	7110	42	17.4	4.8	81	10	88
17Y2098	S	5360	43	18.7	4.8	86	90	109
17Y2096	S	4960	44	19.4	4.8	88	93	101
MEAN		9240		21.2	4.8	86	36	94
CV		3.5		7.8	0.8	1.4	38.8	4.1
LSD (.05)		659		3.3	0.1	2.5	28.3	7.7

S = short; M = medium; L = long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 4. 2018 Yolo Very Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
L-207	L	11600	1	14.9	4.8	82	0	113
10Y2043	S	11520	2	15.5	4.8	78	5	104
14Y1006	L	11500	3	14.8	4.8	78	0	99
CJ-201	L	11070	4	13.9	4.8	87	0	100
12Y2175	M	10710	5	16.2	4.9	89	0	105
M-206	M	10090	6	16.7	4.2	83	0	100
M-210	M	10020	7	16.7	4.2	82	1	103
M-105	M	10010	8	18.1	4.1	79	0	106
L-206	L	9890	9	14.7	4.0	81	9	95
M-209	M	9790	10	16.1	4.1	88	0	96
17Y3000	M	9650	11	16.7	4.1	83	0	99
S-102	S	9490	12	14.0	4.8	78	0	100
MEAN		10450		15.7	4.5	82	1	101
CV		4.0		3.7	19.3	1.8	419.7	0.7
LSD (.05)		607		0.8	1.2	2.1	7.5	1.1

Preliminary Lines and Varieties

17Y2087	S	11040	1	17.3	4.9	83	8	97
15Y2100	S	10970	2	14.4	4.8	86	25	105
17Y1002	L	10830	3	14.8	4.8	81	0	118
16Y2028	S	10780	4	17.1	4.9	82	65	109
15Y2112	S	10710	5	20.8	4.8	87	95	98
17Y1007	L	10700	6	14.4	4.9	79	0	110
16Y2127	S	10660	7	16.0	4.8	82	0	96
15Y2024	S	10640	8	15.5	4.8	88	58	104
17Y1100	L	10520	9	15.7	5.0	86	0	105
16Y127	L	10490	10	13.7	4.9	84	0	106
17Y3023	M	10410	11	15.3	4.8	85	0	103
17P2216	S	10360	12	16.2	4.7	85	3	103
17Y3047	M	10250	13	13.8	4.9	85	5	105
17P3450	M	10240	14	14.5	4.8	84	3	103
17Y3114	M	10180	15	15.5	4.9	85	8	108
17Y1087	L	10170	16	14.3	4.9	81	3	101
16Y2058	S	10160	17	15.3	4.8	82	8	103
17Y3014	M	10140	18	15.6	4.9	84	45	106
17Y2140	S	10130	19	16.4	4.8	85	65	102
CH-201	S	10100	20	18.1	4.8	83	90	105
17P3035	M	10090	21	14.8	4.8	81	88	101
17Y3119	M	10050	22	15.6	4.9	83	5	104
14Y3143	M	10040	23	14.6	4.8	83	0	104
17Y3042	M	10000	24	15.2	4.9	82	0	105
CH-202	S	9930	25	16.6	4.9	81	93	97
16Y3019	M	9910	26	16.8	4.8	83	3	100
CM-203	S	9860	27	15.7	4.9	80	25	110
17Y3082	M	9850	28	16.0	4.8	86	3	101
M-104	M	9780	29	13.5	4.8	76	10	92
M-205	M	9760	30	14.9	4.8	91	3	96
15Y3036	M	9730	31	14.2	4.9	84	0	102
17Y3131	M	9670	32	15.6	4.8	85	3	97
A-202	L	9610	33	10.3	4.8	82	0	103
89Y235	S	9330	34	14.9	4.8	81	83	100
15Y3171	M	9250	35	15.5	4.8	91	3	96
17Y3043	M	9190	36	15.9	4.9	89	0	98
13Y3152	M	9060	37	14.8	4.8	87	0	102
17Y3150	M	9050	38	16.6	4.8	87	0	107
15Y2153	M	9010	39	15.2	4.8	91	0	104
17Y1063	L	8770	40	17.0	4.9	82	45	117
CM-101	S	8500	41	12.4	4.8	80	10	99
CA-201	S	7970	42	14.7	4.9	81	85	99
17Y2096	S	6990	43	14.7	5.0	82	95	114
17Y2098	S	5250	44	17.4	4.8	82	98	116
MEAN		9780		15.4	4.8	84	26	103
CV		5.0		9.1	1.2	1.9	46.0	1.6
LSD (.05)		986		2.8	0.1	3.2	23.7	3.3

S = short; M = medium; L = long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 5. 2018 South Yolo Very Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
10Y2043	S	8680	1	18.9	4.8	92	8	82
14Y1006	L	8430	2	18.0	4.8	91	0	82
S-102	S	8320	3	18.2	4.7	87	8	85
M-105	M	8210	4	17.5	4.8	88	5	85
L-207	L	8010	5	20.2	4.8	97	3	83
M-210	M	7830	6	17.5	4.8	94	5	85
17Y3000	M	7650	7	18.0	4.7	96	8	82
M-206	M	7640	8	17.3	4.8	96	5	83
M-209	M	7580	9	17.6	4.8	100	1	81
L-206	L	7260	10	18.2	4.8	95	8	79
12Y2175	M	7170	11	17.9	4.7	98	8	84
CJ-201	L	6970	12	19.5	4.5	101	3	80
MEAN		7810		18.2	4.7	94	5	82
CV		5.0		8.4	1.9	2.3	72.3	4.7
LSD (.05)		562		2.2	0.1	3.2	5.1	5.6

Preliminary Lines and Varieties

14Y3143	M	9230	1	14.6	4.8	100	3	85
16Y2127	S	8870	2	16.6	4.8	93	8	89
16Y2028	S	8870	3	15.4	4.7	98	35	84
M-104	M	8830	4	13.0	4.8	87	5	83
17P2216	S	8730	5	15.7	4.8	93	5	83
17Y3014	M	8630	6	14.0	4.9	99	30	86
CH-202	S	8590	7	14.8	4.6	100	40	79
15Y2100	S	8530	8	15.2	4.7	96	8	83
16Y2058	S	8500	9	14.5	4.8	94	23	88
17Y2087	S	8490	10	15.0	4.8	94	23	84
17Y3023	M	8490	11	11.3	4.8	101	23	83
89Y235	S	8440	12	16.4	4.7	92	23	84
CM-203	S	8420	13	15.5	4.7	98	8	86
17Y3042	M	8400	14	13.0	4.8	98	18	81
17P3035	M	8400	15	12.8	4.9	97	45	89
15Y2112	S	8360	16	16.6	4.8	101	50	85
13Y3152	M	8280	17	13.3	4.7	101	20	85
17Y2140	S	8260	18	14.9	4.9	99	20	87
16Y127	L	8180	19	13.8	4.8	98	8	84
16Y3019	M	8180	20	14.9	4.8	98	10	92
17Y3082	M	8170	21	11.9	4.8	101	28	78
17Y1002	L	8110	22	15.7	4.9	91	3	95
CH-201	S	8040	23	15.4	4.6	101	3	78
17Y2096	S	8030	24	15.5	4.6	93	15	87
CM-101	S	8020	25	16.0	4.7	89	3	88
17Y3114	M	8020	26	15.2	4.8	101	5	84
15Y3036	M	8010	27	14.8	4.8	86	3	82
17Y3043	M	7940	28	14.8	4.9	101	10	81
15Y2024	S	7930	29	16.7	4.6	99	23	84
17Y3131	M	7810	30	13.5	4.8	99	18	87
17Y3047	M	7790	31	15.8	4.8	98	13	76
17Y3119	M	7670	32	13.2	4.8	99	38	78
17Y2098	S	7530	33	15.5	4.6	92	18	92
17Y1007	L	7520	34	15.2	4.8	93	3	86
17P3450	M	7360	35	13.5	4.8	94	28	84
CA-201	S	7310	36	16.6	4.5	98	0	84
A-202	L	7210	37	17.6	4.9	99	0	86
15Y2153	M	7120	38	18.4	4.8	101	0	83
17Y1100	L	7050	39	16.0	4.9	102	0	84
M-205	M	6940	40	15.5	4.9	104	0	82
17Y3150	M	6810	41	13.8	4.9	103	0	84
17Y1087	L	6800	42	15.9	4.9	94	0	83
15Y3171	M	6240	43	14.0	4.7	103	0	76
17Y1063	L	6070	44	17.3	4.8	94	8	87
MEAN		7960		15.0	4.8	97	14	84
CV		6.0		10.4	1.6	4.5	117.5	5.2
LSD (.05)		961		3.1	0.2	8.7	33.0	8.8

S = short; M = medium; L = long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 6. Grain Yield (lb/acre @14% moisture) Summary of Very Early Rice Varieties by Location and Year (2014-2018)

Location	Year	M104	M105	M206	Calmochi 101	S102	L206
Biggs (RES)	2014	8150	7680	9200	6540	7640	8580
	2015	8580	8150	9350	7940	9520	8910
	2016		10380	10250	7490	8960	10100
	2017	8790	9270	9680	8140	9260	9850
	2018	7670	8600	9090	6390	7890	9770
Location Mean		8298	8816	9514	7300	8654	9442
Sutter	2014	9510	10380	9710	7780	8770	9440
	2015	9520	10350	9900	7990	9190	9820
	2016		11630	11110	9420	10720	9260
	2017	9030	9380	9240	7250	8770	8580
	2018	9390	9540	9250	7110	9260	9330
Location Mean		9363	10256	9842	7910	9342	9286
Yolo	2014	9610	10150	9770	7580	8980	8760
	2015	8150	7210	7490	5560	6940	7740
	2016		10420	10980	9290	9530	10090
	2017	9670	8550	8890	7790	8360	9250
	2018	9780	10010	10090	8500	9490	9890
Location Mean		9303	9268	9444	7744	8660	9146
South Yolo	2017	8240	8590	7530	8570	8610	6860
	2018	8830	8210	7640	8020	8330	7260
Location Mean		8535	8400	7585	8295	8470	7060
Loc/Years Mean		8874	9185	9096	7812	8782	8734

Table 7. 2018 Four Location Early Rice Variety Trials

Advanced Lines and Varieties

				Single Location Yields												
		Over All Ave Grain Yield at 14% Moisture lbs/ac		Biggs		Butte		Colusa		Yuba						
Variety	Grain Type	**Yield**	**Rank**	Yield	Rank	Yield	Rank	Yield	Rank	Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
14Y1006	L	**9930**	**1**	10990	1	9520	1	9310	5	9890	2	16.6	4.8	79	33	101
10Y2043	S	**9880**	**2**	10280	5	9040	5	9600	2	10630	1	18.0	4.8	80	82	97
L-207	L	**9720**	**3**	10120	6	9420	2	10000	1	9340	6	16.0	4.8	83	10	110
12Y2175	M	**9680**	**4**	10740	3	9270	4	9570	3	9140	7	21.0	4.8	87	26	104
CJ-201	L	**9480**	**5**	10860	2	9330	3	9370	4	8360	11	15.7	4.8	88	27	99
M-209	M	**9040**	**6**	10640	4	7990	10	9120	6	8400	10	21.7	4.8	87	25	100
M-206	M	**8910**	**7**	9050	10	8270	8	8960	8	9350	5	20.2	4.8	81	53	104
M-210	M	**8910**	**8**	9230	9	8290	7	8980	7	9120	8	20.3	4.8	80	55	101
M-105	M	**8900**	**9**	9360	8	8350	6	8470	10	9450	4	19.5	4.8	78	68	101
L-206	L	**8900**	**10**	9750	7	7960	12	8940	9	8930	9	15.7	4.8	80	60	100
17Y3000	M	**8700**	**11**	8980	11	8170	9	8190	11	9470	3	20.3	4.8	81	63	101
S-102	S	**8100**	**12**	8220	12	7980	11	8010	12	8170	12	15.3	4.8	77	75	100
MEAN		**9180**		9850		8630		9040		9190		18.3	4.8	82	48	102
CV		**5.3**		5.0		4.3		6.9		4.6		5.5	1.3	1.9	40.7	10.1
LSD (.05)		**722**		704		530		902		608		2.3	0.1	2.3	24.0	5.2

Preliminary Lines and Varieties

17Y2048	S	**9730**	**1**	9960	14	9410	1	9040	28	10520	1	18.7	4.8	79	59	96
17Y1027	L	**9730**	**2**	10480	4	9130	8	10030	3	9280	4	16.2	4.8	81	11	103
17P3020	M	**9390**	**3**	9540	26	9060	9	9270	15	9670	2	17.1	4.8	80	54	98
16Y3112	M	**9380**	**4**	10400	5	8830	17	9430	7	8840	9	20.3	4.8	87	41	104
16Y1154	L	**9340**	**5**	9660	24	9170	5	10050	2	8490	16	15.8	4.8	84	11	112
17Y3081	M	**9270**	**6**	10230	9	8780	20	9300	13	8780	12	19.0	4.8	85	29	104
15Y2135	S	**9270**	**7**	9860	17	9260	4	9420	8	8520	15	19.7	4.8	85	34	101
17Y3047	M	**9250**	**8**	10240	8	8870	16	10090	1	7800	32	17.9	4.8	83	44	96
17P2217	S	**9240**	**9**	9110	33	8990	12	9220	17	9650	3	17.8	4.8	82	50	105
16Y1029	L	**9200**	**10**	10250	7	8600	28	9630	5	8320	20	15.1	4.8	81	6	105
15Y2100	S	**9170**	**11**	9390	29	8820	19	9550	6	8920	8	16.8	4.8	86	64	100
17P2215	S	**9160**	**12**	10520	3	9330	3	9270	16	7500	37	20.0	4.8	83	46	99
CM-203	S	**9150**	**13**	9690	22	8660	26	9210	18	9050	7	19.9	4.9	81	84	103
17Y3086	M	**9140**	**14**	10320	6	8910	14	8740	33	8590	14	18.8	4.8	85	32	102
17Y1083	L	**9110**	**15**	10150	11	9390	2	9810	4	7100	41	17.7	4.8	86	3	93
17Y3131	M	**9110**	**16**	8820	38	9160	6	9300	12	9170	5	19.2	4.8	84	19	100
15Y3086	M	**9090**	**17**	9590	25	9150	7	9210	19	8420	17	17.1	4.8	82	41	98
16P3288	M	**9000**	**18**	9760	19	8720	23	9210	20	8340	19	19.8	4.8	86	22	100
17P3389	M	**9000**	**19**	10090	13	9050	10	9050	27	7810	31	21.2	4.8	89	6	102
16Y127	L	**8960**	**20**	9740	20	8740	21	9050	26	8290	21	16.3	4.8	86	35	105
16Y3111	M	**8960**	**21**	9950	15	8460	32	9410	9	8000	29	22.2	4.8	88	11	106
17Y3114	M	**8920**	**22**	9280	31	8360	35	8890	31	9170	6	19.5	4.8	81	64	103
15Y2153	M	**8900**	**23**	10570	2	8180	39	8790	32	8050	27	22.4	4.7	89	9	100
17Y3129	M	**8860**	**24**	9690	23	8720	22	9200	21	7830	30	19.6	4.9	86	36	104
15Y3171	M	**8840**	**25**	10930	1	8690	25	8940	30	6780	45	19.2	4.9	89	14	98
17Y3090	M	**8790**	**26**	9490	28	8370	34	9030	29	8280	22	19.0	4.8	86	34	108
17Y3087	M	**8790**	**27**	9100	34	8820	18	9130	23	8100	26	20.3	4.8	86	9	103
15Y2112	S	**8780**	**28**	10090	12	8620	27	8660	34	7740	33	22.9	4.8	85	86	99
16Y2117	S	**8770**	**29**	9930	16	8290	37	8030	41	8810	11	18.6	4.9	82	74	97
17Y3045	M	**8760**	**30**	9850	18	8720	24	9100	24	7390	38	19.5	4.9	85	8	105
17Y3023	M	**8670**	**31**	9240	32	8910	15	9310	11	7240	39	18.8	4.8	81	64	105
16Y3121	M	**8670**	**32**	9700	21	8320	36	9130	22	7510	36	20.2	4.8	89	3	99
17Y2138	S	**8650**	**33**	8890	37	8990	11	8360	39	8340	18	16.5	4.8	84	52	101
A-202	L	**8620**	**34**	9070	35	7760	42	9360	10	8280	23	16.6	4.9	83	23	100
16Y3108	M	**8600**	**35**	10230	10	7970	41	9100	25	7090	42	21.7	4.8	90	1	97
17Y2087	S	**8520**	**36**	8800	39	8410	33	8620	35	8250	24	18.7	4.9	82	35	95
14M206G4	M	**8510**	**37**	8890	36	8130	40	8200	40	8810	10	19.4	4.8	82	66	101
16Y3054	M	**8500**	**38**	8630	40	8960	13	8370	38	8030	28	19.0	4.9	83	70	99
17P3344	M	**8470**	**39**	9530	27	8510	31	9290	14	6560	46	19.4	4.8	87	3	98
M-205	M	**8360**	**40**	9280	30	8540	30	8540	36	7090	43	20.6	4.8	90	5	97
M-104	M	**8340**	**41**	8260	43	8550	29	7810	42	8720	13	16.6	4.8	75	68	97
15Y2024	S	**8190**	**42**	7950	44	8210	38	8470	37	8110	25	17.2	4.8	85	66	97
CH-202	S	**7670**	**43**	8340	42	7060	43	7640	43	7630	35	16.3	4.8	82	80	94
CH-201	S	**7180**	**44**	8510	41	6720	44	7290	44	6210	47	15.2	4.9	87	74	96
CM-101	S	**7080**	**45**	6800	45	6680	45	7100	47	7740	34	15.9	4.8	81	71	94
CA-201	S	**6720**	**46**	6640	46	5970	48	7190	46	7070	44	16.3	4.9	84	66	102
16Y1064	L	**6710**	**47**	6410	47	6090	47	7210	45	7130	40	15.2	4.8	88	1	102
15Y1195	L	**5840**	**48**	5940	48	6120	46	6600	48	4690	48	16.8	4.8	90	2	92
MEAN		**8670**		9330		8440		8850		8080		18.5	4.8	84	37	100
CV		**5.7**		5.7		3.7		4.3		8.4		5.9	1.3	1.5	34.4	9.9
LSD (.05)		**832**		1068		633		771		1362		2.4	0.1	1.5	28.9	5.7

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 8. 2018 Biggs Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
14Y1006	L	10990	1	14.3	4.9	75	9	103
CJ-201	L	10860	2	14.4	4.9	79	0	96
12Y2175	M	10740	3	18.3	4.9	81	4	106
M-209	M	10640	4	19.9	4.8	80	0	99
10Y2043	S	10280	5	13.8	4.9	72	55	92
L-207	L	10120	6	14.2	4.9	78	0	112
L-206	L	9750	7	13.9	4.8	75	0	95
M-105	M	9360	8	17.9	4.9	72	48	102
M-210	M	9230	9	18.5	4.8	75	45	101
M-206	M	9050	10	18.7	4.8	75	38	104
17Y3000	M	8980	11	18.0	4.9	75	45	101
S-102	S	8220	12	10.4	4.8	71	55	97
MEAN		9850		16.0	4.8	76	25	100
CV		5.0		3.8	1.4	0.9	57.2	2.9
LSD (.05)		704		0.9	0.1	1.0	20.4	4.2

Preliminary Lines and Varieties

15Y3171	M	10930	1	18.5	5.0	81	0	97
15Y2153	M	10570	2	21.0	4.8	84	3	102
17P2215	S	10520	3	17.9	4.9	77	55	100
17Y1027	L	10480	4	14.6	4.8	75	0	97
16Y3112	M	10400	5	20.1	4.8	81	0	109
17Y3086	M	10320	6	17.4	4.8	78	28	106
16Y1029	L	10250	7	14.8	4.8	76	0	99
17Y3047	M	10240	8	16.4	4.9	77	0	95
17Y3081	M	10230	9	18.1	4.9	78	8	103
16Y3108	M	10230	10	20.7	4.9	85	0	100
17Y1083	L	10150	11	15.0	4.8	78	0	93
15Y2112	S	10090	12	19.4	4.8	80	60	98
17P3389	M	10090	13	18.0	4.9	82	0	100
17Y2048	S	9960	14	15.9	4.8	72	20	94
16Y3111	M	9950	15	19.5	4.8	81	0	109
16Y2117	S	9930	16	13.8	5.0	76	40	92
15Y2135	S	9860	17	15.5	4.7	76	45	100
17Y3045	M	9850	18	18.8	4.9	78	3	106
16P3288	M	9760	19	17.4	4.9	78	0	104
16Y127	L	9740	20	15.3	5.0	78	0	104
16Y3121	M	9700	21	18.3	4.9	80	0	98
CM-203	S	9690	22	15.9	5.0	73	75	102
17Y3129	M	9690	23	17.5	4.9	77	18	104
16Y1154	L	9660	24	13.9	4.9	76	0	112
15Y3086	M	9590	25	15.8	4.8	76	15	93
17P3020	M	9540	26	16.7	4.8	74	65	96
17P3344	M	9530	27	17.5	4.9	80	0	99
17Y3090	M	9490	28	17.9	4.9	79	10	109
15Y2100	S	9390	29	14.5	4.8	80	0	96
M-205	M	9280	30	18.0	4.9	81	0	96
17Y3114	M	9280	31	18.3	4.9	76	50	101
17Y3023	M	9240	32	17.0	4.9	75	55	107
17P2217	S	9110	33	15.7	4.7	76	20	107
17Y3087	M	9100	34	18.0	4.9	78	3	98
A-202	L	9070	35	15.2	4.9	76	0	99
14M206G4	M	8890	36	18.3	4.8	75	60	104
17Y2138	S	8890	37	12.4	4.8	77	0	96
17Y3131	M	8820	38	17.6	4.9	77	5	102
17Y2087	S	8800	39	15.2	5.0	76	0	93
16Y3054	M	8630	40	18.2	4.9	76	25	98
CH-201	S	8510	41	11.3	5.0	78	65	98
CH-202	S	8340	42	13.3	4.7	75	35	93
M-104	M	8260	43	15.9	4.8	70	40	99
15Y2024	S	7950	44	13.1	4.8	79	0	92
CM-101	S	6800	45	12.0	4.8	73	45	98
CA-201	S	6640	46	13.7	4.9	77	45	99
16Y1064	L	6410	47	13.1	4.7	79	0	98
15Y1195	L	5940	48	14.2	4.9	81	0	87
MEAN		9330		16.4	4.8	77	19	99
CV		5.7		4.2	1.5	1.0	85.2	3.9
LSD (.05)		1068		1.4	0.1	1.5	31.8	7.7

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 9. 2018 Butte Early Rice Variety Trial

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
14Y1006	L	9520	1	19.8	4.8	77	61	105
L-207	L	9420	2	19.2	4.8	84	18	107
CJ-201	L	9330	3	17.7	4.8	86	70	101
12Y2175	M	9270	4	28.1	4.8	86	46	102
10Y2043	S	9040	5	22.8	4.8	79	90	94
M-105	M	8350	6	21.7	4.8	77	86	99
M-210	M	8290	7	25.7	4.8	80	78	102
M-206	M	8270	8	24.6	4.8	80	65	102
17Y3000	M	8170	9	25.0	4.8	80	66	99
M-209	M	7990	10	27.6	4.8	87	18	100
S-102	S	7980	11	18.2	4.8	79	95	104
L-206	L	7960	12	16.4	4.7	79	94	104
MEAN		8630		22.2	4.8	81	66	102
CV		4.3		4.4	1.1	1.0	20.4	5.2
LSD (.05)		530		1.4	0.1	1.2	19.2	7.6

Preliminary Lines and Varieties

17Y2048	S	9410	1	22.1	4.8	79	73	96
17Y1083	L	9390	2	21.0	4.9	83	0	99
17P2215	S	9330	3	22.6	4.8	83	68	102
15Y2135	S	9260	4	23.9	4.8	85	25	96
16Y1154	L	9170	5	20.4	4.8	84	15	115
17Y3131	M	9160	6	25.4	4.8	83	13	101
15Y3086	M	9150	7	22.0	4.9	82	48	107
17Y1027	L	9130	8	19.5	4.8	80	15	108
17P3020	M	9060	9	21.0	4.8	80	45	103
17P3389	M	9050	10	30.1	4.8	89	10	105
17Y2138	S	8990	11	20.0	4.8	84	83	102
17P2217	S	8990	12	21.5	4.8	83	83	107
16Y3054	M	8960	13	23.4	4.9	81	93	99
17Y3086	M	8910	14	23.2	4.8	83	38	99
17Y3023	M	8910	15	24.7	4.8	81	80	105
17Y3047	M	8870	16	21.9	4.8	82	83	95
16Y3112	M	8830	17	26.0	4.8	89	73	105
17Y3087	M	8820	18	28.4	4.8	85	5	108
15Y2100	S	8820	19	20.1	4.7	86	75	102
17Y3081	M	8780	20	23.8	4.8	84	33	106
16Y127	L	8740	21	19.8	4.8	88	45	107
17Y3129	M	8720	22	24.6	4.9	86	50	103
16P3288	M	8720	23	26.3	4.8	86	10	100
17Y3045	M	8720	24	24.6	4.9	84	5	107
15Y3171	M	8690	25	24.3	4.8	88	3	99
CM-203	S	8660	26	23.6	5.0	82	95	102
15Y2112	S	8620	27	27.4	4.8	84	98	100
16Y1029	L	8600	28	16.9	4.9	80	15	109
M-104	M	8550	29	18.7	4.8	75	80	101
M-205	M	8540	30	27.6	4.8	89	8	99
17P3344	M	8510	31	26.6	4.8	88	5	101
16Y3111	M	8460	32	30.6	4.8	89	30	111
17Y2087	S	8410	33	24.1	4.8	82	38	98
17Y3090	M	8370	34	25.3	4.9	86	80	112
17Y3114	M	8360	35	23.6	4.8	80	93	105
16Y3121	M	8320	36	28.4	4.8	88	0	98
16Y2117	S	8290	37	23.9	4.8	82	95	95
15Y2024	S	8210	38	20.8	4.8	85	90	99
15Y2153	M	8180	39	29.4	4.7	89	5	102
14M206G4	M	8130	40	23.9	4.8	81	83	103
16Y3108	M	7970	41	28.7	4.8	88	0	96
A-202	L	7760	42	20.8	5.0	83	73	101
CH-202	S	7060	43	20.1	4.8	82	98	94
CH-201	S	6720	44	18.2	4.8	88	93	95
CM-101	S	6680	45	19.0	4.8	80	88	95
15Y1195	L	6120	46	21.4	4.8	89	3	83
16Y1064	L	6090	47	19.8	4.7	88	3	105
CA-201	S	5970	48	18.6	4.8	84	88	100
MEAN		8440		23.3	4.8	84	48	101
CV		3.7		6.3	1.1	1.6	24.6	4.2
LSD (.05)		633		3.0	0.1	2.7	24.0	8.7

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 10. 2018 Colusa Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
L-207	L	10000	1	16.2	4.8	85	16	112
10Y2043	S	9600	2	17.1	4.8	81	86	97
12Y2175	M	9570	3	19.5	4.8	90	14	105
CJ-201	L	9370	4	15.8	4.8	94	26	106
14Y1006	L	9310	5	16.3	4.9	81	44	92
M-209	M	9120	6	21.5	4.8	89	30	101
M-210	M	8980	7	19.9	4.9	84	20	98
M-206	M	8960	8	20.8	4.8	84	24	104
L-206	L	8940	9	16.0	4.7	84	53	103
M-105	M	8470	10	20.9	4.8	82	55	105
17Y3000	M	8190	11	20.4	4.8	86	54	102
S-102	S	8010	12	17.6	4.9	81	63	99
MEAN		9040		18.5	4.8	85	40	102
CV		6.9		4.5	1.5	1.6	72.3	4.8
LSD (.05)		902		1.2	0.1	2.0	41.9	7.1

Preliminary Lines and Varieties

17Y3047	M	10090	1	18.1	4.8	87	23	93
16Y1154	L	10050	2	15.1	4.8	84	30	116
17Y1027	L	10030	3	16.8	4.9	83	20	101
17Y1083	L	9810	4	18.2	4.9	90	8	92
16Y1029	L	9630	5	14.7	4.9	85	0	114
15Y2100	S	9550	6	19.1	4.8	90	90	100
16Y3112	M	9430	7	21.0	4.8	90	18	106
15Y2135	S	9420	8	22.9	4.9	89	13	106
16Y3111	M	9410	9	22.6	4.8	90	5	107
A-202	L	9360	10	16.0	4.9	85	8	106
17Y3023	M	9310	11	19.9	4.9	84	38	103
17Y3131	M	9300	12	19.5	4.9	89	18	102
17Y3081	M	9300	13	18.6	4.8	88	8	99
17P3344	M	9290	14	19.6	4.9	90	3	97
17P3020	M	9270	15	16.4	4.9	82	45	94
17P2215	S	9270	16	22.5	4.9	86	55	96
17P2217	S	9220	17	19.5	4.9	83	23	105
CM-203	S	9210	18	23.5	4.8	83	80	102
15Y3086	M	9210	19	17.3	4.8	86	5	98
16P3288	M	9210	20	20.4	4.9	89	10	100
17Y3129	M	9200	21	21.7	4.9	89	68	108
16Y3121	M	9130	22	20.6	4.8	91	5	100
17Y3087	M	9130	23	20.4	4.9	90	8	105
17Y3045	M	9100	24	19.6	4.9	90	15	102
16Y3108	M	9100	25	21.4	4.9	92	5	99
16Y127	L	9050	26	16.1	4.8	88	93	107
17P3389	M	9050	27	21.7	4.8	91	8	101
17Y2048	S	9040	28	20.7	4.7	82	60	98
17Y3090	M	9030	29	17.7	4.8	90	13	110
15Y3171	M	8940	30	19.4	4.9	91	45	92
17Y3114	M	8890	31	20.4	4.9	84	18	105
15Y2153	M	8790	32	24.0	4.8	91	13	103
17Y3086	M	8740	33	20.4	4.8	88	20	106
15Y2112	S	8660	34	24.3	4.7	88	95	103
17Y2087	S	8620	35	19.5	4.8	83	38	94
M-205	M	8540	36	21.6	4.7	93	5	99
15Y2024	S	8470	37	19.3	4.8	88	80	94
16Y3054	M	8370	38	20.0	4.8	88	73	99
17Y2138	S	8360	39	19.9	4.9	86	45	109
14M206G4	M	8200	40	20.4	4.9	86	25	98
16Y2117	S	8030	41	19.0	4.8	83	68	102
M-104	M	7810	42	16.0	4.8	79	60	88
CH-202	S	7640	43	17.6	4.9	83	90	91
CH-201	S	7290	44	16.9	4.8	88	45	90
16Y1064	L	7210	45	13.8	4.8	94	3	112
CA-201	S	7190	46	18.4	4.9	87	38	106
CM-101	S	7100	47	17.8	4.9	85	55	91
15Y1195	L	6600	48	15.4	4.9	94	0	96
MEAN		8850		19.3	4.8	87	33	101
CV		4.3		4.2	1.4	1.6	33.2	5.0
LSD (.05)		771		1.6	0.1	2.8	22.0	10.2

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 11. 2018 Yuba Early Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
10Y2043	S	10630	1	18.2	4.8	88	96	104
14Y1006	L	9890	2	15.8	4.8	83	16	106
17Y3000	M	9470	3	17.7	4.8	84	85	100
M-105	M	9450	4	17.3	4.7	82	83	100
M-206	M	9350	5	16.6	4.8	83	84	106
L-207	L	9340	6	14.6	4.8	88	6	112
12Y2175	M	9140	7	18.0	4.8	90	41	105
M-210	M	9120	8	17.0	4.8	83	76	105
L-206	L	8930	9	16.4	4.8	83	93	98
M-209	M	8400	10	17.9	4.8	91	53	101
CJ-201	L	8360	11	14.8	4.8	94	11	95
S-102	S	8170	12	15.0	4.8	79	88	102
MEAN		9190		16.6	4.8	86	61	103
CV		4.6		8.6	1.2	2.9	27.9	2.1
LSD (.05)		608		2.1	0.1	3.6	24.5	3.1

Preliminary Lines and Varieties

17Y2048	S	10520	1	16.2	4.8	85	83	97
17P3020	M	9670	2	14.0	4.8	84	63	100
17P2217	S	9650	3	14.5	4.8	88	75	103
17Y1027	L	9280	4	13.9	4.8	87	10	106
17Y3131	M	9170	5	14.4	4.8	89	43	97
17Y3114	M	9170	6	15.8	4.8	86	95	101
CM-203	S	9050	7	16.4	4.9	85	88	106
15Y2100	S	8920	8	13.5	4.8	90	90	104
16Y3112	M	8840	9	14.0	4.8	90	75	97
14M206G4	M	8810	10	15.1	4.8	86	95	100
16Y2117	S	8810	11	17.6	4.9	89	95	99
17Y3081	M	8780	12	15.4	4.8	89	70	107
M-104	M	8720	13	15.6	4.8	78	93	101
17Y3086	M	8590	14	14.2	4.8	90	43	98
15Y2135	S	8520	15	16.4	4.7	90	55	102
16Y1154	L	8490	16	13.7	4.8	92	0	106
15Y3086	M	8420	17	13.2	4.8	86	95	94
17Y2138	S	8340	18	13.6	4.8	91	80	99
16P3288	M	8340	19	15.1	4.8	93	68	99
16Y1029	L	8320	20	14.0	4.8	85	10	97
16Y127	L	8290	21	13.9	4.8	91	3	105
17Y3090	M	8280	22	15.3	4.8	91	35	102
A-202	L	8280	23	14.5	4.8	88	10	97
17Y2087	S	8250	24	16.2	4.9	88	65	98
15Y2024	S	8110	25	15.5	4.8	91	95	104
17Y3087	M	8100	26	14.4	4.8	94	23	101
15Y2153	M	8050	27	15.1	4.7	92	15	95
16Y3054	M	8030	28	14.5	4.9	88	90	101
16Y3111	M	8000	29	16.0	4.8	93	10	98
17Y3129	M	7830	30	14.8	4.8	91	10	100
17P3389	M	7810	31	14.9	4.8	95	5	103
17Y3047	M	7800	32	15.2	4.9	88	70	103
15Y2112	S	7740	33	20.5	4.8	88	93	97
CM-101	S	7740	34	14.7	4.8	85	95	94
CH-202	S	7630	35	14.4	4.8	87	98	99
16Y3121	M	7510	36	13.6	4.8	96	8	99
17P2215	S	7500	37	16.9	4.8	87	5	101
17Y3045	M	7390	38	15.1	4.9	89	8	106
17Y3023	M	7240	39	13.7	4.8	85	83	106
16Y1064	L	7130	40	14.0	4.9	93	0	94
17Y1083	L	7100	41	16.6	4.8	94	3	88
16Y3108	M	7090	42	15.9	4.8	94	0	95
M-205	M	7090	43	15.1	4.8	98	8	95
CA-201	S	7070	44	14.4	4.9	87	95	101
15Y3171	M	6780	45	14.7	4.8	96	8	103
17P3344	M	6560	46	14.0	4.8	92	5	96
CH-201	S	6210	47	14.6	4.9	94	93	101
15Y1195	L	4690	48	16.3	4.8	96	5	102
MEAN		8080		15.0	4.8	89	49	100
CV		8.4		8.3	1.3	1.8	24.5	1.6
LSD (.05)		1362		2.5	0.1	3.2	24.2	3.3

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 12. Grain Yield (lb/acre @14% moisture) Summary of Early Rice Varieties by Location and Year (2014-2018)

Location	Year	Calhikari 201	S102	M105	M205	M206	M209	L207
Biggs (RES)	2014	6220	7320	8570	9140	9240	9670	
	2015	8580	10050	8610	8720	9620	9490	10550
	2016	7310	9020	10380	10690	10780	10950	11220
	2017	9210	10460	10300	10640	9770	10490	11070
	2018	8510	8220	9360	9280	9050	10640	10120
Location Mean		7966	9014	9444	9694	9692	10248	10740
Butte	2014	8310	8570	9070	9140	9610	9140	
	2015	7180	8810	9350	7780	9370	8580	9130
	2016	8080	9480	10060	9640	10400	10220	10960
	2017	7810	8180	8910	9670	9330	9350	9750
	2018	6720	7980	8350	8540	8270	7990	9420
Location Mean		7620	8604	9148	8954	9396	9056	9815
Colusa	2014	7740	8080	9100	9370	9280	9600	
	2015	8940	9200	10500	10050	9850	10490	11160
	2016	8590	9050	10390	9730	9960	9600	10600
	2017	7610	6920	7390	8040	7530	7850	9410
	2018	7290	8010	8470	8540	8960	9120	10000
Location Mean		8034	8252	9170	9146	9116	9332	10293
Yuba	2014	7290	7420	8590	9120	8950	8800	
	2015	8490	8740	9970	9650	9940	10240	10480
	2016	7310	8300	9110	8430	9090	8760	8470
	2017	6380	8170	8370	8020	8770	9060	9600
	2018	6210	8170	9450	7090	9350	8400	9340
Location Mean		7136	8160	9098	8462	9220	9052	9473
Loc/Years Mean		7689	8508	9215	9064	9356	9422	10080

Table 13. 2018 Three Location Intermediate/Late Rice Variety Trials

Advanced Lines and Varieties

				Single Location Yields										
		Over All Ave Grain Yield at 14% Moisture lbs/ac		Biggs		Butte		Glenn						
Variety	Grain Type	**Yield**	**Rank**	Yield	Rank	Yield	Rank	Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
12Y2175	M	**10960**	**1**	11420	1	10960	1	10510	3	17.5	4.8	86	38	105
L-207	L	**10440**	**2**	10590	4	10400	3	10340	4	15.0	4.8	83	35	113
10Y2043	S	**10430**	**3**	10070	5	10760	2	10540	2	15.9	4.8	80	77	98
14Y1006	L	**10430**	**4**	10630	3	9970	7	10680	1	15.3	4.9	79	34	100
CJ-201	L	**10110**	**5**	10900	2	9550	10	9740	6	14.4	4.9	85	36	98
M-209	M	**9790**	**6**	9760	6	9580	9	9990	5	18.1	4.8	86	30	101
M-206	M	**9720**	**7**	9730	7	10270	5	9300	9	17.1	4.8	81	50	105
17Y3000	M	**9700**	**8**	9600	8	10330	4	9330	8	17.5	4.8	81	48	103
M-105	M	**9590**	**9**	9350	11	9990	6	9520	7	17.2	4.8	79	55	102
M-210	M	**9540**	**10**	9480	10	9960	8	9160	11	16.5	4.9	81	44	102
L-206	L	**9440**	**11**	9540	9	9530	11	9260	10	14.7	4.8	79	63	99
S-102	S	**8690**	**12**	8500	12	9060	12	8520	12	14.2	4.8	78	50	102
MEAN		**9900**		9970		10030		9740		16.1	4.8	82	47	102
CV		**6.4**		7.8		6.0		5.1		4.4	1.2	1.2	29.8	9.4
LSD (.05)		**667**		1123		868		715		2.4	0.1	2.1	32.6	5.2

Preliminary Lines and Varieties

17Y3158	M	**10830**	**1**	11460	1	10870	1	10180	3	17.5	4.9	85	35	107
16P3279	M	**10120**	**2**	10420	6	10040	4	9900	9	17.8	4.9	86	38	107
17Y2142	S	**10100**	**3**	10090	8	9620	11	10600	1	17.5	4.9	85	34	114
CM-203	S	**10010**	**4**	9620	15	10350	2	10050	6	16.6	4.9	80	72	103
17Y2039	M	**9960**	**5**	10480	5	9460	12	9920	8	18.1	4.8	89	22	104
15Y2100	S	**9940**	**6**	10280	7	9200	17	10340	2	15.7	4.8	86	39	106
15Y3171	M	**9920**	**7**	11090	2	9440	14	9220	19	17.5	4.8	87	44	99
17Y2046	S	**9920**	**8**	9900	10	9820	6	10020	7	15.1	4.9	81	25	102
17P3398	M	**9910**	**9**	9770	13	9810	7	10160	5	17.8	4.9	88	35	105
17Y3085	M	**9800**	**10**	9720	14	9880	5	9810	11	18.6	4.8	87	43	106
15Y2153	M	**9730**	**11**	10610	4	9070	18	9510	14	18.9	4.7	87	23	102
17P3355	M	**9700**	**12**	11060	3	8720	22	9310	18	18.0	4.8	87	37	104
15Y2151	M	**9650**	**13**	9830	11	9700	10	9420	15	17.2	4.8	86	34	109
17Y2069	S	**9640**	**14**	9550	16	9210	15	10170	4	16.5	4.9	79	33	103
M-205	M	**9520**	**15**	9530	17	9200	16	9840	10	17.0	4.8	88	25	103
15Y2024	S	**9400**	**16**	8880	20	9700	9	9640	12	15.0	4.8	84	52	100
15Y2112	S	**9380**	**17**	9820	12	9000	19	9310	17	19.3	4.9	85	83	103
17Y3127	M	**9370**	**18**	9160	19	10180	3	8770	22	16.8	4.8	82	48	107
16Y127	L	**9350**	**19**	9950	9	8540	23	9570	13	15.3	4.8	84	38	107
17Y1070	L	**9320**	**20**	8730	21	9810	8	9400	16	14.5	4.8	82	35	111
A-202	L	**8980**	**21**	9320	18	8840	20	8790	21	15.7	4.9	81	44	107
CH-202	S	**8780**	**22**	8490	22	8820	21	9050	20	15.8	4.9	81	72	96
CH-201	S	**8540**	**23**	7580	23	9450	13	8610	23	14.4	4.9	84	62	96
CA-201	S	**7440**	**24**	6500	24	7930	24	7890	24	15.1	4.9	82	54	100
MEAN		**9560**		9660		9440		9560		16.7	4.8	84	43	104
CV		**6.3**		4.6		8.5		5.2		7.3	1.2	1.1	29.4	11.2
LSD (.05)		**987**		922		1666		1034		2.8	0.1	2.6	25.6	5.3

S=short; M=medium; L=long.

Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.

Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 14. 2018 Biggs Intermediate-Late Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
12Y2175	M	11420	1	19.2	4.8	82	1	105
CJ-201	L	10900	2	14.5	4.8	80	1	96
14Y1006	L	10630	3	14.6	5.0	74	0	100
L-207	L	10590	4	14.2	4.8	77	0	110
10Y2043	S	10070	5	13.6	4.9	73	35	91
M-209	M	9760	6	19.7	4.8	80	0	97
M-206	M	9730	7	18.5	4.9	76	30	100
17Y3000	M	9600	8	18.7	4.9	75	31	100
L-206	L	9540	9	14.2	4.8	73	1	92
M-210	M	9480	10	18.2	4.9	75	15	96
M-105	M	9350	11	17.5	4.9	73	3	96
S-102	S	8500	12	11.3	5.0	71	5	94
MEAN		9970		16.2	4.9	76	10	98
CV		7.8		4.7	1.0	1.3	134.6	4.2
LSD (.05)		1123		1.1	0.1	1.4	19.8	5.9

Preliminary Lines and Varieties

17Y3158	M	11460	1	19.3	4.9	80	0	103
15Y3171	M	11090	2	19.7	4.9	83	0	96
17P3355	M	11060	3	20.4	4.9	82	0	102
15Y2153	M	10610	4	21.6	4.8	84	0	100
17Y2039	M	10480	5	19.8	4.9	85	0	95
16P3279	M	10420	6	20.5	5.0	82	2	101
15Y2100	S	10280	7	14.2	5.0	80	0	96
17Y2142	S	10090	8	15.6	5.0	78	0	107
16Y127	L	9950	9	15.7	4.9	77	8	101
17Y2046	S	9900	10	12.7	5.0	75	3	97
15Y2151	M	9830	11	18.5	4.9	82	3	106
15Y2112	S	9820	12	20.6	4.9	80	50	96
17P3398	M	9770	13	19.8	5.0	85	0	96
17Y3085	M	9720	14	21.1	4.9	82	0	104
CM-203	S	9620	15	15.7	5.0	73	70	95
17Y2069	S	9550	16	14.4	5.0	73	0	98
M-205	M	9530	17	19.0	4.8	84	0	97
A-202	L	9320	18	15.1	5.0	75	0	101
17Y3127	M	9160	19	17.8	4.9	77	10	96
15Y2024	S	8880	20	14.3	4.9	78	3	94
17Y1070	L	8730	21	14.4	4.9	76	5	105
CH-202	S	8490	22	14.4	5.0	75	30	92
CH-201	S	7580	23	13.2	5.0	75	20	92
CA-201	S	6500	24	14.0	5.0	77	20	90
MEAN		9660		17.2	4.9	79	9	98
CV		4.6		5.8	1.2	0.8	58.8	4.9
LSD (.05)		922		2.0	0.1	1.3	11.3	9.9

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 15. 2018 Butte Intermediate-Late Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
12Y2175	M	10960	1	15.6	4.7	88	96	102
10Y2043	S	10760	2	16.2	4.8	83	100	96
L-207	L	10400	3	15.2	4.9	84	94	112
17Y3000	M	10330	4	16.9	4.8	84	99	98
M-206	M	10270	5	15.9	4.8	84	96	104
M-105	M	9990	6	15.3	4.8	83	94	97
14Y1006	L	9970	7	15.5	4.8	83	99	97
M-210	M	9960	8	15.3	4.9	84	99	100
M-209	M	9580	9	15.7	4.8	87	74	99
CJ-201	L	9550	10	14.7	4.9	87	98	95
L-206	L	9530	11	14.4	4.8	83	99	102
S-102	S	9060	12	15.4	4.8	83	100	102
MEAN		10030		15.5	4.8	84	96	100
CV		6.0		5.5	1.4	1.3	7.1	3.2
LSD (.05)		868		1.2	0.1	1.6	9.7	4.6

Preliminary Lines and Varieties

17Y3158	M	10870	1	15.2	4.9	86	95	104
CM-203	S	10350	2	17.4	4.8	85	100	104
17Y3127	M	10180	3	14.8	4.9	84	100	111
16P3279	M	10040	4	14.5	4.9	88	100	107
17Y3085	M	9880	5	16.2	4.8	87	98	104
17Y2046	S	9820	6	16.6	4.9	84	68	99
17P3398	M	9810	7	15.6	4.9	89	88	102
17Y1070	L	9810	8	15.1	4.9	85	98	110
15Y2024	S	9700	9	14.3	4.7	86	90	100
15Y2151	M	9700	10	15.8	4.8	88	98	108
17Y2142	S	9620	11	17.5	4.8	88	95	114
17Y2039	M	9460	12	16.9	4.8	91	60	110
CH-201	S	9450	13	15.0	4.8	90	100	96
15Y3171	M	9440	14	15.6	4.8	87	90	94
17Y2069	S	9210	15	17.3	4.9	82	88	98
M-205	M	9200	16	14.6	4.8	89	73	107
15Y2100	S	9200	17	16.6	4.6	88	95	111
15Y2153	M	9070	18	15.6	4.7	87	60	101
15Y2112	S	9000	19	15.8	4.9	88	100	105
A-202	L	8840	20	15.3	4.9	85	83	104
CH-202	S	8820	21	16.0	4.8	86	98	96
17P3355	M	8720	22	14.8	4.8	89	95	104
16Y127	L	8540	23	14.4	4.9	87	100	109
CA-201	S	7930	24	16.1	4.8	84	95	103
MEAN		9440		15.7	4.8	87	90	104
CV		8.5		8.8	1.1	1.1	13.1	5.3
LSD (.05)		1666		2.9	0.1	1.9	24.4	11.3

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 16. 2018 Glenn Intermediate-Late Rice Variety Trials

Advanced Lines and Varieties

Variety	Grain Type	Grain Yield at 14% Moisture lbs/ac Yield	Rank	Grain Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
14Y1006	L	10680	1	15.8	4.8	82	4	104
10Y2043	S	10540	2	17.8	4.8	85	95	106
12Y2175	M	10510	3	17.8	4.8	90	15	107
L-207	L	10340	4	15.7	4.7	89	13	118
M-209	M	9990	5	17.9	4.8	90	16	107
CJ-201	L	9740	6	14.7	4.9	90	9	103
M-105	M	9520	7	18.1	4.8	82	68	114
17Y3000	M	9330	8	17.2	4.7	84	14	112
M-206	M	9300	9	16.7	4.8	83	25	112
L-206	L	9260	10	15.5	4.8	81	90	104
M-210	M	9160	11	16.1	4.8	83	18	109
S-102	S	8520	12	15.8	4.8	81	46	111
MEAN		9740		16.6	4.8	85	34	109
CV		5.1		4.3	0.9	1.2	54.2	3.6
LSD (.05)		715		1.0	0.1	1.5	26.7	5.6

Preliminary Lines and Varieties

17Y2142	S	10600	1	19.5	4.8	90	8	123
15Y2100	S	10340	2	16.1	4.7	89	23	111
17Y3158	M	10180	3	18.0	4.9	89	10	116
17Y2069	S	10170	4	17.8	4.8	83	13	113
17P3398	M	10160	5	17.9	4.8	91	18	118
CM-203	S	10050	6	16.7	4.8	82	45	112
17Y2046	S	10020	7	15.9	4.8	83	5	110
17Y2039	M	9920	8	17.7	4.8	91	5	109
16P3279	M	9900	9	18.3	4.9	90	13	114
M-205	M	9840	10	17.4	4.8	91	3	106
17Y3085	M	9810	11	18.4	4.9	91	30	112
15Y2024	S	9640	12	16.4	4.8	89	63	108
16Y127	L	9570	13	15.7	4.8	89	5	110
15Y2153	M	9510	14	19.6	4.7	91	8	107
15Y2151	M	9420	15	17.3	4.7	89	3	113
17Y1070	L	9400	16	14.0	4.8	87	3	117
15Y2112	S	9310	17	21.6	4.8	88	98	109
17P3355	M	9310	18	18.8	4.8	90	15	107
15Y3171	M	9220	19	17.2	4.7	91	43	106
CH-202	S	9050	20	17.1	4.8	83	88	100
A-202	L	8790	21	16.6	4.8	84	50	117
17Y3127	M	8770	22	17.8	4.8	86	33	115
CH-201	S	8610	23	15.0	4.9	88	65	102
CA-201	S	7890	24	15.1	4.9	84	48	107
MEAN		9560		17.3	4.8	88	29	111
CV		5.2		7.4	1.2	1.3	60.7	3.0
LSD (.05)		1034		2.7	0.1	2.3	36	6.9

S=short; M=medium; L=long.
Subjective rating of 1-5 where 1 = poor and 5 = excellent seedling emergence.
Subjective rating of 0-100 where 0 = none and 100 = completely lodged.

Table 17. Grain Yield (lb/acre @14% moisture) Summary of Intermediate/Late Rice Varieties by Location and Year (2014-2018)

Location	Year	M205	M402	M209	L206
Biggs (RES)	2014	10550	10040	11270	10340
	2015	9880	8450	9880	9520
	2016	9460	9370	9900	10490
	2017	10590	8880	10350	10520
	2018	9530		9760	9540
Location Mean		10002	9185	10232	10082
Glenn	2014	8910	8910	8610	8870
	2015	9420	8710	9700	9910
	2016	8490	9850	8520	9290
	2017	8500	7280	8200	7560
	2018	9840		9990	9260
Location Mean		9032	8688	9004	8978
Butte	2016	9110	6900	9010	9530
	2017	8550	6280	8480	8980
	2018	9200		9580	9530
Location Mean		8953	6590	9023	9347
Loc/Years Mean		9329	8154	9420	9469