UNIVERSITY OF CALIFORNIA, DAVIS

AGRONOMY PROGRESS REPORT

Agricultural Experiment Station Cooperative Extension

No. 223 October 1990

1990 REGIONAL BARLEY, COMMON AND DURUM WHEAT, TRITICALE, AND OAT PERFORMANCE TESTS IN CALIFORNIA[1]

L.F. Jackson[2], C.O. Qualset[3], R.L. Wennig[4], H. Vogt[4], L.K. Gibbs[4], M. Campbell[5], A. Fulton[5], T. Kearney[5], P. Mauk[5], D. Munier[5], M. Smith[5], B. Weir[5], C. Wick[5], J. Williams[5], and S. Wright[5]

University of California Cooperative Extension regional cereal evaluation tests were conducted in the Sacramento, San Joaquin, and Imperial Valleys and in the south central coastal region in 1990. Entries in the tests included standard cultivars, new and soon-to-be released cultivars, and advanced breeding lines from the University of California, the International Maize and Wheat Improvement Center (CIMMYT), and several private companies. Barleys (30 entries) were evaluated at 8 locations; common wheats (50 entries), at 10 locations; durum wheats (30 entries), at 3 locations; triticales (15 entries), at 4 locations; and oats (18 entries), at 3 locations. Because of the severity of the drought in the south central coastal region, the wheat and barley nurseries planted in San Luis Obispo county were not harvested.

Tests were conducted on University of California Field Stations or in fields of cooperating growers. Irrigated tests were planted at a seeding rate of 1.0 million seeds per acre (requiring from 66 to 117 lb/ac for common wheat and from 73 to 113 lb/ac for barley, depending on the entry). Tests were set-up in randomized complete block designs with four replications; each plot was six drill rows wide (6-inch row spacing) and 25 feet long, except at the UC Imperial Valley Agricultural Center where plots consisted of five rows, 16 feet long. Grain was harvested with a Wintersteiger Seedmaster Universal 150 plot combine. Foliar diseases were assessed at the soft-to-medium dough stage of growth by estimating the percentages of areas of second leaves (flag-1 leaf) affected. BYD assessments, however, were based on the percentage of plants showing symptoms. Black point and yellowberry of wheat were assessed on grain samples after harvest. Yields, test weights, kernel weights, plant

---

[1]These tests were conducted as a joint program of the University of California, Davis, Department of Agronomy and Range Science and Cooperative Extension. Land for the tests, the grain produced and other facilities were contributed by cooperating growers identified in Table 1. Quality evaluations were provided by the Western Wheat Quality Laboratory, USDA, Pullman, WA; General Mills, Inc., Vallejo, CA., ADM Milling, Olathe, KS; the Hard Red Spring and Durum Wheat Quality Laboratory, USDA, North Dakota State University, Fargo, ND; and the California Wheat Commission. The assistance of growers and quality laboratories is acknowledged with appreciation. The regional testing program is supported in part by funds provided by the California Crop Improvement Association and the California Wheat Commission.

[2]Extension Agronomist, [3]Agronomist, [4]Staff Research Associates, Department of Agronomy and Range Science, UC Davis, and [5]University of California Cooperative Extension Farm Advisors in Stanislaus, Kings, Yolo, Sacramento, Kern, San Luis Obispo, Merced, Butte, Sutter, and Tulare Counties, respectively.

heights, days to heading and maturity, lodging, shattering, disease reactions, and grain quality were determined as indicated in the tables. Information (location, planting dates, soil types, previous crops, fertilization, irrigation, rainfall) regarding each site is given in Table 1.

The California Agricultural Statistics Service estimated harvested barley acreage at 200,000 acres (planted acreage was 280,000), compared to 240,000 in 1989. Barley yields averaged 1.25 tons/ac (compared to 1.34 in 1989). Winter wheat was harvested from 550,000 acres (planted acreage was 620,000), compared to 570,000 in 1989. Winter wheat yields averaged 2.34 tons/ac (compared to 2.31 in 1989). Durum wheat was harvested from 57,000 acres (compared to 105,000 in 1989) and yielded 2.85 tons/ac (compared to 2.49 in 1989). Planted acreage of winter wheat was dominated by three cultivars, "Yecora Rojo", with 34.3% of the total acreage; "Anza", 28.7%; and "Yolo", 23.6%. Klasic was planted on 31,000 acres. The durum wheat acreage was dominated by "Yavaros 79", with 55% of the acreage, and "Mexicali 75", with 24%.

Small grain production in California faced a number of obstacles in 1990. The fourth year of drought meant lower availability of surface water and many growers saw their allocations severely reduced. Annual rainfall ranged from 110% of normal in Tulelake; 80-100%, in the southern Sacramento and northern San Joaquin Valley, to 40-60%, in the southern San Joaquin and south-central coastal valley regions. Despite near normal total rainfall in the Sacramento Valley, the crop was drought stressed and required earlier irrigation than normal (by about a month) because of the rainfall pattern. To add to the problem, late rains caused sprout damage at a level rarely seen in California. Early harvested wheat fields had up to 20% sprouted seed.

Russian wheat aphid occurred in at least trace levels in most grain producing areas of the state. Yield losses were minimal in most cases, especially for irrigated grain. The dry conditions limited disease damage except by powdery mildew (particularly on barley), which thrives under the dry spring conditions that occurred, and BYD, which is transmitted by aphids whose populations were high because of favorable conditions (for them).

BARLEY

The barley entries were 6-row spring feed barleys except for three 2-row spring malting barleys (entries B1202, 2B84-8589, and 2B84-8591) and one 6-row spring malting barley (entry 6B86-3016). Average yields for the barley tests ranged from 1790 lb/ac (1260 - 2390 lb/ac) at Yolo dryland to 5190 lb/ac (3400 - 7180 lb/ac) at Kern (Tables 2 - 9). Entries 8690/14, DA 587-71, Sunbar 458, and UC 476 were the highest yielding in the Sacramento Valley; and UC 337, DA 587-71, and UC81026-1, in the San Joaquin Valley. In the three-year period, 1988-90, entries UC 603, 8690/14, PH 585-6, and UC 476 were the highest yielding in the Sacramento Valley; UC 337, 8690/31, and Gustoe, in the San Joaquin Valley; and Prato, UC 476, UC81026-1, and UC 337, in dryland production areas.

Yields were affected by rodent and/or bird damage at Butte and Sutter, and by severe lodging at these same locations. Entries most affected by the bird and

rodent damage were most of the 2-row barleys as well as the 6-row barleys 6B86-3016, CM 72, and FMC 5041. Entries most affected by lodging included CM 72, Briggs, 8690/37, 8690/17, 8691/22, and FMC 5041. Entries with the best lodging resistance were 2B84-8589, 2B84-8591, UC 603, and FMC 7032.

Foliar diseases generally occurred in only low to moderate severity, except for powdery mildew, which was severe at Butte, Sutter, and UC Davis. Powdery mildew was most severe on entries NK BB 82-2, Sunbar 400, B1202, Gustoe, and FMC 7025, while 8690/37, 8691/22, 8690/14, Briggs, 2B84-8589, and FMC 7032 showed the best resistance. BYD was severe on a few entries, including 2B84-8589, 2B84-8591, 8690/14, and B2601.

Bushel weights and kernel weights were high at all locations except Yolo dryland (affected by drought), Sutter (reduced by lodging), and UC Davis (affected by late-season moisture stress). Entries Fiesta, PH 585-6, and Gustoe had consistently high bushel weights, while 8690/14 and PH 584-11 had consistently high kernel weights.

COMMON WHEAT

The common wheat entries were primarily hard red spring wheats. However, two hard white winter wheats (entries Phoenix and UC 864), four hard white spring wheats (Klasic, UC 849, Pioneer RBI0104, and Pioneer RBI0161), five hard red winter wheats (QT 588, Yecora Rojo 87W, QT 589, QT 577, and XH1075), and two spring club wheats (UC 850 and UC 852) were tested. Average yields for the common wheat tests ranged from 1620 lb/ac (840 - 2250 lb/ac) at Yolo dryland to 7270 lb/ac (6150 - 8650 lb/ac) at Kern (Tables 10 - 19). Entries FMC BR 5144, UC 864, Pioneer RBI0104, and UC 784 were the highest yielding in the Sacramento Valley; Klasic, Serra, and FMC BR 5144, in the San Joaquin Valley; and Klasic and CONT BR 5702, in the Imperial Valley. In the three-year period 1988-90, entries FMC BR 5144, UC 784, and Yolo were the highest yielding in the Sacramento Valley; Klasic, FMC BR 5144, Serra, and Yolo, in the San Joaquin Valley; Klasic, in the Imperial Valley (1989-90); and Serra, in the dryland production areas.

Yields were reduced by lodging at Sutter and UC Davis, late emergence at Kings, and by drought stress at Yolo dryland. Entries UC 850, UC 852, Serra, and WS 2502 were most affected by lodging while UC 839, UC 843, UC 842, QT 588, and QT 589 showed the best lodging resistance.

Diseases generally were in low to moderate severity. However, stripe rust was observed on a few entries (particularly FMC BR 5450 and CONT BR 5901) at Butte, Sutter, UC Davis, and Sacramento-San Joaquin Delta. Powdery mildew was severe on entries UC 847 and PH 986-61 in the Sacramento - San Joaquin Delta, where Fusarium crown rot also occurred in low to moderate levels on most entries. BYD occurred in moderate to severe levels at Kings, where entries DA 984-034, DA 984-02, Pioneer RBI0104, and S87-0149 were most affected.

Kernel weights and bushel weights were high at all locations except Yolo dryland where they were reduced by severe drought stress. Grain protein levels were low at Butte, Sutter, and the Sacramento - San Joaquin Delta

(averaging 10.7%, 11.4%, and 10.0% at 0% moisture basis, respectively) intermediate at UC Davis and Kern (averaging 12.3% and 12.5%), and high at Kings and Imperial (averaging 13.2% and 15.2%). Entries UC 845, UC 846, UC 847, and Klasic had consistently high bushel weights; UC 784, UC 847, and CONT BR 5702, consistently high kernel weights; and DA 984-02, UC 849, PH 986-61, Yecora Rojo, Baker, and DA 984-034, consistently high grain protein content.

Results of quality analyses of grain samples from the 1989 tests at Butte, Sacramento - San Joaquin Delta, Kings, and Imperial are given in Tables 20 - 23. Samples of Yecora Rojo and Baker from the Butte test received the highest bread crumb ratings. Samples of ESCA 2, ESCA 4, DA 984-034, and DA 984-039 from the Sacramento - San Joaquin Delta test received the highest hardness scores. Entries from the Imperial test that showed the most promise in baking included ESCA 2, ESCA 4, DA 984-034, and Yecora Rojo 87W. Many entries, including Yecora Rojo, FMC BR 5236, CONT BR 5702, CONT BR 5710, UC 839, UC 841, UC 842, UC 843, UC 844, UC 845, UC 846, UC 847, UC 849, PH 984-75, DA 984-02, PH 986-61, and CONT BR 5901, received high baking scores in quality analysis of samples from the 1990 test at UC Davis (Table 24).

DURUM WHEAT

Average yields of the durum wheat tests ranged from 5880 lb/ac (4770 - 7040 lb/ac) at Kings to 8880 lb/ac (7440 - 9880 lb/ac) at Imperial (Tables 25 - 28). Entries PH 885-59 and Westbred Turbo were the highest yielding in 1990, while Westbred Turbo, Carcomun "S", UC 781, and Yavaros 79 were the highest yielding in the three-year period, 1988-90.

Yields at Kings were relatively low because of very late emergence; tillering was just beginning in early March. Moderate to severe lodging occurred at UC Davis and Imperial. Entries FMC D5317, UC 780, Mexicali 75, Carcomun "S", Yavaros 79, and Westbred Turbo lodged most severely, while Aldura and PH 886-26 had the best lodging resistance.

Except for low to moderate levels of BYD at Kings, there were only traces of disease. At Kings, entries UC 780 and Imperial had the most severe BYD.

Bushel weights and kernel weights were high at each location. Entries Yavaros 79, UC 782, UC 743, and Altar 84 had consistently high bushel weights, while entries Nudura, Imperial, and Durex had consistently high kernel weights. Average protein levels were high at Imperial (averaging 14.4, 0% moisture basis), and moderate at Kings and UC Davis (averaging 13.5% and 13.2%). Entries PH 884-28, Westbred 881, CONT D5633, and Imperial had consistently high grain protein content.

Results of quality analyses of grain samples from the 1989 tests at the Sacramento - San Joaquin Delta and Imperial are given in Table 29. Entries that received high overall scores at both locations included Imperial, Nudura, and Durex.

TRITICALE

Average yields of the triticale tests ranged from 4300 lb/ac (2250 - 5360 lb/ac) at Sutter to 7280 lb/ac (5090 - 8370 lb/ac) at Imperial (Tables 30 - 34). Entry Stier was the highest yielding in 1990, while Faro "S" and Juan were the highest yielding in the three-year period 1988-90. Juan has yielded 112% of the hard red spring wheat Yolo from 1988-90.

Yields of all entries were affected by severe lodging at both UC Davis and Sutter. Diseases were not important on triticale in 1990, although moderate levels of BYD occurred on several entries.

Bushel weights of some entries were nearly as high as for wheat. Entries Stier, Rhino "S", Hippo "S", and UC 84 had the highest bushel weights. Kernel weights were high for many entries, including Eronga 83, Platypuss "S", Juan, Faro "S", UC 84, UC 61, and Rhino "S".

OAT

Average yields of the oat grain tests ranged from 600 lb/ac (260 - 1360 lb/ac) at Yolo dryland to 3740 lb/ac (2340 - 4620 lb/ac) at Tulare (Tables 35 - 38). Entries 75Q-036-83-1D and Ogle were the highest yielding in 1990, while 75Q-036-83-1D was the highest yielding in the three-year period 1988-90.

Yields were very low at Yolo dryland because of extreme moisture stress. Yields were low at UC Davis because of severe lodging and late-season moisture stress. All entries except 75Q-036-83-1D, A81-0006, 83SH137, and Ogle had severe lodging at UC Davis.

Diseases occurred at UC Davis, but not at Yolo dryland or Tulare. At UC Davis, BYD was severe on Cal Red, Cayuse, A81-006, Kanota, Sierra, and Montezuma; powdery mildew and crown rust were severe on Montezuma. Entries OT 03669 (hulless) and 82SH163 has the highest bushel weights, while Swan had the highest kernel weight.

Forage yields at Stanislaus, Tulare, and Kings are given in Table 39. Entries MO 06072 and 75Q-036-83-1D had high yields at all locations, while Cayuse, A82-0006, and Dirkwin (soft white wheat) were high at Stanislaus; Ogle, 82SH163, and A82-0058, at Tulare; and Swan, Ogle, and Kanota, at Kings. Entry MO 06072 combined high forage yields with high quality (fine stems).

TABLE 1. SITE CHARACTERISTICS FOR UC REGIONAL CEREAL EVALUATION TESTS, 1990

Location	Test	Planting Date	Soil Type	1989 Crop	Fertilization	Irrigation	Rainfall Yr/After Plant
Butte Co. M&T Ranch Chico	Wheat Barley	11/17/89	Columbia loam	Beans	Preplant: 82# N (NH_3) With seed: 90# 18-46-0 Topdress: 42# N (21-0-0)	Flood 1x (5" total)	14.2"/11.7"
Sutter Co. Newhall Land & Farming Meridian	Wheat Barley Triticale	11/7/89	Capay silty loam	Fallow	Preplant: 110# N (aqua)	Flood 1x (8-10" total)	19.4"/16.3"
UC Davis Agronomy Farm Davis	Wheat Triticale Barley Oats	11/14/89 " 11/22/89 "	Yolo fine sandy loam	Beans	Wheat preplant: 80# N (NH_3) Barley preplant: 40# N (NH_3) With seed: 90# 11-52-0-2S Wheat topdress: 46# N (jointing) 40# N (anthesis) Barley topdress: 46# N (jointing)	Wheat/Oat: Flood (2x, 12" total) Barley: Flood 1x (6" total)	15.7"/12.1"
Yolo Co. Vern Horgan Yolo	Wheat Barley Oat	11/10/89	Sehorn clay	Fallow	With seed: 90# 16-20-0-13S	None	15.7"/12.1"
Sacramento Co. Lewallen Ranch Tyler Island	Wheat	12/7/89	Egbert muck	Corn	With seed: 90# 11-52-0	Subsurface 1x, 6" total	8.0"/5.0"
Merced Co. San Juan Ranch Los Banos	Wheat Barley	11/20/89	Columbia clay loam	Cotton	Preplant: 92# N (urea) Topdress: 23# N (urea)	Flood 3x (14" total)	11.5"/10.2"
Stanislaus Co. Foster Farms Dairy No. 4 Waterford	Oat Hay	11/6/89	Modified loam	N/A	N/A	N/A	N/A
Tulare Co. ICI Americas Farmersville	Oat	12/14/89	Foster fine sandy loam	Wheat	Preplant: 100# N (urea)	Flood 4x (20" total)	5.9"/5.9"
Kings Co. J.G. Boswell Paso Robles Ranch Corcoran	Wheat Triticale	12/15/89	Tulare clay	Cotton	Preplant: 200# N (NH_3)	Flood 4x (24" total)	3.8"/3.6"
Kings Co. R.A. Rowan & Co. Grangeville	Barley	12/1/89	Vangard sandy loam	Cotton	Preplant: 110# N (NH_3)	Flood 2x (16" total)	3.8"/3.6"

Location	Test	Planting Date	Soil Type	1989 Crop	Fertilization	Irrigation	Rainfall Yr/After Plant
Kings Co. Stan Azevedo Grangeville	Oat hay	1/3/90	Nord fine sandy loam	Alfalfa	None	Flood 3x (18" total)	2.6"/2.5"
Kern Co. J.G. Boswell Kern Lake Ranch Old River	Wheat	12/8/89	Sacramento clay	Cotton	Preplant: 160# N (NH_3) 100# 11-52-0 Topdress: (Water-run NH_3) 27# N (3/9) 15# N (4/4)	Flood 4x (28" total)	3.5"/2.8"
Kern Co. Mitchell Ranch Shafter	Barley	12/8/89	Milham sandy loam	Cotton	Preplant: 115# N (UN-32) Topdress: (Water-run NH_3) 60# N	Flood (amt. ?)	3.5"/2.8"
Imperial Co. UC IVAC El Centro	Wheat Triticale	12/15/89	Meloland clay loam	Alfalfa	Preplant: 82# N (urea) 60# P_2O_5 Tillering: 41# N (urea) Boot: 41# N (urea)	Flood 6x (24" total)	0.3"/0.3"

TABLE 2. 1990 BUTTE BARLEY TEST

Entry	Yield (lbs/acre)	Lodging on 5/9	Lodging at Harvest	Shatter	BYDV	Leaf Rust	Net Blotch	Scald	Powdery Mildew	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	2680 (21)	5.8	6.0	4.8	1.0	2.0	1.0	1.0	2.0	45	48.1	43.8
191 CM 72	2090 (27)	7.8	8.0	5.0	1.0	1.5	1.8	1.8	1.0	43	47.0	42.5
316 PRATO	4220 (6)	6.3	7.3	3.3	1.0	2.0	1.3	1.3	2.3	42	48.4	39.5
337 UC 337	3480 (17)	4.0	5.3	3.0	1.0	1.3	1.0	1.0	1.5	43	50.2	42.5
365 SUNBAR 400	3800 (11)	3.3	6.0	2.3	1.0	1.8	1.5	3.0	4.0	36	45.7	42.8
476 UC 476	5140 (3)	4.8	4.5	2.0	1.0	2.0	1.0	1.3	1.5	41	50.7	42.5
584 NK BB-82-2	2250 (25)	2.8	4.5	5.8	1.0	2.0	1.3	1.0	4.8	41	47.1	43.2
603 UC 603	4340 (5)	2.5	3.0	2.5	1.0	1.8	1.3	1.0	2.3	35	49.2	37.6
618 GUSTOE	3730 (14)	3.0	7.3	2.3	1.0	2.3	1.0	3.3	2.5	30	49.1	37.8
647 SUNBAR 458	5320 (2)	1.5	4.5	2.5	1.8	2.5	1.0	1.5	1.0	38	50.1	44.4
703 FIESTA	2210 (26)	1.5	2.8	4.8	1.0	2.5	1.0	2.8	3.0	29	52.5	46.0
757 PH 584-11	3790 (12)	2.3	6.3	2.8	1.3	1.8	1.3	2.8	1.3	33	50.4	46.0
771 B1202	1620 (28)	3.3	4.0	6.8	1.3	1.8	1.0	1.8	1.3	43	49.6	39.3
775 UC81026-1	3800 (10)	7.5	7.8	3.5	1.0	1.0	1.0	1.0	4.0	39	47.9	39.9
777 8690/12	4110 (7)	5.0	7.0	3.3	1.0	2.3	2.3	1.0	2.0	41	49.2	41.4
778 8690/14	4920 (4)	3.3	4.8	2.3	1.0	1.8	1.3	2.0	1.5	37	48.8	48.0
779 8690/17	3910 (9)	6.8	7.5	4.8	1.0	1.0	1.0	1.0	1.0	41	47.2	39.3
781 8690/31	3250 (18)	6.8	7.8	4.5	1.0	2.0	1.3	1.0	1.8	43	46.8	39.4
782 8690/37	3720 (15)	7.0	6.8	3.0	1.0	2.0	1.0	1.0	1.0	39	46.3	40.0
784 8691/22	3950 (8)	6.3	6.8	3.5	1.0	1.3	1.0	1.0	1.0	43	46.2	43.3
787 PH 585-6	3730 (13)	2.8	5.0	2.3	2.3	1.3	1.0	1.5	1.5	36	51.8	45.0
790 FMC 5041	1070 (30)	6.5	7.3	4.3	1.0	2.8	1.0	1.0	1.3	48	47.5	44.3
797 B2601	2660 (22)	2.5	4.8	4.0	2.3	2.8	1.0	1.5	3.0	37	48.8	36.0
798 2B84-8589	2440 (23)	1.0	2.5	6.8	3.0	2.3	1.0	3.3	1.0	33	49.2	34.8
799 2B84-8591	2330 (24)	1.3	2.0	6.8	3.3	1.8	1.0	4.3	1.8	31	49.3	35.9
814 DA 587-71	5600 (1)	1.8	7.3	1.5	1.0	1.0	1.0	2.5	1.0	36	48.1	45.2
815 6B86-3016	1290 (29)	3.5	5.3	6.5	1.0	1.5	1.0	1.0	1.0	44	50.9	39.7
816 FMC 7024	3550 (16)	1.0	6.0	2.8	1.3	3.3	1.3	2.0	1.8	31	50.4	39.5
817 FMC 7025	2980 (20)	2.8	7.3	3.5	1.0	3.0	1.5	2.5	2.3	32	46.7	34.0
818 FMC 7032	3110 (19)	1.3	5.0	2.0	1.0	1.8	1.0	5.3	1.0	29	43.1	30.8
Mean	3370	3.8	5.7	3.8	1.3	1.9	1.2	1.9	1.9	38.	48.5	40.8
CV	23.6	35.5	28.0	35.7	30.1	34.2	39.3	40.4	36.6	4.8	2.7	5.3
LSD (.05)	1120	1.9	2.2	1.9	0.5	0.9	0.6	1.1	1.0	4	2.7	4.4

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 3. 1990 SUTTER BARLEY TEST

Entry	Yield (lbs/acre)	Lodging on 5/8	Lodging at Harvest	Shatter	BYDV	Leaf Rust	Scald	Powdery Mildew	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	2890 (14)	7.3	7.3	2.5	2.8	1.5	1.0	1.5	48	45.4	39.3
191 CM 72	2840 (16)	7.5	6.5	3.0	1.0	1.0	1.3	3.5	46	48.0	46.2
316 PRATO	2720 (19)	8.0	7.5	1.8	1.0	1.8	1.3	2.8	43	46.5	35.2
337 UC 337	2190 (25)	1.8	2.0	3.0	1.0	1.0	1.0	3.5	48	50.6	42.2
365 SUNBAR 400	2250 (23)	5.3	6.3	4.0	1.8	1.0	1.5	3.3	41	43.6	39.7
476 UC 476	3310 (7)	7.3	5.5	2.8	1.0	2.0	1.3	2.3	46	46.8	36.8
584 NK BB-82-2	2350 (22)	3.0	3.0	4.5	1.3	1.0	1.0	3.5	45	44.8	38.2
603 UC 603	3120 (10)	1.8	2.8	2.0	1.0	1.3	1.0	2.8	41	47.7	37.0
618 GUSTOE	2930 (13)	3.8	5.5	3.3	1.0	1.3	1.3	2.3	37	50.0	38.0
647 SUNBAR 458	3730 (3)	3.8	3.5	4.5	1.3	1.0	1.0	2.3	41	46.8	37.5
703 FIESTA	3110 (11)	3.3	4.3	2.3	1.0	1.0	1.3	3.0	37	51.3	41.5
757 PH 584-11	2870 (15)	4.3	4.8	2.8	1.0	1.0	1.0	2.0	40	49.0	42.5
771 B1202	1950 (27)	3.8	5.5	5.0	1.8	1.0	1.5	2.3	46	48.5	40.5
775 UC81026-1	3030 (12)	8.0	8.0	2.3	1.3	1.0	1.0	3.3	42	45.8	35.0
777 8690/12	2740 (18)	8.0	7.3	2.0	1.0	1.3	1.0	2.5	44	47.3	37.0
778 8690/14	4120 (1)	3.8	5.3	3.3	1.0	1.0	1.0	1.0	44	47.0	44.3
779 8690/17	2750 (17)	7.5	7.5	2.8	1.0	1.3	1.0	2.3	42	45.5	36.3
781 8690/31	3330 (6)	6.8	6.8	2.3	1.3	1.5	1.0	3.0	45	49.0	41.1
782 8690/37	3810 (2)	7.0	7.0	2.3	1.0	1.0	1.0	1.0	44	44.4	36.7
784 8691/22	3360 (5)	8.0	8.0	1.5	1.3	1.0	1.0	1.0	45	44.0	37.2
787 PH 585-6	3250 (9)	2.8	3.8	3.8	1.3	1.0	1.0	2.3	39	49.2	43.0
790 FMC 5041	1700 (29)	6.3	6.0	4.8	1.3	1.3	1.0	3.8	47	45.5	41.8
797 82601	1820 (28)	2.3	5.3	3.8	2.3	1.5	1.3	3.3	44	46.8	30.6
798 2B84-8589	1980 (26)	1.3	3.8	3.0	2.5	1.3	1.3	1.5	36	45.5	28.7
799 2B84-8591	2470 (21)	1.3	4.0	2.3	1.8	1.0	1.5	2.0	34	47.2	30.0
814 DA 587-71	3730 (4)	4.5	4.8	3.0	1.0	1.0	1.3	2.0	44	45.8	42.5
815 6B86-3016	920 (30)	2.8	3.8	5.3	1.0	1.0	1.0	3.3	48	48.4	38.7
816 FMC 7024	3290 (8)	1.3	3.5	2.3	1.0	1.3	1.0	2.3	34	50.7	42.2
817 FMC 7025	2230 (24)	1.8	4.3	3.5	1.0	1.0	1.5	2.8	39	48.4	38.4
818 FMC 7032	2720 (20)	1.3	1.8	1.5	1.8	1.0	1.0	1.8	32	44.5	35.5
Mean	2780	4.5	5.2	3.0	1.3	1.2	1.1	2.5	42	47.1	38.5
CV	22.4	20.7	33.9	33.4	35.1	37.4	35.4	22.9	3.4	2.6	5.8
LSD (.05)	880	1.3	2.5	1.4	0.6	NS	NS	0.8	3	2.5	4.5

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Disease assessed but occurring in trace or less amounts: net blotch.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 4. 1990 UC DAVIS BARLEY TEST

Entry	Yield (lbs/acre)	Lodging on 5/7	Lodging at Harvest	Shatter	BYDV	Leaf Rust	Net Blotch	Powdery Mildew	Days to Heading after 3/1	Days to Maturity	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	4060 (17)	6.3	6.3	1.0	2.8	1.5	1.5	1.3	35	71	46	44.9	37.6
191 CM 72	4760 (6)	7.3	8.0	1.3	1.0	1.0	1.0	1.5	35	73	41	47.0	42.3
316 PRATO	5220 (2)	3.5	4.5	1.0	1.3	1.8	1.3	1.5	37	72	43	47.3	37.9
337 UC 337	4740 (7)	3.0	3.5	1.5	1.0	1.0	1.0	1.8	37	72	45	48.4	41.3
365 SUNBAR 400	3450 (28)	2.0	5.8	1.0	2.8	1.3	1.0	2.5	45	71	37	41.8	34.8
476 UC 476	4830 (4)	2.5	3.5	1.0	1.0	1.0	1.0	1.3	41	72	44	47.9	38.4
584 NK BB-82-2	4030 (18)	1.8	4.0	1.0	1.5	1.3	1.0	2.0	42	73	42	44.8	38.3
603 UC 603	4660 (10)	1.0	1.3	1.0	1.5	1.0	1.0	1.3	32	72	36	47.5	32.5
618 GUSTOE	4080 (16)	1.3	5.0	1.0	1.3	1.3	1.3	3.5	50	82	34	48.8	34.2
647 SUNBAR 458	4450 (13)	1.0	2.3	1.0	1.5	1.0	1.0	1.0	44	75	38	45.3	36.0
703 FIESTA	3790 (21)	4.3	7.0	1.0	1.0	1.0	1.3	1.3	35	72	34	48.8	36.0
757 PH 584-11	3690 (23)	1.0	3.0	1.0	1.0	1.0	1.0	2.3	51	77	36	47.6	36.3
771 B1202	3700 (22)	2.3	5.0	1.8	2.5	1.0	1.0	1.0	45	71	43	47.0	37.3
775 UC81026-1	4610 (12)	4.3	6.5	1.3	1.0	1.0	1.0	2.8	36	73	39	44.4	35.8
777 8690/12	5350 (1)	2.5	5.3	1.0	1.0	1.3	1.0	1.3	36	71	42	47.4	38.4
778 8690/14	4870 (3)	1.3	2.5	1.0	2.0	1.0	1.0	1.0	44	71	38	45.5	41.9
779 8690/17	4790 (5)	3.5	5.8	1.0	1.0	1.0	1.0	1.0	38	70	37	44.0	32.8
781 8690/31	4720 (9)	3.5	5.0	1.3	2.5	1.0	1.0	1.8	37	72	43	45.9	38.3
782 8690/37	4230 (15)	3.3	5.0	1.8	1.3	1.0	1.0	1.0	38	72	43	44.1	35.8
784 8691/22	3680 (24)	5.8	7.0	1.0	1.3	1.3	1.0	1.0	42	74	42	42.9	35.4
787 PH 585-6	4620 (11)	1.0	1.0	1.0	2.3	1.0	1.0	1.3	49	79	36	49.9	40.5
790 FMC 5041	4010 (20)	7.3	8.0	1.0	2.0	1.0	1.3	1.5	32	68	44	44.9	37.0
797 B2601	3510 (26)	1.0	3.5	1.0	2.0	1.0	1.0	2.8	46	74	40	45.9	31.2
798 2B84-8589	2340 (29)	1.3	1.3	1.0	2.5	1.0	1.0	1.3	60	77	31	44.3	28.6
799 2B84-8591	3460 (27)	1.0	1.5	1.0	2.5	1.3	1.0	1.3	60	79	33	46.6	30.0
814 DA 587-71	4380 (14)	2.0	4.0	1.0	1.0	1.0	1.0	1.0	48	79	36	44.5	38.4
815 6B86-3016	3570 (25)	2.8	4.0	2.5	2.0	1.0	1.0	1.0	34	66	49	48.8	34.5
816 FMC 7024	4740 (8)	1.0	1.3	1.0	1.0	1.3	1.8	2.0	52	84	34	50.3	37.0
817 FMC 7025	4010 (19)	1.3	3.3	1.0	1.5	1.0	1.0	3.5	50	79	36	46.6	31.6
818 FMC 7032	2320 (30)	1.0	1.0	1.0	2.5	1.0	1.0	1.3	53	81	31	39.3	25.9
Mean	4160	2.7	4.2	1.1	1.6	1.1	1.1	1.6	43	74	39	46.1	35.9
CV	12.7	39.5	25.8	25.9	32.9	25.4	20.3	37.2	3.1	2.0	4.4	3.0	5.5
LSD (.05)	740	1.5	1.5	0.4	0.8	0.4	0.3	0.8	3	3	4	2.8	4.1

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Oisease assessed but occurring in trace or less amounts: scald.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 5. 1990 MERCED BARLEY TEST

Entry	Yield (lbs/acre)	Days to Heading after 3/1	Lodging on 5/1	Lodging at Harvest	Shatter	BYDV	Leaf Rust	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	4600 (22)	61	6.0	5.3	1.0	2.8	1.3	41	46.8	40.6
191 CM 72	4930 (18)	59	7.8	7.3	2.0	1.0	1.0	42	47.3	41.0
316 PRATO	5670 (8)	63	4.0	3.3	1.0	1.3	1.3	40	47.7	37.7
337 UC 337	6340 (3)	62	1.3	1.0	1.3	1.0	1.0	44	50.1	40.5
365 SUNBAR 400	5150 (15)	64	1.5	3.5	1.0	1.5	1.3	37	46.4	43.3
476 UC 476	6120 (6)	65	1.3	1.0	1.5	1.0	1.3	39	48.4	39.3
584 NK BB-82-2	4970 (17)	64	1.0	1.5	1.0	1.8	1.5	42	46.2	38.3
603 UC 603	5990 (7)	58	1.0	1.0	1.0	1.0	1.3	37	47.0	34.8
618 GUSTOE	5260 (14)	67	1.0	1.8	1.0	1.3	3.0	33	50.2	40.6
647 SUNBAR 458	5310 (13)	66	1.0	1.5	1.0	1.0	1.5	37	47.8	40.5
703 FIESTA	5600 (9)	58	1.5	3.0	1.0	1.0	1.8	36	50.1	40.9
757 PH 584-11	5550 (11)	67	1.0	2.0	1.0	1.0	1.8	36	51.2	44.8
771 B1202	4840 (19)	62	1.5	1.8	1.0	2.0	1.3	41	50.5	41.5
775 UC81026-1	6560 (1)	64	3.3	3.0	1.0	1.0	1.0	38	46.7	40.3
777 8690/12	6360 (2)	63	1.3	1.3	1.0	1.0	1.3	39	49.1	41.0
778 8690/14	6290 (4)	63	1.0	1.0	1.0	1.3	1.0	34	47.9	46.4
779 8690/17	5370 (12)	62	6.0	5.8	2.3	1.0	1.0	40	46.5	39.6
781 8690/31	6290 (5)	62	2.8	2.0	1.0	1.3	1.0	42	47.8	41.5
782 8690/37	4620 (21)	64	6.0	4.5	1.0	1.3	1.0	42	45.9	38.8
784 8691/22	4450 (24)	63	4.5	4.5	1.0	1.3	1.0	40	45.9	41.1
787 PH 585-6	4710 (20)	67	1.0	1.0	1.0	2.0	1.3	38	51.0	41.2
790 FMC 5041	4140 (25)	55	6.8	7.0	2.5	1.5	1.3	45	46.6	38.7
797 B2601	3890 (26)	64	1.0	1.5	1.0	1.8	2.0	41	47.6	34.7
798 2B84-8589	2700 (30)	69	1.3	1.8	1.0	1.3	2.3	30	46.6	31.8
799 2B84-8591	3410 (28)	69	1.0	1.3	1.0	2.8	2.0	31	48.5	32.2
814 DA 587-71	5560 (10)	66	1.0	2.5	1.0	1.0	1.0	38	46.4	43.2
815 6B86-3016	3150 (29)	58	2.0	2.3	2.5	1.5	1.0	47	48.5	37.2
816 FMC 7024	4980 (16)	68	1.0	2.5	1.0	1.3	1.8	35	48.3	37.8
817 FMC 7025	4470 (23)	66	1.0	2.3	1.0	1.5	3.0	34	47.3	37.0
818 FMC 7032	3730 (27)	67	1.0	1.5	1.0	1.8	1.5	30	42.4	31.4
Mean	5030	63	2.4	2.6	1.2	1.4	1.4	38	47.7	39.3
CV	14.1	1.9	32.3	42.8	35.3	30.4	28.4	4.2	2.3	5.3
LSD (.05)	1000	2	1.1	1.6	0.6	0.6	0.6	3	2.2	4.3

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: net blotch, scald, powdery mildew.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 6. 1990 KINGS BARLEY TEST

Entry	Yield (lbs/acre)	Lodging at Harvest	BYDV	Leaf Rust	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	4330 (20)	1.0	1.8	1.0	32	49.9	48.8
191 CM 72	4810 (9)	3.5	1.8	1.0	31	50.6	47.8
316 PRATO	4980 (5)	1.0	1.5	1.5	26	49.8	42.5
337 UC 337	5360 (1)	1.0	1.0	1.0	32	50.3	45.2
365 SUNBAR 400	3920 (27)	1.5	1.5	1.3	27	49.4	45.9
476 UC 476	4830 (8)	1.0	1.0	1.5	32	50.9	44.7
584 NK BB-82-2	5050 (3)	1.5	1.3	1.0	31	48.9	47.4
603 UC 603	4560 (17)	1.0	1.0	1.3	29	49.7	38.0
618 GUSTOE	4680 (12)	1.5	1.3	2.3	24	53.5	36.9
647 SUNBAR 458	4150 (22)	1.0	1.5	1.3	26	49.4	42.8
703 FIESTA	4560 (16)	1.8	1.3	1.0	27	51.8	47.3
757 PH 584-11	4740 (11)	1.0	1.3	1.0	26	50.7	47.9
771 B1202	4430 (19)	1.5	2.5	1.5	37	54.1	43.8
775 UC81026-1	4980 (4)	1.0	1.0	1.0	28	49.5	46.7
777 8690/12	4610 (14)	1.0	1.0	1.3	27	50.5	41.8
778 8690/14	4120 (23)	1.0	1.5	1.0	24	49.0	46.5
779 8690/17	4290 (21)	1.3	1.0	1.0	28	48.0	40.8
781 8690/31	5180 (2)	1.0	1.5	1.0	32	52.3	48.4
782 8690/37	4780 (10)	1.3	1.0	1.0	34	51.5	42.0
784 8691/22	4840 (7)	1.3	1.0	1.0	32	47.8	43.4
787 PH 585-6	4480 (18)	1.0	1.8	1.3	26	52.1	42.7
790 FMC 5041	4670 (13)	3.3	2.3	1.0	36	52.0	48.2
797 B2601	4060 (24)	1.3	3.0	1.3	33	52.1	39.2
798 2884-8589	3400 (30)	1.0	3.0	1.5	25	50.7	37.1
799 2B84-8591	3430 (29)	1.0	2.8	1.5	25	52.3	38.8
814 DA 587-71	4870 (6)	1.0	1.3	1.0	27	48.7	45.3
815 6B86-3016	3990 (25)	1.8	3.0	1.0	39	53.2	38.5
816 FMC 7024	4600 (15)	1.0	1.0	1.5	21	50.5	38.8
817 FMC 7025	3970 (26)	1.0	1.0	1.5	27	49.6	34.4
818 FMC 7032	3790 (28)	2.3	1.8	2.0	24	43.3	31.9
Mean	4480	1.4	1.6	1.2	29	50.4	42.8
CV	12.3	56.9	35.1	35.3	6.4	3.7	4.9
LSD (.05)	770	1.1	0.8	0.6	4	3.8	4.3

Rating scale for diseases (area of flag-1 leaf affected) and lodging: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: net blotch, scald, powdery mildew.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 7. 1990 KERN BARLEY TEST

Entry	Yield (lbs/acre)	Plant Height (inches)	Lodging on 5/2	Lodging at Harvest	Shatter	BYDV	Leaf Rust	Net Blotch	Powdery Mildew	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	5070 (20)	43	5.5	4.3	1.0	1.8	1.0	1.0	1.0	48.0	43.6
191 CM 72	5070 (18)	43	7.0	6.8	1.0	1.8	1.0	1.0	1.0	48.9	44.8
316 PRATO	5990 (5)	38	6.8	5.3	1.0	1.0	1.3	1.0	1.0	50.0	42.3
337 UC 337	5970 (6)	45	6.0	3.5	1.0	1.3	1.0	1.0	1.8	49.7	39.5
365 SUNBAR 400	4800 (22)	41	5.0	4.0	1.0	2.5	1.0	1.0	2.3	47.7	45.3
476 UC 476	5210 (17)	39	3.8	3.0	1.0	1.0	1.0	1.0	1.3	50.8	41.0
584 NK BB-82-2	5850 (8)	46	5.3	2.0	1.0	2.0	1.0	1.3	3.3	49.5	45.9
603 UC 603	5280 (16)	41	1.3	1.3	1.0	1.0	1.3	1.0	1.3	49.8	38.3
618 GUSTOE	5340 (13)	39	1.8	4.8	1.0	1.0	1.3	1.0	2.3	51.3	38.3
647 SUNBAR 458	6070 (4)	43	1.5	1.5	1.0	1.8	1.0	1.0	1.0	50.7	45.7
703 FIESTA	5070 (19)	39	1.8	1.5	1.0	1.3	1.0	1.8	2.5	50.9	44.0
757 PH 584-11	5900 (7)	42	1.3	4.0	1.0	1.3	1.0	1.0	2.0	52.8	47.8
771 B1202	4270 (25)	45	5.0	4.8	1.3	3.3	1.0	1.0	1.0	53.7	46.7
775 UC81026-1	5780 (9)	41	6.3	4.3	1.0	1.3	1.3	1.3	2.8	49.1	44.8
777 8690/12	5340 (14)	40	4.5	3.5	1.0	1.0	1.3	1.0	1.0	50.4	43.5
778 8690/14	5670 (11)	41	2.3	1.3	1.0	4.0	1.0	1.0	1.5	48.6	48.7
779 8690/17	5330 (15)	41	5.0	4.3	1.0	1.5	1.0	1.0	1.3	47.7	41.4
781 8690/31	5410 (12)	43	6.0	5.0	1.0	1.8	1.0	1.0	1.3	47.4	42.3
782 8690/37	5690 (10)	44	6.0	6.3	1.0	1.0	1.0	1.0	1.0	47.1	41.8
784 8691/22	4560 (24)	41	5.0	5.5	1.3	1.3	1.0	1.0	1.0	45.2	38.8
787 PH 585-6	6540 (2)	42	2.3	1.8	1.0	2.0	1.0	1.0	1.5	54.2	47.5
790 FMC 5041	4840 (21)	45	6.0	4.8	1.0	1.8	1.0	1.0	1.0	48.6	45.0
797 B2601	3480 (29)	48	1.0	1.5	2.3	3.5	1.0	1.0	3.0	52.5	38.5
798 2B84-8589	3850 (28)	39	1.8	1.3	1.0	4.8	1.8	1.0	1.3	50.4	35.2
799 2B84-8591	4650 (23)	36	1.0	1.3	1.0	4.8	1.3	1.0	1.0	52.2	38.3
814 DA 587-71	7180 (1)	40	1.0	2.0	1.0	1.3	1.0	1.0	1.0	49.2	46.1
815 6B86-3016	3400 (30)	52	3.5	2.3	2.0	3.0	1.0	1.0	1.3	52.2	41.1
816 FMC 7024	6200 (3)	39	1.0	3.0	1.0	1.0	1.0	1.0	1.3	50.1	38.5
817 FMC 7025	4030 (26)	42	2.3	5.3	1.0	1.8	1.0	1.3	3.8	48.4	33.8
818 FMC 7032	4010 (27)	38	1.8	3.8	1.0	2.5	1.5	1.5	1.3	43.5	32.9
Mean	5190	42	3.6	3.4	1.1	2.0	1.1	1.1	1.6	49.7	42.0
CV	10.7	5.8	39.2	46.4	24.2	44.0	24.4	19.2	42.0	2.5	5.5
LSD (.05)	780	3	2.0	2.2	0.4	1.2	0.4	0.3	0.9	2.5	4.7

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Disease assessed but occurring in trace or less amounts: scald.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 8. 1990 YOLO DRYLAND BARLEY TEST

Entry	Yield (lbs/acre)	Lodging at Harvest	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 BRIGGS	1750 (16)	2.3	30	43.2	32.3
191 CM 72	2390 (1)	2.3	26	43.3	35.0
316 PRATO	1860 (7)	1.3	26	41.9	28.3
337 UC 337	1850 (8)	1.0	23	42.8	28.3
365 SUNBAR 400	2020 (3)	1.0	20	42.7	35.5
476 UC 476	1620 (24)	1.0	23	44.7	29.9
584 NK BB-82-2	1740 (17)	1.0	26	41.9	31.5
603 UC 603	1870 (6)	1.0	26	43.5	28.9
618 GUSTOE	1680 (22)	1.0	19	42.3	26.6
647 SUNBAR 458	1770 (14)	1.0	23	42.6	31.2
703 FIESTA	1530 (25)	1.3	21	45.9	33.8
757 PH 584-11	1420 (26)	1.0	21	39.6	27.2
771 B1202	1960 (4)	1.5	28	45.8	29.5
775 UC81026-1	2070 (2)	1.0	26	42.6	30.3
777 8690/12	1710 (19)	1.0	24	43.0	28.9
778 8690/14	1620 (23)	1.0	23	41.7	31.6
779 8690/17	1800 (12)	1.0	24	41.0	29.3
781 8690/31	1920 (5)	1.0	26	43.2	30.7
782 8690/37	1710 (18)	1.0	25	41.6	30.0
784 8691/22	1760 (15)	1.0	26	41.3	30.0
787 PH 585-6	1820 (10)	1.0	19	44.9	32.7
790 FMC 5041	1790 (13)	5.5	32	43.4	33.3
797 B2601	1700 (20)	1.0	27	44.1	29.0
798 2B84-8589	1680 (21)	1.0	19	45.9	25.8
799 2B84-8591	1810 (11)	1.0	19	46.8	26.8
814 DA 587-71	1840 (9)	1.0	23	39.0	31.2
815 6B86-3016	1370 (29)	1.3	32	46.4	30.0
816 FMC 7024	1400 (28)	1.0	17	44.3	29.1
817 FMC 7025	1410 (27)	1.0	21	42.8	25.5
818 FMC 7032	1260 (30)	1.0	15	38.7	25.5
Mean	1740	1.3	24	43.0	29.9
CV	12.0	25.8	6.8	1.5	3.7
LSD (.05)	290	0.5	3	1.3	2.3

Rating scale for lodging: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.

TABLE 9. 1990 AND 1988-90 BARLEY YIELD SUMMARY (LBS/ACRE)

		SACRAMENTO VALLEY			SAN JOAQUIN VALLEY			DRYLAND		
		1990	1989-90	1988-90	1990	1989-90	1988-90	1990	1989-90	1988-90
	ENTRY	3 LOC	6 LOC/YR	9 LOC/YR	3 LOC	6 LOC/YR	9 LOC/YR	1 LOC	3 LOC/YR	5 LOC/YR
2	BRIGGS	3210 (19)	3620 (18)	4140 (17)	4660 (20)	4490 (17)	4310 (16)	1750 (16)	2230 (4)	2680 (5)
191	CM 72	3230 (18)	3520 (20)	3970 (20)	4940 (19)	4450 (19)	4260 (18)	2390 (1)	2320 (1)	2270 (18)
316	PRATO	4060 (6)	4180 (10)	4600 (8)	5540 (5)	4680 (11)	4580 (10)	1860 (7)	2110 (7)	2840 (1)
337	UC 337	3470 (16)	4120 (11)	4710 (7)	5890 (1)	5000 (3)	5010 (1)	1850 (8)	2120 (6)	2760 (4)
365	SUNBAR 400	3160 (20)	3580 (19)	4090 (18)	4630 (21)	4310 (21)	3970 (20)	2020 (3)	2280 (2)	2580 (8)
476	UC 476	4430 (4)	4550 (4)	4920 (4)	5380 (8)	4640 (13)	4770 (4)	1620 (24)	2010 (10)	2780 (2)
584	NK BB-82-2	2880 (23)	3920 (15)	4390 (15)	5290 (10)	4910 (6)	4690 (7)	1740 (17)	2120 (5)	2630 (7)
603	UC 603	4040 (7)	4660 (3)	5230 (1)	5280 (11)	4990 (5)	4460 (12)	1870 (6)	1770 (19)	2400 (14)
618	GUSTOE	3580 (15)	4090 (12)	4510 (11)	5100 (15)	5000 (4)	4870 (3)	1680 (22)	1760 (20)	2350 (17)
647	SUNBAR 458	4500 (3)	4810 (2)		5180 (14)	4680 (10)		1770 (14)	1880 (14)	
703	FIESTA	3040 (22)	3690 (17)	4290 (16)	5080 (16)	4610 (15)	4170 (19)	1530 (25)	1870 (15)	2470 (12)
757	PH 584-11	3450 (17)	4030 (13)	4590 (10)	5400 (7)	4640 (12)	4500 (11)	1420 (26)	1620 (25)	2190 (19)
771	B1202	2420 (27)	2920 (25)		4510 (24)	4180 (22)		1960 (4)	2080 (8)	
775	UC81026-1	3810 (12)	4250 (6)	4740 (6)	5780 (3)	5120 (1)	4670 (8)	2070 (2)	2260 (3)	2780 (3)
777	8690/12	4070 (5)	4220 (8)	4490 (13)	5430 (6)	4840 (9)	4720 (6)	1710 (19)	2000 (11)	2570 (9)
778	8690/14	4640 (1)	4870 (1)	5050 (2)	5360 (9)	4870 (7)	4740 (5)	1620 (23)	2050 (9)	2550 (10)
779	8690/17	3820 (11)	4180 (9)	4590 (9)	5000 (18)	4570 (16)	4260 (17)	1800 (12)	1970 (12)	2510 (11)
781	8690/31	3770 (13)	4230 (7)	4780 (5)	5630 (4)	5060 (2)	4900 (2)	1920 (5)	1950 (13)	2680 (6)
782	8690/37	3920 (8)	3990 (14)	4490 (12)	5030 (17)	4430 (20)	4380 (15)	1710 (18)	1800 (17)	2470 (13)
784	8691/22	3660 (14)	3860 (16)	4430 (14)	4620 (22)	4490 (18)	4400 (14)	1760 (15)	1640 (23)	2150 (20)
787	PH 585-6	3870 (9)	4430 (5)	4950 (3)	5240 (13)	4840 (8)	4640 (9)	1820 (10)	1750 (21)	2380 (15)
790	FMC 5041	2260 (28)	3430 (21)	4010 (19)	4550 (23)	4620 (14)	4420 (13)	1790 (13)	1840 (16)	2360 (16)
797	B2601	2660 (26)	3370 (23)		3810 (28)	4060 (23)		1700 (20)	1790 (18)	
798	2884-8589	2260 (29)	3110 (24)		3320 (30)	3430 (25)		1680 (21)	1670 (22)	
799	2884-8591	2750 (24)	3400 (22)		3830 (27)	3710 (24)		1810 (11)	1630 (24)	
814	DA 587-71	4570 (2)			5870 (2)			1840 (9)		
815	6886-3016	1930 (30)			3510 (29)			1370 (29)		
816	FMC 7024	3860 (10)			5260 (12)			1400 (28)		
817	FMC 7025	3070 (21)			4160 (25)			1410 (27)		
818	FMC 7032	2720 (25)			3840 (26)			1260 (30)		
MEAN		3440	3960	4550	4900	4590	4540	1740	1940	2520
CV		19.2	17.0	14.3	12.4	13.2	13.8	12.0	16.7	13.5
LSD (.05)		530	380	300	490	340	290	290	260	210

Numbers in parentheses indicate relative rank in column.

TABLE 10. 1990 BUTTE COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Lodging at Harvest	BYDV	Septoria	Plant Height (inches)	Test Weight (lbs/bu)	Black Point	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	6340 (15)	1.5	1.0	1.0	37	62.7	1.0	6.5	39.5	9.7
112 YECORA ROJO	6290 (18)	3.5	2.0	1.8	33	63.3	1.0	2.5	44.7	10.7
221 PHOENIX	6290 (17)	1.0	1.5	1.3	37	63.3	1.0	7.0	40.0	10.8
353 YOLO	6740 (3)	2.3	1.0	1.0	39	63.3	1.0	5.5	36.3	10.0
415 KLASIC	6180 (26)	1.3	2.3	1.3	33	63.3	1.0	2.0	45.8	11.2
538 PROBRAND 775	5750 (38)	1.0	1.5	3.3	30	62.0	1.0	4.0	38.0	10.9
544 TADINIA	6330 (16)	1.0	1.5	1.0	40	62.8	1.0	8.0	39.7	9.6
638 SERRA	6700 (5)	4.0	1.0	1.0	42	62.9	1.0	7.5	44.5	9.3
716 BAKER	6180 (25)	2.5	2.5	1.3	33	63.0	1.0	2.0	43.5	11.0
784 UC 784	6510 (9)	1.3	2.3	1.0	33	63.1	1.0	2.0	46.1	11.3
785 UC 785	6240 (22)	1.8	1.8	1.0	34	63.6	1.0	2.0	43.8	11.1
786 UC 786	6630 (6)	2.0	1.0	1.3	35	63.7	1.0	4.0	43.0	9.8
788 DA 984-034	6270 (19)	1.3	1.8	1.0	38	64.0	1.0	1.0	40.4	11.7
804 FMC BR 5144	6810 (2)	1.5	1.0	1.0	39	62.6	1.0	7.5	38.0	8.6
821 FMC BR 5236	5700 (40)	2.0	2.0	1.5	38	60.7	1.0	2.0	40.7	11.4
822 FMC 8R 5450	5470 (47)	1.5	2.5	1.8	36	62.9	1.0	2.0	38.0	11.2
823 FMC 8R 5678	6410 (13)	1.5	1.3	1.5	34	62.1	1.0	4.5	45.8	10.5
827 CONT BR 5702	6470 (10)	1.5	1.8	1.0	32	62.4	1.0	2.5	45.4	10.9
828 CONT 8R 5710	6240 (21)	1.8	2.5	1.0	33	62.5	1.0	2.0	43.2	11.0
829 CONT BR 5738	5910 (35)	1.0	1.8	1.8	32	62.8	1.0	1.5	41.1	11.6
838 QT 588	5510 (45)	1.3	1.3	1.0	38	62.6	1.0	5.5	39.8	10.3
839 UC 839	6410 (14)	1.0	1.0	1.0	27	63.2	1.0	5.5	39.0	10.5
840 UC 840	6510 (8)	1.0	1.5	1.0	27	62.9	1.0	3.5	45.2	10.3
841 UC 841	5490 (46)	1.0	1.3	1.0	27	61.2	1.0	4.5	38.5	11.0
842 UC 842	5720 (39)	1.0	1.5	1.0	28	62.3	1.0	1.5	41.0	12.2
843 UC 843	5990 (32)	1.0	1.8	1.0	29	62.1	1.0	2.0	40.0	11.5
844 UC 844	5650 (42)	1.0	1.8	1.0	30	62.3	1.0	5.0	38.7	10.9
845 UC 845	5680 (41)	1.5	1.5	1.0	40	64.4	1.0	2.5	42.9	11.4
846 UC 846	5810 (37)	1.0	1.8	1.0	38	64.1	1.0	2.5	40.5	11.6
847 UC 847	6080 (30)	1.3	1.0	1.0	42	64.0	1.0	3.0	46.7	10.5
848 YECORA ROJO 87W	6740 (4)	1.0	2.8	1.0	31	63.5	1.0	2.0	42.3	11.4
849 UC 849	5580 (44)	1.0	2.5	2.0	36	63.1	1.0	5.0	36.5	11.0
850 UC 850	5920 (34)	5.8	1.5	1.5	41	62.1	1.0	7.5	37.0	8.9
852 UC 852	5950 (33)	5.3	1.0	2.0	40	62.3	1.0	8.0	38.6	8.7
859 WS 2501	5430 (48)	2.8	2.0	1.3	43	60.9	1.0	4.0	38.2	11.1
860 WS 2502	5850 (36)	2.3	1.0	1.5	42	61.3	1.0	7.5	39.3	9.6
862 PIONEER RBI0104	6440 (11)	1.3	1.3	2.3	38	61.5	1.0	4.5	41.7	9.6
863 PIONEER RBI0161	6440 (12)	2.0	1.5	1.3	38	62.9	1.0	3.5	42.4	11.0
864 UC 864	6200 (24)	1.0	1.5	1.3	29	62.9	1.0	2.0	39.8	11.3
865 PH 984-75	6200 (23)	1.0	2.5	1.0	34	62.0	1.0	2.0	41.0	10.5
866 DA 984-02	6120 (29)	1.0	1.8	1.0	38	63.7	1.0	1.0	41.2	12.6
867 PH 986-61	6530 (7)	1.3	1.0	2.0	39	63.0	1.0	2.5	46.7	11.4
868 PH 986-66	6870 (1)	1.5	1.5	3.0	32	63.1	1.0	3.5	43.2	10.5
872 S87-0149	6130 (28)	1.0	1.5	1.0	37	62.0	1.0	2.5	42.7	10.9
873 N89-4005	6050 (31)	1.3	1.3	1.3	33	61.2	1.0	6.0	42.7	10.6
874 QT 589	5240 (49)	1.0	1.3	1.0	38	63.1	1.0	6.0	41.2	10.6
875 QT 577	4740 (50)	1.0	1.0	1.0	42	61.7	1.0	5.0	39.7	11.3
876 XH1075	5580 (43)	1.8	1.0	1.0	47	62.1	2.0	3.5	45.4	10.9
882 FMC BR 7381	6270 (20)	1.0	1.0	2.3	30	61.4	1.0	3.5	36.4	10.6
883 CONT BR 5901	6170 (27)	2.3	1.3	2.0	34	63.8	1.0	1.5	41.0	10.6
Mean	6100	1.6	1.6	1.3	35.	62.7	1.0	3.8	41.3	10.7
CV	6.1	46.4	40.9	29.6	3.2	0.6	0.0	19.7	3.1	4.6
LSD (.05)	520	1.1	0.9	0.6	2	0.8	0.0	1.5	2.5	1.0

Rating scale for diseases (area of flag-1 leaf affected), lodging, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, stripe rust, powdery mildew.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.
Percent protein, 0.0% moisture basis.

TABLE 11. 1990 SUTTER COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Lodging on 5/8	Lodging at Harvest	Shatter	Leaf Rust	Stripe Rust	Septoria	Plant Height (inches)	Test Weight (lbs/bu)	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	5900 (4)	1.8	3.5	1.0	1.0	1.0	1.0	43	63.0	6.0	37.3	10.8
112 YECORA ROJO	5010 (38)	4.5	4.5	1.5	1.0	1.0	1.3	38	61.5	2.5	41.8	11.5
221 PHOENIX	5140 (31)	2.3	4.3	1.0	1.0	1.0	1.0	42	61.3	5.5	36.0	10.5
353 YOLO	5280 (26)	4.0	7.0	1.0	1.0	1.0	1.0	43	61.5	4.0	32.5	11.4
415 KLASIC	5360 (21)	4.0	4.3	1.3	1.0	1.0	1.0	37	61.6	1.0	40.8	11.9
538 PROBRAND 775	5310 (22)	1.0	1.5	1.0	1.0	1.0	2.0	36	59.8	3.0	34.5	11.1
544 TADINIA	5620 (10)	2.5	3.8	1.3	1.0	1.0	1.0	46	61.2	4.0	35.5	11.1
638 SERRA	4430 (45)	6.0	5.0	1.3	1.5	1.0	1.0	45	62.0	6.5	39.0	10.3
716 BAKER	5200 (30)	4.8	5.0	1.8	1.0	1.0	1.3	35	60.2	2.0	42.4	11.4
784 UC 784	5720 (8)	2.8	3.8	1.0	1.0	1.0	1.5	37	60.6	1.0	42.8	11.6
785 UC 785	5480 (16)	2.0	3.8	1.0	1.0	1.0	1.0	39	61.7	2.0	41.9	11.4
786 UC 786	5610 (11)	4.5	6.3	1.0	1.3	1.0	1.0	39	61.5	2.0	39.3	11.4
788 DA 984-034	5390 (20)	2.3	3.3	1.8	1.0	1.0	1.0	44	62.5	1.0	38.9	12.0
804 FMC BR 5144	5750 (7)	3.5	4.3	1.3	1.0	1.0	1.3	45	61.6	6.5	33.6	10.4
821 FMC BR 5236	4200 (47)	5.0	5.5	2.3	1.0	1.0	1.3	42	59.1	1.5	37.0	11.2
822 FMC BR 5450	4980 (39)	3.8	4.5	1.0	1.3	2.5	2.3	42	61.0	2.0	34.5	11.3
823 FMC BR 5678	5520 (14)	2.3	4.8	1.3	1.0	1.0	1.8	38	60.7	2.5	43.0	11.1
827 CONT BR 5702	4580 (43)	3.8	4.5	1.3	1.0	1.0	1.0	37	60.9	2.0	42.2	11.1
828 CONT BR 5710	5100 (35)	4.8	5.3	1.5	1.0	1.0	1.8	38	60.7	1.0	42.0	11.8
829 CONT BR 5738	5310 (23)	1.3	3.5	1.0	1.0	1.0	2.0	34	62.2	1.5	39.8	11.8
838 QT 588	5130 (32)	1.3	2.8	1.0	1.0	1.5	1.0	43	61.8	2.5	38.6	10.7
839 UC 839	5280 (27)	1.0	2.0	1.0	1.0	1.0	1.0	32	61.2	4.5	34.7	10.3
840 UC 840	6230 (2)	1.0	3.3	1.5	1.0	1.0	1.0	31	62.6	3.0	45.5	10.6
841 UC 841	5100 (34)	1.0	2.0	1.0	1.0	1.0	1.0	34	59.3	3.5	31.8	11.4
842 UC 842	6280 (1)	1.0	1.3	1.0	1.0	1.0	1.0	32	60.8	1.5	39.1	11.9
843 UC 843	4650 (41)	1.0	1.3	1.0	1.0	1.0	1.0	32	60.6	1.5	38.0	11.7
844 UC 844	4650 (42)	1.5	4.8	1.0	1.0	1.0	1.0	37	61.1	2.5	35.6	12.1
845 UC 845	5390 (19)	3.3	3.3	1.5	1.0	1.0	1.0	43	63.3	3.0	39.5	11.7
846 UC 846	6000 (3)	2.0	2.5	1.0	1.0	1.0	1.3	42	63.5	2.5	37.2	11.7
847 UC 847	5210 (29)	6.0	5.5	1.0	1.0	1.0	1.0	46	61.6	1.0	41.9	12.4
848 YECORA ROJO 87W	5640 (9)	1.3	4.3	1.0	1.0	1.0	1.3	36	62.2	2.0	41.5	11.8
849 UC 849	5270 (28)	4.0	4.5	1.0	1.0	1.0	1.3	38	60.3	1.5	31.8	13.4
850 UC 850	4730 (40)	5.0	5.5	2.0	1.0	1.0	1.0	41	61.4	7.5	35.8	11.2
852 UC 852	5090 (36)	4.3	5.3	2.3	1.0	1.0	1.5	42	61.3	7.5	35.3	12.1
859 WS 2501	3550 (50)	4.3	5.3	1.3	1.0	1.0	1.0	43	58.5	2.0	34.7	12.4
860 WS 2502	4240 (46)	4.5	4.0	1.3	1.0	1.0	1.3	44	59.7	4.0	33.4	11.9
862 PIONEER R8I0104	5850 (6)	1.5	4.3	1.0	1.0	1.0	1.5	43	60.0	2.0	41.9	10.4
863 PIONEER R8I0161	5120 (33)	2.8	4.0	1.0	1.0	1.0	1.0	41	61.1	3.5	40.2	11.7
864 UC 864	5890 (5)	1.0	3.3	1.0	1.0	1.0	1.0	34	61.5	2.5	39.3	11.5
865 PH 984-75	5300 (25)	4.0	4.5	1.3	1.0	1.0	1.0	40	60.5	1.5	40.3	10.9
866 DA 984-02	5500 (15)	3.0	4.3	1.3	1.0	1.0	1.0	43	62.4	1.0	39.9	12.2
867 PH 986-61	5580 (13)	5.3	4.3	1.0	1.0	1.0	1.0	42	61.9	2.0	42.3	12.3
868 PH 986-66	5040 (37)	3.3	5.8	1.5	1.0	1.0	1.8	37	60.4	2.5	38.4	11.3
872 S87-0149	5430 (18)	1.0	2.3	1.0	1.0	1.3	1.3	40	58.8	1.5	37.4	11.2
873 N89-4005	5300 (24)	1.8	3.5	1.0	1.0	1.0	1.0	37	59.2	4.5	40.5	11.5
874 QT 589	4430 (44)	1.0	1.8	1.0	1.0	1.0	1.0	45	62.4	3.0	40.5	11.3
875 QT 577	3810 (49)	2.3	3.0	1.8	1.0	1.0	1.0	47	60.8	2.5	38.1	11.3
876 XH1075	3870 (48)	2.3	3.3	1.3	1.0	1.8	1.0	48	60.2	1.0	38.3	11.4
882 FMC BR 7381	5590 (12)	1.0	2.0	1.0	1.0	1.0	1.8	34	57.8	1.5	34.4	11.6
883 CONT BR 5901	5450 (17)	3.8	4.8	1.5	1.0	2.5	2.3	37	62.3	1.5	39.3	10.7
Mean	5190	2.8	3.9	1.2	1.0	1.1	1.2	40	61.1	2.8	38.4	11.4
CV	14.3	31.0	30.9	40.7	17.1	28.3	41.5	3.5	0.9	39.2	3.9	5.1
LSD (.05)	1040	1.2	1.7	0.7	NS	0.4	0.7	3	1.1	2.2	3.0	1.2

Rating scale for diseases (area of flag-1 leaf affected), lodging, shatter, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: BYDV, leaf rust, powdery mildew, black point.
Numbers in parentheses indicate relative rank in column.
Percent protein, 0.0% moisture basis.

TABLE 12. 1990 UC DAVIS COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Lodging on 5/7	Lodging at Harvest	BYDV	Stripe Rust	Days to Heading from 3/1	Days to Maturity from 3/1	Plant Height (inches)	Test Weight (lbs/bu)	Black Point	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	6340 (22)	1.0	5.3	1.0	1.0	52	99	37	63.4	1.5	2.0	35.6	11.7
112 YECORA ROJO	6340 (23)	2.0	7.3	1.5	1.0	43	92	35	63.3	1.0	1.0	44.5	13.6
221 PHOENIX	6000 (30)	1.0	5.5	1.0	1.0	50	99	38	63.7	1.0	2.5	37.0	10.9
353 YOLO	6810 (9)	1.0	6.3	1.0	1.0	51	98	39	63.5	1.0	3.0	34.9	11.1
415 KLASIC	7420 (1)	1.3	7.3	1.0	1.0	43	90	35	64.1	1.0	1.0	44.1	12.5
538 PROBRAND 775	5850 (34)	1.0	4.3	1.5	2.3	47	98	33	61.0	1.5	1.5	36.5	12.5
544 TADINIA	5560 (43)	1.0	3.5	1.0	1.0	50	96	41	62.5	1.0	3.5	36.1	11.7
638 SERRA	6420 (20)	2.0	6.0	1.0	1.0	51	98	41	63.0	1.0	1.5	39.8	11.9
716 BAKER	6100 (29)	3.5	6.8	1.8	1.0	44	89	34	63.0	1.0	1.0	44.5	13.5
784 UC 784	6750 (11)	1.0	6.5	1.0	1.0	44	92	33	63.3	1.0	1.0	47.0	12.8
785 UC 785	6710 (12)	1.0	2.3	1.3	1.0	50	96	37	63.0	2.0	1.0	41.7	13.0
786 UC 786	6630 (14)	1.0	6.0	2.3	1.0	50	96	37	63.8	1.0	1.5	42.6	11.9
788 DA 984-034	6460 (16)	1.0	4.5	1.5	1.0	48	93	39	63.5	1.0	1.5	39.7	13.3
804 FMC BR 5144	7130 (3)	1.0	6.5	1.0	1.0	49	98	43	62.8	1.0	2.0	34.4	11.3
821 FMC BR 5236	5980 (31)	1.5	6.5	1.5	1.0	51	93	38	61.9	1.0	1.0	38.6	12.4
822 FMC BR 5450	5570 (42)	1.0	3.0	1.3	4.0	52	96	39	62.1	1.0	1.0	35.5	12.1
823 FMC BR 5678	5980 (32)	1.0	6.0	1.8	1.0	46	90	35	62.8	1.0	1.0	43.5	12.9
827 CONT BR 5702	7070 (4)	3.0	7.5	1.3	1.0	45	88	37	63.3	1.0	1.0	44.9	12.5
828 CONT BR 5710	6760 (10)	1.8	6.8	1.3	1.0	43	89	35	63.7	1.0	1.0	43.7	13.0
829 CONT BR 5738	6660 (13)	1.0	7.5	2.5	1.0	46	88	30	62.5	1.0	1.0	43.1	13.2
838 QT 588	5820 (36)	1.0	1.8	1.0	1.8	55	100	40	63.0	1.5	3.0	39.8	11.1
839 UC 839	5840 (35)	1.0	1.0	1.5	1.0	56	102	29	60.1	1.0	2.0	32.0	11.7
840 UC 840	6370 (21)	1.0	2.0	1.8	1.0	47	98	28	62.2	1.0	1.5	42.0	11.8
841 UC 841	5530 (44)	1.3	1.0	1.0	1.0	53	99	30	61.4	1.0	1.0	37.2	12.3
842 UC 842	6140 (27)	1.0	2.3	1.0	1.0	50	97	30	62.0	1.0	1.0	39.3	13.0
843 UC 843	5910 (33)	1.0	1.8	1.3	2.3	48	97	30	60.9	1.0	1.0	35.8	12.8
844 UC 844	6170 (25)	1.0	2.3	1.5	1.0	48	97	32	62.0	1.0	2.0	35.2	12.7
845 UC 845	6170 (26)	1.0	6.8	1.5	1.0	38	91	42	64.5	1.0	1.0	40.9	12.6
846 UC 846	6130 (28)	1.0	6.0	1.3	1.3	40	94	41	63.7	1.0	1.0	36.9	12.9
847 UC 847	6180 (24)	3.0	6.0	1.8	1.0	43	91	44	64.1	1.5	1.0	46.0	12.8
848 YECORA ROJO 87W	6430 (18)	1.0	4.8	2.3	1.0	48	96	34	63.8	1.0	1.0	40.8	12.9
849 UC 849	5800 (37)	2.0	8.0	2.0	1.0	40	89	38	63.6	1.0	1.0	34.0	13.5
850 UC 850	4860 (50)	4.0	7.0	1.0	1.0	48	97	40	62.7	2.0	2.5	33.0	12.6
852 UC 852	5440 (45)	2.8	6.5	1.3	1.0	49	100	38	62.5	1.5	2.0	32.1	13.3
859 WS 2501	5220 (48)	1.8	4.5	1.0	1.0	50	94	44	60.0	1.0	1.0	34.5	12.9
860 WS 2502	5590 (41)	2.3	4.8	1.0	1.0	48	94	41	61.4	1.0	3.0	34.2	12.3
862 PIONEER R8I0104	6940 (5)	1.8	4.0	2.8	1.0	46	95	39	62.5	1.5	1.0	42.0	10.8
863 PIONEER R8I0161	6850 (7)	2.0	6.5	2.0	1.0	42	89	38	64.2	1.0	1.0	43.9	12.0
864 UC 864	7300 (2)	1.0	6.0	1.3	1.0	46	91	31	64.7	1.0	1.0	43.1	11.7
865 PH 984-75	6850 (6)	1.8	5.5	1.5	1.0	46	94	35	63.3	1.0	1.0	39.8	12.7
866 DA 984-02	6460 (15)	1.0	5.5	1.8	1.0	48	95	39	64.0	1.0	1.0	39.8	13.0
867 PH 986-61	6460 (17)	3.3	6.3	2.0	0.8	45	96	42	61.6	1.0	1.0	42.8	13.7
868 PH 986-66	6840 (8)	1.0	3.5	1.5	1.0	46	96	35	62.7	1.0	1.0	40.7	12.1
872 S87-0149	6420 (19)	1.0	3.3	2.3	1.0	53	99	38	60.8	1.0	1.0	40.6	11.7
873 N89-4005	5400 (46)	1.0	5.8	1.5	1.0	49	96	35	60.1	1.0	1.5	35.8	12.6
874 QT 589	5740 (40)	1.0	2.5	1.5	1.3	55	99	41	63.4	1.0	3.0	39.8	11.3
875 QT 577	5270 (47)	1.0	2.8	1.5	1.5	57	100	43	61.4	1.5	3.0	38.3	11.9
876 XH1075	5750 (39)	1.0	2.3	1.0	2.8	55	98	46	62.1	1.0	2.5	40.8	10.9
882 FMC BR 7381	5750 (38)	1.0	3.5	1.0	1.0	53	98	32	60.0	1.0	1.0	34.1	11.7
883 CONT BR 5901	5050 (49)	1.8	5.3	1.8	4.5	50	97	35	60.5	1.0	1.5	34.0	12.1
Mean	6180	1.5	4.9	1.5	1.2	48	95	37	62.6	1.1	1.5	39.1	12.3
CV	8.0	43.6	19.3	34.2	27.0	2.8	2.0	4.9	1.1	23.8	39.3	5.3	5.2
LSD (.05)	690	0.9	1.3	0.7	0.5	3	4	4	1.4	0.5	1.2	4.1	1.3

Rating scale for diseases (area of flag-1 leaf affected), lodging, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, Septoria leaf blotch, powdery mildew.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.
Percent protein, 0.0% moisture basis.

TABLE 13. 1990 SACRAMENTO-SAN JOAQUIN DELTA COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Lodging at Harvest	BYDV	Stripe Rust	Fusarium	Powdery Mildew	Plant Height (inches)	Test Weight (lbs/bu)	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	6410 (26)	3.5	2.5	1.0	1.8	1.0	37.6	63.3	5.5	37.7	10.3
112 YECORA ROJO	5910 (38)	2.8	1.5	1.0	1.5	2.0	32.9	63.9	3.5	45.5	10.2
221 PHOENIX	5980 (35)	1.0	1.5	1.0	2.3	1.0	36.0	62.9	8.0	37.3	9.1
353 YOLO	6620 (19)	3.3	1.3	1.0	1.0	1.0	37.4	63.3	7.5	35.7	8.1
415 KLASIC	6810 (8)	3.0	2.5	1.0	2.3	2.0	32.9	64.7	2.5	43.9	10.2
538 PROBRAND 775	6420 (25)	1.0	1.5	1.3	1.5	1.8	30.7	62.0	8.0	37.0	9.3
544 TADINIA	7000 (3)	4.8	1.3	1.0	1.5	1.0	40.3	62.9	5.0	39.0	9.9
638 SERRA	6780 (10)	6.8	1.0	1.0	1.0	1.0	41.0	61.7	5.5	40.3	9.4
716 BAKER	6120 (31)	3.5	2.0	1.0	1.8	1.5	34.3	63.3	1.5	44.5	10.8
784 UC 784	7040 (1)	1.0	2.0	1.0	1.8	1.8	31.7	64.2	2.5	45.4	9.1
785 UC 785	6800 (9)	1.0	1.3	1.0	2.0	1.5	33.3	64.2	2.0	44.0	9.9
786 UC 786	6640 (17)	4.3	1.0	1.0	1.0	1.3	37.0	63.7	2.5	40.7	9.8
788 DA 984-034	6610 (20)	5.5	1.5	1.0	1.0	1.0	40.0	62.5	1.0	41.8	11.9
804 FMC BR 5144	6680 (6)	2.5	1.0	1.0	1.0	1.3	38.4	62.9	8.0	36.7	8.3
821 FMC BR 5236	5520 (47)	4.5	1.3	1.0	2.0	1.3	36.0	61.7	3.5	41.4	10.0
822 FMC BR 5450	6110 (32)	2.8	1.3	2.3	1.0	1.5	34.7	62.9	2.0	36.0	10.4
823 FMC BR 5678	5970 (36)	1.5	2.0	1.0	1.3	1.3	31.5	63.5	4.5	44.1	9.8
827 CONT BR 5702	6680 (15)	4.3	1.3	1.0	1.3	2.3	34.5	62.7	1.0	44.5	10.5
828 CONT BR 5710	6140 (30)	5.8	2.0	1.0	1.8	2.5	33.8	63.1	1.0	43.8	11.6
829 CONT BR 5738	5830 (40)	1.0	2.0	1.0	1.0	1.3	29.1	63.1	1.0	40.0	11.0
838 QT 588	6690 (13)	2.3	1.3	1.0	1.0	1.0	37.8	62.6	6.5	40.7	10.3
839 UC 839	6560 (21)	1.0	1.0	1.0	1.0	1.3	28.9	62.0	7.5	36.0	9.1
840 UC 840	6520 (22)	1.0	1.3	1.0	2.3	2.8	25.6	62.5	7.0	46.2	8.9
841 UC 841	6450 (24)	1.0	1.5	1.0	1.0	1.0	30.1	61.9	5.0	37.8	9.9
842 UC 842	7030 (2)	1.0	1.3	1.0	1.8	1.5	29.3	62.9	1.5	42.0	12.1
843 UC 843	6760 (11)	1.0	1.3	1.0	2.0	1.0	28.1	62.6	2.0	41.1	11.2
844 UC 844	6630 (16)	1.0	1.3	1.0	1.0	1.0	31.3	62.6	3.5	36.3	11.5
845 UC 845	5960 (37)	2.0	1.0	1.0	1.0	1.0	39.2	64.9	2.0	42.7	10.3
846 UC 848	6310 (29)	2.0	1.8	1.0	2.0	1.0	39.4	64.6	1.5	38.7	11.7
847 UC 847	5730 (44)	5.8	2.3	1.0	2.0	3.8	44.1	63.1	2.5	42.5	9.9
848 YECORA ROJO 87W	6850 (7)	1.0	1.8	1.0	1.3	1.3	32.3	64.1	3.5	42.2	9.7
849 UC 849	5710 (45)	1.5	2.3	1.0	1.3	1.0	35.4	63.6	5.0	35.1	9.9
850 UC 850	4930 (50)	5.0	1.0	1.0	2.0	1.0	40.2	62.1	8.0	36.7	7.5
852 UC 852	5560 (46)	3.0	2.8	1.0	1.5	2.0	39.2	62.4	8.0	35.7	9.1
859 WS 2501	5360 (48)	4.5	1.0	1.0	2.0	1.0	41.1	60.9	7.0	38.5	9.3
860 WS 2502	5850 (39)	5.3	1.3	1.0	1.3	1.0	41.8	60.2	6.0	38.6	10.0
862 PIONEER R8I0104	6900 (5)	2.0	1.8	1.0	2.5	1.3	38.4	62.3	3.5	41.1	10.1
863 PIONEER RBI0161	6730 (12)	4.0	1.5	1.0	1.3	1.0	37.6	63.5	3.0	41.2	10.8
864 UC 864	6920 (4)	1.8	1.8	1.0	1.8	1.3	29.4	64.0	1.5	39.2	11.3
865 PH 984-75	6320 (28)	2.5	1.5	1.0	2.0	1.3	33.0	61.9	2.0	43.0	10.0
866 DA 984-02	6020 (34)	2.5	1.8	1.0	1.5	1.0	38.6	63.7	2.0	40.5	11.0
867 PH 986-61	5750 (43)	2.3	1.8	1.0	2.3	2.0	38.6	62.5	4.0	45.1	9.5
868 PH 986-66	6640 (18)	2.5	1.8	1.0	1.3	3.0	31.9	62.8	6.0	41.0	8.6
872 S87-0149	6510 (23)	1.5	2.0	1.0	1.0	1.0	35.0	62.0	2.0	40.2	10.0
873 N89-4005	6060 (33)	3.8	1.8	1.0	1.0	1.0	33.0	61.2	6.0	41.8	9.8
874 QT 589	5760 (42)	1.8	1.5	1.0	1.0	1.0	36.8	62.7	7.5	39.5	8.6
875 QT 577	5200 (49)	1.5	1.3	1.0	1.0	1.0	42.9	61.5	7.5	40.7	9.3
876 XH1075	5760 (41)	2.5	1.3	1.0	1.0	1.0	42.9	61.7	8.0	43.5	8.1
882 FMC BR 7381	6410 (27)	1.0	2.0	1.3	1.0	1.5	30.5	61.4	2.5	34.5	10.2
883 CONT BR 5901	6680 (14)	3.8	1.0	2.0	1.0	1.0	34.0	62.4	1.0	37.2	10.3
Mean	6300	2.7	1.6	1.1	1.5	1.4	35.4	62.8	4.2	40.4	10.0
CV	7.1	71.2	41.8	22.4	40.8	34.2	3.5	1.0	34.9	4.5	10.7
LSD (.05)	630	2.7	0.9	0.3	0.8	0.7	2.5	1.2	2.9	3.6	2.1

Rating scale for diseases (area of flag-1 leaf affected), lodging, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, Septoria leaf blotch.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.
Percent protein, 0.0% moisture basis.
Fusarium ratings (see scale above) were based on percentage of plants showing "white heads."

TABLE 14. 1990 MERCED COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Days to Heading after 3/1	BYDV	Stripe Rust	Test Weight (lbs/bu)	Plant Height (inches)	Yellow-berry	Thousand Kernel Weight (grams)
20 ANZA	5400 (14)	69	1.0	1.0	63.4	38	5.0	37.3
112 YECORA ROJO	5680 (6)	63	1.8	1.0	62.5	33	1.0	41.2
221 PHOENIX	5150 (20)	70	1.3	1.0	63.4	38	3.5	37.5
353 YOLO	5420 (13)	70	1.3	1.0	63.2	41	2.0	31.7
415 KLASIC	6220 (1)	63	1.3	1.0	63.6	33	1.0	41.0
538 PROBRAND 775	4360 (40)	66	1.5	1.0	61.6	31	2.0	36.9
544 TADINIA	4640 (35)	70	1.3	1.0	62.4	41	4.5	34.8
638 SERRA	5430 (12)	68	1.0	1.0	63.4	42	3.5	39.5
716 BAKER	4860 (25)	63	2.0	1.0	61.1	30	1.0	39.8
784 UC 784	4860 (26)	64	1.0	1.0	63.4	31	1.5	44.0
785 UC 785	3940 (47)	66	1.5	1.0	60.6	32	1.0	36.3
786 UC 786	5250 (16)	67	1.5	1.0	63.1	35	2.5	35.8
788 DA 984-034	4580 (37)	66	2.3	1.0	62.7	36	2.0	38.5
804 FMC BR 5144	5520 (10)	68	1.3	1.0	62.6	39	6.0	37.8
821 FMC BR 5236	4290 (42)	68	1.5	1.0	58.5	35	1.0	34.0
822 FMC BR 5450	5170 (19)	65	1.5	1.0	63.5	34	2.0	38.5
823 FMC BR 5678	5030 (23)	65	1.5	1.0	59.5	29	1.0	36.7
827 CONT BR 5702	5210 (17)	64	1.8	1.0	62.1	33	1.0	44.0
828 CONT BR 5710	5680 (7)	66	1.5	1.0	62.0	29	1.0	42.0
829 CONT BR 5738	5280 (15)	64	1.8	1.0	61.4	27	1.0	37.8
838 QT 588	4700 (32)	72	1.3	1.8	62.3	38	3.0	36.6
839 UC 839	4620 (36)	73	1.3	1.0	60.7	28	2.5	32.7
840 UC 840	4820 (28)	64	1.8	1.0	60.8	25	1.5	41.4
841 UC 841	4120 (44)	69	1.8	1.0	58.3	30	2.0	32.5
842 UC 842	5990 (3)	68	1.3	1.0	62.2	29	1.5	39.8
843 UC 843	5600 (9)	65	1.0	1.3	61.2	28	1.0	37.1
844 UC 844	5170 (18)	66	1.3	1.0	61.4	30	2.5	33.8
845 UC 845	5060 (22)	64	1.3	1.0	64.2	40	1.5	40.2
846 UC 846	4980 (24)	63	1.3	1.3	63.6	39	1.5	35.9
847 UC 847	4700 (33)	63	2.3	1.0	62.6	40	1.5	43.7
848 YECORA ROJO 87W	5800 (5)	66	1.3	1.0	62.6	31	2.5	39.1
849 UC 849	5650 (8)	63	1.8	1.0	63.5	35	1.0	35.5
850 UC 850	5450 (11)	68	1.3	1.0	62.3	41	4.0	33.1
852 UC 852	4770 (31)	70	1.5	1.0	61.8	39	1.0	32.5
859 WS 2501	2860 (50)	69	1.5	1.0	54.6	41	1.5	29.6
860 WS 2502	4050 (46)	66	1.5	1.0	60.2	43	5.0	30.6
862 PIONEER RBI0104	4660 (34)	68	2.8	1.0	60.5	38	2.0	39.5
863 PIONEER RBI0161	5910 (4)	64	2.0	1.0	62.7	35	1.0	39.8
864 UC 864	6070 (2)	66	1.8	1.0	62.7	28	1.0	36.6
865 PH 984-75	5150 (21)	65	1.0	1.0	59.6	34	1.0	36.5
866 DA 984-02	4280 (43)	67	1.8	1.0	61.2	38	1.5	33.3
867 PH 986-61	4830 (27)	65	2.0	1.0	60.8	36	1.0	36.5
868 PH 986-66	4780 (30)	63	1.3	1.0	60.5	27	2.5	38.2
872 S87-0149	3920 (48)	69	2.3	1.0	58.0	34	2.5	33.7
873 N89-4005	4330 (41)	67	1.8	1.0	57.5	33	2.0	33.7
874 QT 589	4480 (39)	71	1.0	1.0	61.9	38	3.0	36.8
875 QT 577	2920 (49)	70	1.0	1.0	59.3	40	2.0	35.3
876 XH1075	4080 (45)	72	1.3	2.0	60.3	45	1.0	36.3
882 FMC BR 7381	4560 (38)	68	1.5	1.0	59.3	30	1.0	30.9
883 CONT BR 5901	4800 (29)	68	1.8	1.0	62.3	35	1.0	36.7
Mean	4900	67	1.5	1.0	61.5	35	2.0	36.9
CV	13.5	2.5	36.8	16.2	1.9	5.6	8.8	6.9
LSD (.05)	930	2	0.8	0.2	2.4	4	2.0	5.1

Rating scale for diseases (area of flag-1 leaf affected) and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, Septoria leaf blotch, powdery mildew, black point.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 15. 1990 KINGS COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Shatter	BYDV	Plant Height (inches)	Test Weight (lbs/bu)	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	5480 (8)	1.0	1.0	34	62.8	4.0	36.6	12.2
112 YECORA ROJO	5260 (17)	1.0	1.3	28	63.5	1.0	42.7	14.4
221 PHOENIX	4970 (31)	1.0	1.0	31	62.5	1.5	34.7	12.3
353 YOLO	5530 (7)	1.0	1.5	34	63.7	2.0	33.0	11.8
415 KLASIC	5840 (2)	1.0	1.3	28	64.5	1.0	43.2	13.1
538 PROBRAND 775	4410 (45)	1.0	1.3	26	60.1	1.0	34.5	12.8
544 TADINIA	4730 (37)	1.0	1.0	33	62.3	2.5	35.0	12.0
638 SERRA	6030 (1)	1.0	1.0	35	63.5	1.0	38.2	12.6
716 BAKER	5070 (27)	1.0	1.5	28	63.0	1.0	39.9	14.2
784 UC 784	5570 (5)	1.0	1.0	26	63.3	1.0	42.8	13.4
785 UC 785	5160 (22)	1.0	1.3	28	63.0	1.0	37.8	13.1
786 UC 786	5380 (11)	1.0	1.3	32	62.1	1.0	37.2	13.2
788 DA 984-034	5230 (18)	1.0	3.3	32	63.6	1.0	39.6	14.4
804 FMC BR 5144	5770 (3)	1.0	1.5	34	63.5	2.5	33.9	11.9
821 FMC BR 5236	5030 (29)	1.0	1.3	32	61.9	1.0	37.3	14.1
822 FMC BR 5450	5330 (14)	1.0	1.0	29	62.6	1.0	33.1	13.3
823 FMC BR 5678	5050 (28)	1.0	2.0	27	62.6	1.0	38.8	13.9
827 CONT BR 5702	5390 (10)	1.0	1.5	29	62.3	1.0	41.1	13.7
828 CONT BR 5710	5340 (12)	1.0	2.3	26	62.5	1.0	39.1	13.8
829 CONT BR 5738	5010 (30)	1.0	2.0	24	62.4	1.0	37.2	14.2
838 QT 588	4630 (39)	1.3	1.0	32	61.7	2.5	32.3	12.5
839 UC 839	4340 (46)	1.0	1.3	24	61.2	2.0	29.5	12.3
840 UC 840	5100 (24)	1.0	2.3	23	61.0	1.0	36.6	12.6
841 UC 841	4520 (43)	1.0	1.0	25	60.0	1.0	31.1	12.8
842 UC 842	4740 (36)	1.0	1.0	23	61.7	1.0	39.0	12.5
843 UC 843	5120 (23)	1.0	1.0	25	61.3	1.0	36.8	13.4
844 UC 844	4630 (40)	1.0	1.5	26	60.5	1.0	32.3	13.1
845 UC 845	4960 (33)	1.0	1.3	31	63.9	1.0	38.2	13.8
846 UC 846	4550 (41)	1.0	1.3	34	63.8	1.0	36.8	13.4
847 UC 847	4950 (34)	1.0	2.8	35	63.6	1.0	41.5	14.4
848 YECORA ROJO 87W	5570 (6)	1.0	1.3	26	63.2	1.0	37.4	13.9
849 UC 849	5200 (20)	1.0	2.3	31	63.3	1.0	35.2	14.7
850 UC 850	5230 (19)	1.0	1.5	33	63.5	2.5	35.0	12.5
852 UC 852	5080 (25)	1.0	1.8	31	62.7	2.5	34.3	12.7
859 WS 2501	4470 (44)	1.0	1.3	36	60.4	1.5	36.8	13.4
860 WS 2502	4960 (32)	1.0	1.8	38	61.6	2.5	36.3	13.4
862 PIONEER RBI0104	5340 (13)	1.0	3.0	32	61.6	1.0	40.5	12.8
863 PIONEER RBI0161	5600 (4)	1.0	2.5	29	63.6	1.0	40.3	13.1
864 UC 864	5300 (15)	1.0	1.8	26	62.4	1.0	33.8	13.5
865 PH 984-75	5180 (21)	1.0	1.8	29	62.3	1.0	40.0	13.8
866 DA 984-02	4860 (35)	1.0	3.3	32	63.3	1.0	37.0	14.4
867 PH 986-61	5080 (26)	1.0	2.3	32	62.6	1.0	41.8	14.4
868 PH 986-66	5280 (16)	1.0	2.0	25	62.4	1.0	38.1	13.3
872 S87-0149	4040 (49)	1.0	3.0	31	59.5	1.0	33.8	13.4
873 N89-4005	4250 (47)	1.0	1.5	26	60.4	1.0	34.9	13.3
874 QT 589	4690 (38)	1.0	1.0	34	62.5	2.0	36.4	12.6
875 QT 577	3790 (50)	1.8	1.0	38	60.8	2.0	34.3	12.9
876 XH1075	4520 (42)	1.5	1.0	37	60.7	2.0	35.1	12.8
882 FMC BR 7381	4250 (48)	1.0	1.0	25	59.0	1.0	30.0	12.8
883 CONT BR 5901	5420 (9)	1.0	1.0	29	63.4	1.0	36.3	13.0
Mean	5020	1.0	1.6	30	62.3	1.4	36.7	13.2
CV	5.8	16.8	34.5	4.1	0.5	25.4	4.2	2.9
LSD (.05)	410	0.2	0.8	2	0.7	0.7	3.1	0.8

Rating scale for diseases (area of flag-1 leaf affected), shatter, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, Septoria leaf blotch, powdery mildew, black point.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.
Percent protein, 0.0% moisture basis.

TABLE 16. 1990 KERN COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Plant Height (inches)	Lodging on 5/21	Lodging at Harvest	Test Weight (lbs/bu)	Black Point	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	7110 (31)	40	1.0	1.0	64.0	1.0	2.5	38.8	11.4
112 YECORA ROJO	7320 (23)	37	1.0	1.3	63.5	1.5	1.0	43.8	13.5
221 PHOENIX	7220 (27)	40	1.0	1.0	63.8	1.0	6.0	37.0	12.0
353 YOLO	8130 (3)	43	1.0	1.8	64.2	1.0	2.0	37.6	11.4
415 KLASIC	7740 (10)	36	1.0	1.0	64.1	1.5	2.0	43.8	12.7
538 PROBRAND 775	7630 (14)	35	1.0	1.0	62.2	1.5	3.0	36.3	12.2
544 TADINIA	7350 (21)	44	1.0	1.0	63.1	1.0	3.5	39.8	11.3
638 SERRA	8090 (5)	45	3.8	4.0	64.0	1.0	3.5	42.8	11.2
716 BAKER	7540 (17)	37	1.0	1.0	63.8	1.0	1.0	43.9	13.4
784 UC 784	7620 (16)	36	1.0	1.0	63.6	2.0	1.0	43.8	12.7
785 UC 785	6990 (34)	37	1.0	1.0	63.8	1.5	1.0	44.3	13.3
786 UC 786	7640 (12)	40	1.0	1.0	63.7	1.0	1.0	42.0	12.9
788 DA 984-034	7480 (19)	42	1.0	2.8	64.2	1.0	1.0	42.0	13.4
804 FMC BR 5144	8140 (2)	43	1.0	1.5	63.7	1.0	4.5	37.3	11.0
821 FMC BR 5236	7320 (24)	43	1.0	3.5	63.3	1.5	2.0	44.1	12.2
822 FMC BR 5450	6450 (45)	38	1.0	1.0	62.4	1.0	3.0	34.8	12.8
823 FMC BR 5678	7700 (11)	36	1.0	1.0	63.7	1.0	1.0	45.1	12.9
827 CONT BR 5702	7330 (22)	38	1.0	1.0	62.7	1.0	1.5	43.7	13.0
828 CONT BR 5710	7420 (20)	37	1.0	1.3	63.1	1.0	1.5	41.6	12.8
829 CONT BR 5738	7200 (28)	33	1.0	1.0	63.3	1.0	1.0	39.6	13.2
838 QT 588	7220 (26)	41	1.0	2.0	63.1	1.0	4.5	39.2	10.9
839 UC 839	6600 (44)	31	1.0	1.0	62.7	1.0	2.5	35.1	11.5
840 UC 840	7230 (25)	30	1.0	1.0	62.5	2.0	2.0	41.6	12.6
841 UC 841	6290 (49)	33	1.0	1.0	61.0	1.0	1.5	34.8	12.7
842 UC 842	6870 (40)	32	1.0	1.0	62.3	1.0	1.0	38.6	13.5
843 UC 843	6960 (36)	33	1.0	1.0	62.1	1.0	1.0	37.5	13.2
844 UC 844	6310 (48)	35	1.0	1.0	61.7	1.5	2.0	35.5	13.0
845 UC 845	7180 (29)	43	1.0	1.0	64.5	1.0	1.5	39.8	13.1
846 UC 846	7910 (9)	43	1.0	1.0	59.6	1.0	2.0	41.1	12.9
847 UC 847	7920 (8)	48	1.8	2.8	64.7	1.0	1.0	46.5	12.8
848 YECORA ROJO 87W	6880 (38)	35	1.0	1.0	64.1	1.0	2.0	44.0	13.0
849 UC 849	7010 (32)	38	1.0	1.3	63.9	1.0	3.5	33.5	13.2
850 UC 850	6870 (39)	44	3.5	6.3	63.5	1.0	6.0	36.0	11.9
852 UC 852	7000 (33)	43	1.3	5.5	62.8	1.0	5.5	35.3	11.8
859 WS 2501	6420 (46)	47	4.3	3.8	61.0	1.0	4.5	38.3	12.2
860 WS 2502	6600 (43)	46	4.0	4.3	56.2	1.0	3.5	36.5	13.0
862 PIONEER RBI0104	8650 (1)	40	1.0	1.0	63.0	1.0	1.0	45.5	12.0
863 PIONEER RBI0161	7530 (18)	42	1.0	3.0	63.2	1.5	1.0	42.3	13.8
864 UC 864	7130 (30)	32	1.0	1.0	63.3	1.0	1.0	38.4	14.0
865 PH 984-75	6940 (37)	37	1.0	1.0	62.5	1.0	1.0	40.8	13.3
866 DA 984-02	7970 (7)	42	1.0	1.8	64.3	1.0	1.5	41.5	13.3
867 PH 986-61	7640 (13)	44	1.8	5.0	62.8	1.0	1.0	44.0	12.6
868 PH 986-66	7630 (15)	36	1.0	1.0	63.1	1.0	1.5	43.6	12.0
872 S87-0149	8100 (4)	39	1.0	1.0	62.6	1.0	3.0	41.5	11.8
873 N89-4005	6360 (47)	37	1.0	1.0	61.4	1.0	4.5	39.1	13.1
874 QT 589	6700 (42)	43	1.0	1.0	63.4	1.5	3.5	39.7	11.8
875 QT 577	6150 (50)	50	2.8	2.3	62.1	1.0	3.0	38.6	12.3
876 XH1075	8020 (6)	50	3.3	4.0	63.0	1.0	3.5	42.0	11.1
882 FMC BR 7381	6970 (35)	33	1.0	1.0	60.8	1.0	1.5	35.1	12.1
883 CONT BR 5901	6860 (41)	37	1.0	2.5	62.6	1.0	1.5	38.7	12.9
Mean	7270	39	1.3	1.8	62.9	1.1	2.3	40.1	12.5
CV	5.9	3.1	29.9	43.0	2.3	25.5	26.0	3.3	3.8
LSD (.05)	600	2	0.6	1.1	2.9	0.6	1.2	2.6	1.0

Rating scale for diseases (area of flag-1 leaf affected), lodging, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: BYDV, leaf rust, stripe rust, Septoria leaf blotch, powdery mildew.
Numbers in parentheses indicate relative rank in column.
Percent protein, 0.0% moisture basis.

TABLE 17. 1990 IMPERIAL COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Test Weight (lbs/bu)	Days to Heading	Days to Maturity	Plant Height (inches)	Lodging at Harvest	Shatter	Black Point	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
20 ANZA	7490 (24)	62.3	90	133	34	1.0	3.5	1.0	2.5	35.5	13.6
112 YECORA ROJO	7790 (18)	61.0	82	129	29	1.0	2.0	1.5	1.0	40.8	16.1
221 PHOENIX	8200 (10)	62.8	96	141	35	2.0	2.5	1.0	1.0	34.2	14.3
353 YOLO	7120 (32)	61.8	88	131	36	2.0	4.0	1.0	1.5	32.3	13.5
415 KLASIC	9150 (1)	62.8	82	129	29	1.0	1.0	3.0	1.0	41.0	15.3
538 PROBRAND 775	7860 (17)	59.0	85	132	28	1.0	1.0	2.0	1.0	33.1	15.1
544 TADINIA	6570 (40)	60.3	89	131	38	1.0	2.0	1.0	3.5	32.9	13.1
638 SERRA	7270 (26)	61.5	87	131	36	4.0	3.3	1.5	1.0	40.1	14.9
716 BAKER	8110 (12)	61.3	84	129	29	1.0	1.3	2.0	1.0	39.8	16.4
784 UC 784	8430 (7)	61.5	84	131	28	1.0	1.0	2.5	1.0	43.5	15.1
785 UC 785	8460 (6)	61.5	86	132	30	1.0	1.3	1.0	1.0	40.5	15.6
786 UC 786	8380 (8)	61.8	88	132	31	1.0	1.8	1.0	1.0	37.1	15.2
788 DA 984-034	6020 (44)	61.5	87	129	37	1.0	4.0	1.0	1.0	37.3	16.2
804 FMC BR 5144	6680 (38)	62.0	87	130	36	1.8	4.0	1.0	2.0	33.8	14.5
821 FMC BR 5236	5670 (46)	60.3	90	130	32	1.0	3.5	1.0	1.0	37.8	15.8
822 FMC BR 5450	8010 (13)	60.5	87	131	28	1.0	1.5	1.5	1.0	32.8	15.3
823 FMC BR 5678	6880 (36)	60.5	84	128	31	1.0	2.3	1.5	1.0	37.4	15.7
827 CONT BR 5702	8740 (3)	61.5	82	127	30	1.0	1.5	1.0	1.0	40.8	15.9
828 CONT BR 5710	7630 (22)	61.0	84	126	30	1.0	1.5	1.0	1.0	37.7	16.5
829 CONT BR 5738	7640 (21)	60.3	85	126	25	1.0	1.0	1.0	1.0	34.7	16.6
838 QT 588	6940 (35)	61.3	106	142	36	1.0	2.0	1.0	2.0	38.0	14.6
839 UC 839	7420 (25)	59.8	89	134	25	1.0	1.0	1.5	1.5	30.9	14.3
840 UC 840	8570 (4)	61.5	86	134	25	1.0	1.0	1.0	1.0	40.5	14.7
841 UC 841	7330 (26)	58.0	89	133	26	1.0	1.0	1.0	1.0	33.5	15.8
842 UC 842	7980 (15)	59.8	87	131	26	1.0	1.0	1.0	1.0	36.0	15.8
843 UC 843	8000 (14)	59.5	86	130	26	1.0	1.0	1.0	1.0	35.0	15.9
844 UC 844	7490 (23)	59.0	86	130	29	1.0	1.3	2.0	1.0	30.5	16.4
845 UC 845	7320 (27)	63.0	84	129	38	1.8	2.5	1.0	1.0	35.8	14.9
846 UC 846	7260 (30)	63.0	82	127	36	1.5	1.8	1.0	1.0	34.7	15.4
847 UC 847	5880 (45)	62.8	81	126	37	2.3	3.5	1.0	1.0	42.6	15.4
848 YECORA ROJO 87W	8360 (9)	61.8	91	134	29	1.0	1.5	1.0	1.0	35.5	16.0
849 UC 849	6430 (42)	62.0	81	125	33	1.0	2.8	1.0	1.0	33.2	16.0
850 UC 850	6550 (41)	61.5	87	131	36	4.0	3.8	1.5	3.0	32.8	12.4
852 UC 852	6820 (37)	62.0	87	131	34	1.5	2.3	1.0	5.0	33.3	12.2
859 WS 2501	4750 (48)	59.0	89	131	38	2.3	4.5	1.0	1.5	36.8	14.6
860 WS 2502	5080 (47)	59.8	86	130	38	2.8	4.8	1.0	2.0	34.2	15.2
862 PIONEER R8I0104	6640 (39)	60.0	86	129	35	1.0	3.5	1.5	1.0	40.3	14.7
863 PIONEER R8I0161	7680 (20)	61.8	85	129	35	1.0	2.0	1.0	1.0	37.5	14.6
864 UC 864	8560 (5)	61.8	92	133	26	1.0	1.0	1.0	1.0	34.9	16.3
865 PH 984-75	8190 (11)	60.3	85	128	30	1.0	1.5	1.0	1.0	37.5	16.3
866 DA 984-02	6160 (43)	62.0	87	129	37	1.0	3.5	1.0	1.0	37.8	16.3
867 PH 986-61	7000 (34)	60.3	84	131	35	3.0	2.5	2.0	1.0	40.3	16.9
868 PH 986-66	9050 (2)	60.8	86	132	29	1.0	1.3	1.5	1.0	38.8	15.2
872 S87-0149	7780 (19)	59.8	92	136	32	1.0	1.8	1.0	1.0	36.9	15.0
873 N89-4005	7190 (31)	58.5	88	131	30	1.0	1.8	1.0	2.5	36.0	14.7
874 QT 589	7020 (33)	61.0	106	144	36	1.0	2.0	1.0	1.5	35.2	14.8
875 QT 577	3460 (50)	59.8	106	143	41	1.0	4.8	1.0	1.0	32.2	15.6
876 XH1075	4450 (49)	60.8	106	143	43	1.8	5.8	1.0	1.0	35.5	15.4
882 FMC BR 7381	7270 (29)	58.8	90	136	25	1.0	1.0	2.0	1.0	30.9	14.9
883 CONT BR 5901	7940 (16)	60.5	86	131	29	1.0	1.5	1.0	1.0	33.8	15.3
Mean	7250	60.9	88	131	32	1.4	2.3	1.3	1.3	36.2	15.2
CV	9.2	0.9	1.5	1.2	4.1	35.8	32.9	24.0	26.9	2.8	3.1
LSD (.05)	930	0.8	2	2	2	0.7	1.0	0.6	0.7	2.1	0.9

Rating scale for lodging, shatter, yellowberry, and black point: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.
Percent protein, 0.0% moisture basis.

TABLE 18. 1990 YOLO DRYLAND COMMON WHEAT TEST

Entry	Yield (lbs/acre)	Plant Height (inches)	Test Weight (lbs/bu)	Yellow-berry	Thousand Kernel Weight (grams)
20 ANZA	1530 (34)	25	58.4	2.0	25.5
112 YECORA ROJO	1980 (6)	25	57.4	1.0	31.9
221 PHOENIX	1000 (49)	23	56.8	1.0	23.9
353 YOLO	1370 (42)	25	57.1	1.0	21.9
415 KLASIC	2250 (1)	25	58.1	1.0	29.6
538 PROBRAND 775	840 (50)	23	54.4	1.0	25.5
544 TADINIA	1210 (44)	25	56.1	1.0	24.9
638 SERRA	1660 (26)	26	57.0	1.0	26.9
716 BAKER	1700 (23)	22	57.3	1.0	29.0
784 UC 784	2020 (4)	24	55.7	1.0	29.1
785 UC 785	1710 (20)	20	56.6	1.0	28.3
786 UC 786	1680 (25)	25	57.2	1.0	28.4
788 OA 984-034	1780 (12)	28	59.0	1.0	28.1
804 FMC BR 5144	1490 (37)	25	57.3	1.5	23.8
821 FMC BR 5236	1710 (21)	26	55.5	1.0	28.5
822 FMC BR 5450	1420 (40)	22	57.8	1.5	26.5
823 FMC BR 5678	1730 (19)	25	56.4	1.0	29.8
827 CONT BR 5702	1960 (7)	24	56.5	1.0	30.6
828 CONT BR 5710	2030 (3)	22	56.3	1.5	28.4
829 CONT BR 5738	1690 (24)	22	55.3	1.0	25.4
838 QT 588	1110 (47)	24	58.6	2.0	27.1
839 UC 839	1270 (43)	18	55.4	1.0	24.7
840 UC 840	1820 (11)	20	56.6	1.0	30.8
841 UC 841	1400 (41)	20	55.3	1.0	24.5
842 UC 842	1610 (29)	20	55.6	1.0	27.3
843 UC 843	1700 (22)	21	56.0	1.0	27.3
844 UC 844	1750 (16)	21	55.7	1.0	23.7
845 UC 845	1570 (31)	28	58.7	1.0	27.5
846 UC 846	1650 (27)	28	59.5	2.0	28.9
847 UC 847	1870 (9)	28	58.2	1.0	29.7
848 YECORA ROJO 87W	1760 (14)	20	58.0	1.0	27.7
849 UC 849	1620 (28)	25	57.5	2.0	23.0
850 UC 850	1860 (10)	31	59.8	3.0	28.3
852 UC 852	1460 (39)	27	60.0	2.0	26.7
859 WS 2501	1570 (32)	29	55.8	1.5	25.1
860 WS 2502	1480 (38)	28	55.3	1.0	25.2
862 PIONEER RBI0104	1780 (13)	27	57.0	1.5	29.7
863 PIONEER RBI0161	1940 (8)	27	57.7	1.0	28.0
864 UC 864	1760 (15)	19	57.5	1.0	25.9
865 PH 984-75	1750 (17)	23	54.6	1.5	27.9
866 DA 984-02	1740 (18)	28	58.4	1.5	27.5
867 PH 986-61	2140 (2)	29	59.3	2.0	34.2
868 PH 986-66	2000 (5)	21	57.2	1.0	27.9
872 S87-0149	1560 (33)	24	54.9	3.0	25.3
873 N89-4005	1500 (36)	20	55.9	1.0	27.6
874 QT 589	1110 (46)	21	58.0	1.5	27.0
875 QT 577	1100 (48)	28	58.2	2.0	29.8
876 XH1075	1140 (45)	24	55.9	1.0	26.7
882 FMC BR 7381	1510 (35)	19	56.3	1.0	24.8
883 CONT BR 5901	1600 (30)	20	57.2	1.0	28.9
Mean	1620	24	57.0	1.3	27.3
CV	11.8	8.5	1.3	43.7	5.1
LSD (.05)	270	4	1.4	1.1	2.8

Rating scale for yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.

TABLE 19. 1990 AND 1988-90 COMMON WHEAT YIELD SUMMARY (LBS/ACRE)

		SACRAMENTO VALLEY			SAN JOAQUIN VALLEY			IMPERIAL VALLEY	DRYLAND		
		1990	1989-90	1988-90	1990	1989-90	1988-90	1989-90	1990	1989-90	1988-90
	ENTRY	4 LOC	8 LOC/YR	12 LOC/YR	3 LOC	6 LOC/YR	9 LOC/YR	2 YR	1 LOC	3 LOC/YR	5 LOC/YR
20	ANZA	6250 (14)	6290 (11)	6270 (9)	5990 (13)	5860 (9)	6190 (6)	7140 (20)	1530 (34)	1700 (23)	2250 (9)
112	YECORA ROJO	5890 (30)	5920 (23)	5990 (12)	6090 (10)	5790 (12)	6070 (8)	7430 (16)	1980 (6)	2000 (7)	2310 (7)
221	PHOENIX	5850 (31)	6180 (13)	6080 (11)	5780 (26)	5540 (24)	5950 (10)	8240 (4)	1000 (49)	1240 (33)	1930 (13)
353	YOLO	6360 (9)	6440 (4)	6570 (3)	6360 (4)	6000 (4)	6570 (4)	7040 (22)	1370 (42)	1570 (26)	2060 (11)
415	KLASIC	6440 (5)	6310 (10)	6410 (5)	6600 (1)	6480 (1)	6760 (1)	8680 (1)	2250 (1)	2220 (1)	2440 (4)
538	PROBRAND 775	5830 (33)	5900 (25)		5460 (39)	5410 (29)		7720 (12)	840 (50)	1380 (30)	
544	TADINIA	6130 (18)	6370 (8)	6440 (4)	5570 (35)	5410 (30)	5830 (12)	6870 (24)	1210 (44)	1450 (28)	2170 (10)
638	SERRA	6080 (20)	6070 (17)	6250 (10)	6520 (2)	6250 (2)	6610 (3)	6820 (25)	1660 (26)	1980 (9)	2560 (1)
716	BAKER	5900 (29)	5770 (28)	5770 (13)	5820 (24)	5790 (11)	6060 (9)	7900 (9)	1700 (23)	2000 (6)	2470 (3)
784	UC 784	6500 (4)	6650 (1)	6660 (2)	6020 (12)	5880 (7)	6160 (7)	8260 (3)	2020 (4)	1990 (8)	2380 (6)
785	UC 785	6310 (11)	6350 (9)	6350 (7)	5370 (41)	5340 (31)	5710 (13)	8030 (6)	1710 (20)	2070 (2)	2500 (2)
786	UC 786	6380 (8)	6390 (6)	6400 (6)	6090 (9)	6000 (5)	6360 (5)	8010 (7)	1680 (25)	1830 (15)	2270 (8)
788	DA 984-034	6180 (16)	6370 (7)	6300 (8)	5760 (27)	5710 (16)	5940 (11)	6200 (30)	1780 (12)	2010 (4)	2390 (5)
804	FMC BR 5144	6640 (1)	6590 (2)	6690 (1)	6470 (3)	6100 (3)	6630 (2)	6450 (27)	1490 (37)	1370 (31)	1950 (12)
821	FMC BR 5236	5350 (45)	5500 (33)		5540 (36)	5480 (27)		5800 (31)	1710 (21)	1740 (20)	
822	FMC BR 5450	5530 (42)	5690 (30)		5650 (33)	5730 (14)		7870 (10)	1420 (40)	1910 (12)	
823	FMC BR 5678	5970 (27)	6050 (18)		5920 (16)	5700 (18)		7040 (23)	1730 (19)	1930 (11)	
827	CONT BR 5702	6200 (15)	6130 (15)		5970 (14)	5870 (8)		8280 (2)	1960 (7)	2030 (3)	
828	CONT BR 5710	6060 (23)	5810 (26)		6140 (8)	5950 (6)		7440 (15)	2030 (3)	2010 (5)	
829	CONT BR 5738	5930 (28)	6140 (14)		5830 (23)	5490 (26)		7360 (17)	1690 (24)	1890 (13)	
838	QT 588	5790 (37)	6080 (16)		5520 (38)	5460 (28)		7560 (14)	1110 (47)	1240 (32)	
839	UC 839	6020 (25)	5970 (21)		5190 (46)	4880 (33)		7240 (18)	1270 (43)	1400 (29)	
840	UC 840	6410 (7)	6410 (5)		5720 (30)	5530 (25)		8130 (5)	1820 (11)	1820 (16)	
841	UC 841	5650 (40)	5740 (29)		4970 (48)	4840 (34)			1400 (41)	1580 (25)	
842	UC 842	6290 (12)	6270 (12)		5860 (19)	5670 (20)		7560 (13)	1610 (29)	1760 (19)	
843	UC 843	5830 (34)	5990 (20)		5890 (18)	5700 (17)		7770 (11)	1700 (22)	1700 (22)	
844	UC 844	5780 (38)	5910 (24)		5370 (40)	5300 (32)		7150 (19)	1750 (16)	1850 (14)	
845	UC 845	5800 (35)	5930 (22)		5730 (29)	5690 (19)		7100 (21)	1570 (31)	1670 (24)	
846	UC 846	6060 (22)	6050 (19)		5810 (25)	5600 (22)			1650 (27)	1550 (27)	
847	UC 847	5800 (36)	5780 (27)		5860 (20)	5600 (21)			1870 (9)		
848	YECORA ROJO 87W	6410 (6)	6500 (3)		6080 (11)	5830 (10)		7950 (8)	1760 (14)	1740 (21)	
849	UC 849	5590 (41)	5610 (31)		5950 (15)	5780 (13)		6410 (29)	1620 (28)	1810 (18)	
850	UC 850	5110 (48)	5330 (34)		5850 (22)	5730 (15)		6420 (28)	1860 (10)	1960 (10)	
852	UC 852	5510 (43)	5560 (32)		5620 (34)	5580 (23)		6730 (26)	1460 (39)	1820 (17)	
859	WS 2501	4890 (49)			4580 (49)				1570 (32)		
860	WS 2502	5380 (44)			5210 (45)				1480 (38)		
862	PIONEER RBI0104	6530 (3)			6210 (6)				1780 (13)		
863	PIONEER RBI0161	6290 (13)			6350 (5)				1940 (8)		
864	UC 864	6580 (2)			6170 (7)				1760 (15)		
865	PH 984-75	6170 (17)			5750 (28)				1750 (17)		
866	DA 984-02	6030 (24)			5700 (31)				1740 (18)		
867	PH 986-61	6080 (21)			5850 (21)				2140 (2)		
868	PH 986-66	6350 (10)			5900 (17)				2000 (5)		
872	S87-0149	6120 (19)			5350 (42)				1560 (33)		
873	N89-4005	5700 (39)			4980 (47)				1500 (36)		
874	QT 589	5290 (46)			5290 (43)				1110 (46)		
875	QT 577	4750 (50)			4290 (50)				1100 (48)		
876	XH1075	5240 (47)			5540 (37)				1140 (45)		
882	FMC BR 7381	6010 (26)			5260 (44)				1510 (35)		
883	CONT BR 5901	5840 (32)			5690 (32)				1600 (30)		
MEAN		5940	6060	6320	5730	5680	6220	7370	1620	1760	2280
CV		9.0	8.0	7.6	8.4	8.9	8.4	7.7	11.8	15.2	15.2
LSD (.05)		370	240	190	390	280	240	560	270	220	220

Numbers in parentheses indicate relative rank in column.

TABLE 20. 1989 BUTTE COMMON WHEAT TEST, QUALITY EVALUATION*

ENTRY	FLOUR				MIXOGRAPH		BAKING			
	YLD	ASH	MSCR	PRO	ABSR	TY	ABSR	MXT	LVOL	BCR
20 ANZA	71.9	0.29	92.4	8.4	55.4	2M	55.5	1.8	550	9
112 YECORA ROJO	73.3	0.33	91.7	9.4	59.9	8M	61.0	3.8	830	2
221 PHOENIX	73.3	0.32	92.2	9.4	60.5	4M	61.6	2.0	805	6
243 PROBRED	72.4	0.34	90.2	8.7	59.7	8M	60.1	4.1	835	4
353 YOLO	73.2	0.31	92.6	8.3	59.5	3M	59.5	1.7	765	8
415 KLASIC	74.3	0.31	93.9	9.2	60.2	8M	61.1	4.1	760	4
538 PROBRAND 775	72.8	0.35	90.2	10.0	62.8	3M	64.5	3.3	890	5
544 TADINIA	75.2	0.30	95.0	9.0	56.1	5H	56.8	1.8	680	9
638 SERRA	74.8	0.31	94.4	9.1	59.2	8M	60.0	4.2	835	3
671 S8330501	70.0	0.33	88.3	9.6	57.4	4M	58.7	2.2	750	8
716 BAKER	72.3	0.33	90.7	9.9	61.4	8M	63.0	3.7	855	2
776 ESCA 2	69.6	0.33	87.9	9.7	63.0	8M	64.4	3.0	830	5
778 ESCA 4	69.6	0.33	87.8	10.0	61.9	7M	63.6	2.4	850	6
779 ESCA 5	69.8	0.31	89.2	9.7	60.8	6M	62.2	2.3	825	6
784 UC 784	70.0	0.33	88.3	9.6	57.1	4M	58.4	2.8	750	8
785 UC 785	69.0	0.35	86.2	9.4	57.4	5M	59.5	3.2	770	8
786 UC 786	70.5	0.30	90.4	8.6	58.2	5M	58.5	2.9	745	7
788 DA 984-034	69.3	0.36	85.9	10.3	60.7	4M	62.7	2.3	885	6
804 FMC BR 5144	72.7	0.36	89.6	8.1	57.4	4M	57.2	2.2	740	9
821 FMC BR 5236	70.9	0.29	91.3	9.5	58.4	8M	59.6	3.6	875	5
822 FMC BR 5450	71.9	0.31	91.3	9.8	58.0	8M	59.5	3.4	900	4
823 FMC BR 5678	72.4	0.36	89.2	9.8	58.5	8M	60.0	3.5	860	5
824 FMC BR 5784	71.2	0.33	89.5	8.1	56.9	6L	56.7	3.2	750	8
825 DA984-146	69.7	0.34	87.4	9.4	60.4	8M	61.5	3.1	815	6
826 DA984-039	69.0	0.33	87.2	10.0	59.8	6M	62.5	2.3	870	4
827 PB BR 5702	71.8	0.33	90.2	10.1	59.6	8M	62.4	3.8	910	3
828 PB BR 5710	71.7	0.33	90.0	10.5	60.9	7M	64.1	3.4	935	4
829 PB BR 5738	71.7	0.39	86.5	10.5	60.5	8M	63.7	3.4	890	3
830 PB BR 5762	70.8	0.33	89.1	9.4	60.2	8M	62.3	3.8	870	4
834 QT 555	70.7	0.37	87.0	8.9	59.5	7M	62.1	3.3	760	8
835 QT 562	69.7	0.39	84.9	7.8	57.7	6L	58.2	2.8	765	8
836 QT 574	68.8	0.32	87.6	9.2	57.5	6L	59.4	2.9	860	7
837 QT 578	68.8	0.36	85.4	8.6	57.8	4M	59.1	2.8	760	8
838 QT 588	70.7	0.34	88.5	8.5	57.8	4M	59.0	2.6	775	8
839 UC 839	70.4	0.29	90.8	9.3	59.5	7L	62.5	5.2	765	7
840 UC 840	70.3	0.31	89.6	8.6	60.8	6L	62.1	3.2	770	8
841 UC 841	69.4	0.30	89.2	10.0	59.3	8M	62.0	3.2	770	7
842 UC 842	71.6	0.31	90.9	10.4	60.2	7M	63.3	2.9	865	6
843 UC 843	71.6	0.30	91.5	10.5	61.4	8M	64.6	3.3	830	5
844 UC 844	70.5	0.34	88.3	10.0	59.7	8M	62.4	3.3	870	3
845 UC 845	73.2	0.32	92.2	10.6	59.1	3M	61.4	1.6	870	6
846 UC 846	74.0	0.29	94.5	10.4	60.5	6M	63.6	2.9	900	4
847 UC 847	71.2	0.32	90.1	10.2	60.5	5H	63.4	3.7	885	4
848 YECORA ROJO 87W	70.7	0.33	89.0	9.5	61.2	6M	62.4	2.8	865	4
849 UC 849	72.0	0.35	89.4	9.7	59.3	4M	63.7	2.6	855	5
851 UC 851	69.8	0.29	90.2	9.9	61.9	7M	63.5	2.8	855	6
853 ESCA 32	69.5	0.33	87.8	9.2	61.1	8M	62.0	3.6	805	6

*Quality analyses were performed by the Western Wheat Quality Laboratory, USDA, Pullman, WA.

YLD = flour extraction percentage; ASH = flour ash percentage; MSCR = milling score; PRO = flour protein, 14% m.b.; ABSR = absorption at 14% m.b. corrected to 11% protein; TY = mixograph type; MXT = optimum mixing time in minutes; LVOL = loaf volume (cc) corrected to 11% protein; BCR = bread crumb rating (1=excellent, 2=satisfactory,4=questionable/satisfactory, 6=questionable, 9=unsatisfactory)

TABLE 21. 1989 SACRAMENTO-SAN JOAQUIN DELTA COMMON WHEAT TEST, QUALITY EVALUATION*

ENTRY		WHT PRO	BU WT	HARDNESS	FALL NO.
20	ANZA	11.8	64.5	90	401
112	YECORA ROJO	13.2	64.5	77	423
221	PHOENIX	12.4	64.0	84	393
243	PROBRED	14.1	63.5	85	420
353	YOLO	11.5	64.5	73	410
415	KLASIC	14.1	65.0	69	422
538	PROBRAND 775	12.7	61.5	67	434
544	TADINIA	12.1	64.0	81	408
638	SERRA	12.5	64.0	63	386
671	VEERY	13.5	63.5	85	391
716	BAKER	13.7	64.5	84	411
776	ESCA 2	13.6	63.5	99	403
778	ESCA 4	14.5	64.0	98	398
779	ESCA 5	14.9	64.0	91	437
784	UC 784	13.2	64.5	91	442
785	UC 785	13.5	64.0	91	419
786	UC 786	12.8	63.5	83	446
788	DA 984-034	14.5	64.0	95	398
804	FMC BR 5144	10.8	63.5	77	390
821	FMC BR 5236	13.1	62.5	66	343
822	FMC BR 5458	14.5	64.5	70	405
823	FMC BR 5678	14.2	63.0	79	415
824	FMC BR 5784	12.9	61.0	84	425
825	DA 984-146	13.6	62.5	78	411
826	DA 984-039	13.3	64.5	98	374
827	PB BR 5702	13.0	63.5	81	421
828	PB BR 5710	14.1	64.0	78	417
829	PB BR 5738	14.7	64.0	84	439
830	PB BR 5762	13.2	63.5	73	425
834	QT 555	13.6	64.0	83	407
835	QT 562	12.8	63.5	77	444
836	QT 574	13.4	63.0	58	420
837	QT 578	13.0	63.5	75	361
838	QT 588	12.6	64.0	72	407
839	UC 839	12.3	63.5	79	418
840	UC 840	12.6	62.5	77	369
841	UC 841	14.0	63.5	81	433
842	UC 842	14.5	62.5	84	459
843	UC 843	14.2	62.5	76	421
844	UC 844	13.8	63.0	84	416
845	UC 845	14.2	65.0	83	425
846	UC 846	13.9	65.0	70	472
847	UC 847	13.7	64.5	82	435
848	YECORA ROJO 87W	14.3	64.5	85	442
849	UC 849	14.5	64.0	91	427
851	UC 851	13.1	64.0	87	420
853	ESCA 32	13.5	62.5	83	435

*Quality analyses were performed by General Mills, Inc., Vallejo, CA.

WHT PRO= wheat protein percentage, 12% m.b.; BU WT = bushel weight, lbs/bu; FALL NO. = falling number (seconds).

TABLE 22. 1989 KINGS COMMON WHEAT TEST, QUALITY EVALUATION*

ENTRY	WHT PRO	YLD	BAKING ABS	MT	DC	LVOL	TXT	COLOR	EXT APP
20 ANZA	12.27	75.0	60.0	05	GOOD	2250	SOFT	SL CR-BRT	ROUGH
112 YECORA ROJO	12.52	72.4	63.0	14	GOOD	2550	SOFT	SL CR-BRT	ROUGH
353 YOLO	12.53	73.0	63.0	08	GOOD	2500	SOFT	SL CR-BRT	ROUGH
221 PHOENIX	12.82	73.4	63.0	12	GOOD	2625	SOFT	WHT-BRT	ROUGH
243 PROBRED	12.79	71.2	63.0	10	GOOD	2350	SOFT	CR-BRT	ROUGH
415 KLASIC	12.45	71.5	63.0	17	GOOD	2500	SOFT	CR-BRT	ROUGH
538 PROBRAND 775	12.98	67.8	63.0	16	GOOD	2675	SOFT	WHT-BRT	ROUGH
544 TADINIA	12.19	72.7	62.0	08	GOOD	2550	SOFT	CR-BRT	ROUGH
638 SERRA	13.16	71.5	63.0	13	GOOD	2800	SOFT	WHT-BRT	ROUGH
671 S8330501	13.00	71.6	63.0	07	VERY SOFT	2600	SOFT	CR-BRT	ROUGH
716 BAKER	13.27	65.5	63.0	20	GOOD	2800	SOFT	WHT-BRT	ROUGH
776 ESCA 2	15.38	70.1	66.0	10	GOOD	2800	SOFT	CR-BRT	ROUGH
778 ESCA 4	13.47	73.6	64.0	09	GOOD	2650	SOFT	SL CR-BRT	ROUGH
779 ESCA 5	12.86	75.3	63.0	11	GOOD	2800	SOFT	WHT-BRT	ROUGH
784 UC 784	13.92	69.5	64.0	07	GOOD	2575	SOFT	WHT-BRT	ROUGH
785 UC 785	14.03	70.8	64.0	07	GOOD	2500	SOFT	SL CR-BRT	ROUGH
786 UC 786	12.88	72.3	63.0	16	GOOD	2800	SOFT	WHT-BRT	ROUGH
788 DA 984-034	13.63	73.7	64.0	12	GOOD	2700	SOFT	WHT-BRT	ROUGH
804 FMC BR 5144	12.12	73.0	61.0	11	SOFT	2800	SOFT	CR-DULL	ROUGH
821 FMC BR 5236	12.99	69.6	62.0	12	GOOD	2800	HARSH	CR-DULL	ROUGH
822 FMC BR 5450	13.99	73.0	63.0	11	GOOD	2800	SOFT	SL CR-BRT	SMOOTH
823 FMC BR 5678	13.58	70.1	63.0	11	GOOD	2700	HARSH	CR-DULL	ROUGH
824 FMC BR 5784	14.24	71.0	64.0	10	SOFT	2800	SOFT	CR-BRT	ROUGH
825 DA 984-146	14.06	68.9	63.0	11	GOOD	2800	SOFT	CR-BRT	ROUGH
826 DA 984-039	13.01	73.0	62.0	10	GOOD	2800	SOFT	CR-SL DULL	ROUGH
827 PB BR 5702	13.26	70.2	63.0	13	GOOD	2800	SOFT	WHT-BRT	ROUGH
828 PB BR 5710	14.33	71.4	64.0	17	GOOD	2800	SOFT	WHT-BRT	ROUGH
829 PB BR 5738	14.33	67.9	64.0	14	BUCKY	2800	SOFT	WHT-BRT	SL-ROUGH
830 PB BR 5762	13.43	70.8	63.0	14	GOOD	2800	SOFT	WHT-BRT	SL-ROUGH
834 QT 555	14.33	65.4	65.0	15	GOOD	2700	SOFT	WHT-BRT	ROUGH
835 QT 562	13.18	62.7	63.0	08	GOOD	2700	SOFT	CR-DULL	ROUGH
836 QT 574	13.20	65.7	63.0	08	GOOD	2800	SOFT	CR-BRT	ROUGH
837 QT 578	12.71	69.9	63.0	08	GOOD	2450	SOFT	CR-VERY DULL	ROUGH
838 QT 588	12.67	71.8	63.0	12	GOOD	2700	SOFT	WHT-BRT	ROUGH
839 UC 839	13.29	68.6	63.0	20	GOOD	2400	SOFT	CR-DULL	ROUGH
840 UC 840	13.32	62.3	63.0	09	GOOD	2700	SOFT	CR-BRT	ROUGH
841 UC 841	13.61	69.9	64.0	11	GOOD	2500	SOFT	CR-BRT	ROUGH
842 UC 842	13.62	72.3	64.0	15	GOOD	2775	SOFT	WHT-BRT	ROUGH
843 UC 843	13.62	72.5	64.0	16	GOOD	2800	SOFT	CR-BRT	ROUGH
844 UC 844	13.79	70.8	64.0	09	GOOD	2400	SOFT	CR-BRT	ROUGH
845 UC 845	13.18	74.7	63.0	09	GOOD	2800	SOFT	CR-BRT	ROUGH
846 UC 846	13.49	74.2	64.0	14	GOOD	2550	SOFT	WHT	ROUGH
847 UC 847	12.83	70.3	63.0	13	GOOD	2675	SOFT	SL CR-BRT	ROUGH
848 YECORA ROJO 87W	13.01	67.9	63.0	20	GOOD	2575	SOFT	SL CR-BRT	ROUGH
849 UC 849	13.61	71.7	64.0	08	GOOD	2600	SOFT	CR-BRT	ROUGH
851 UC 851	12.83	71.9	63.0	12	GOOD	2525	SOFT	WHT-BRT	ROUGH
853 ESCA 32	14.10	69.3	64.0	15	GOOD	2625	SOFT	CR-BRT	ROUGH

*Quality analyses were performed by ADM Milling Co., Olathe, KS.

WHT PRO = wheat protein, 12% m.b.; YLD = % flour; ABS = % absorption; MT = mixing time (minutes); DC = dough condition; LVOL = loaf volume (cc); TXT = texture; COLOR = crumb color; EXT APP = external appearance

TABLE 23. 1989 IMPERIAL COMMON WHEAT TEST, QUALITY EVALUATION*

ENTRY	WHT PRO	HARDNESS	YLD	FLR ASH	BAKE PRO	ABS	MX	BCR	LVOL	BAKE SCORE
20 ANZA	11.4	87	73.5	0.31	10.0	57.4	2.00	3	620	1
112 YECORA ROJO	13.0	80	72.3	0.36	12.0	59.5	5.50	4	820	1
221 PHOENIX	11.4	80	74.5	0.28	10.3	57.0	2.00	6	680	1
243 PROBRED	12.9	83	72.1	0.35	11.6	58.5	4.50	6	800	2
353 YOLO	11.4	73	73.5	0.31	10.4	57.8	2.00	10	765	1
415 KLASIC	13.2	67	74.9	0.29	12.4	56.3	5.25	3	855	1
538 PROBRAND 775	12.7	76	73.3	0.35	11.8	58.2	4.25	6	785	2
544 TADINIA	12.2	85	71.1	0.34	10.7	56.3	2.75	6	680	1
638 SERRA	12.2	72	73.9	0.34	11.4	57.5	5.00	3	815	1
671 S8330501	12.5	77	71.1	0.42	11.5	59.1	2.75	3	760	1
716 BAKER	13.7	82	72.5	0.33	12.6	59.6	4.50	4	850	1
776 ESCA 2	13.3	98	71.1	0.39	11.7	62.3	4.25	6	865	4
778 ESCA 4	12.9	91	70.7	0.37	12.0	62.3	2.75	6	865	3
779 ESCA 5	13.2	92	71.2	0.38	12.3	61.8	2.75	5	860	2
784 UC 784	12.6	84	71.8	0.39	11.2	58.7	3.75	6	740	1
785 UC 785	12.6	90	71.1	0.39	11.3	59.1	3.50	4	775	1
786 UC 786	12.3	81	71.1	0.37	11.3	58.7	4.00	6	825	2
788 DA 984-034	13.4	89	70.8	0.31	12.0	63.0	2.75	6	885	3
804 FMC BR 5144	11.5	74	73.8	0.31	10.2	56.1	2.00	6	760	1
821 FMC BR 5236	13.0	65	72.3	0.30	12.0	58.3	4.75	6	845	2
822 FMC BR 5450	12.8	67	73.7	0.28	12.1	58.0	4.00	6	825	2
823 FMC BR 5678	12.4	79	71.8	0.35	11.5	57.0	5.75	6	800	1
824 FMC BR 5784	11.6	87	73.4	0.35	9.9	59.0	4.75	6	750	1
825 DA 984-146	13.4	81	70.1	0.31	12.2	61.6	4.25	4	850	2
826 DA 984-039	13.3	100	69.5	0.39	12.2	61.9	2.75	6	885	2
827 PB BR 5702	13.2	79	71.9	0.34	12.0	58.8	5.50	6	765	1
828 PB BR 5710	13.4	79	71.5	0.32	12.5	58.9	4.75	6	860	2
829 PB BR 5738	13.3	73	70.6	0.36	12.7	60.1	4.75	4	830	1
830 PB BR 5762	12.7	89	71.4	0.35	11.4	58.2	6.50	6	780	1
834 QT 555	12.0	73	70.4	0.39	11.0	56.9	3.75	6	725	1
835 QT 562	12.2	73	68.9	0.38	10.8	58.9	2.75	8	775	1
836 QT 574	12.2	76	69.3	0.40	11.1	58.2	3.50	4	790	1
837 QT 578	12.0	73	70.1	0.38	10.6	58.6	2.75	6	765	1
838 QT 588	11.2	64	72.6	0.34	10.8	56.6	2.50	4	730	1
839 UC 839	11.9	76	69.2	0.34	10.2	58.0	7.00	1	625	1
840 UC 840	12.0	79	70.6	0.34	10.5	60.8	3.00	2	680	1
842 UC 842	13.1	78	71.9	0.32	12.1	59.6	4.75	6	790	2
843 UC 843	13.1	81	72.0	0.33	12.2	60.1	5.25	3	785	1
844 UC 844	13.8	82	68.4	0.37	12.8	61.2	5.00	4	820	2
845 UC 845	13.0	75	73.9	0.33	12.2	60.1	2.25	6	815	1
848 YECORA ROJO 87W	12.7	85	70.8	0.35	11.3	61.4	4.25	6	810	3
849 UC 849	13.4	82	72.5	0.34	12.3	60.1	3.25	5	820	2
851 UC 851	12.4	77	70.7	0.35	10.9	60.9	2.75	6	755	1
853 ESCA 32	12.8	80	72.3	0.29	11.3	59.0	3.50	4	830	1

*Quality analyses were performed by the Hard Red Spring and Durum Wheat Quality Laboratory, USDA, North Dakota State University, Fargo, ND.

WHT PRO = wheat protein percentage, 14% m.b.; YLD = flour extraction percentage; ASH = flour ash percentage; FLR PRO = flour protein percentage, 14% m.b.; BAKE ABS = water absorption percentage; MX = mixing time (minutes); BCR = bread crumb rating (1=excellent, 2=satisfactory, 4=questionable/satisfactory, 6=questionable, 9=unsatisfactory); LVOL = loaf volume (cc); BAKE SCORE = 1=no promise, 2=little promise, 3=some promise, 4=good promise.

TABLE 24. 1990 UC DAVIS COMMON WHEAT TEST, QUALITY EVALUATION*

			MILLING				FARINOGRAPH					BAKING			KERNEL SIZE		
ENTRY	WHT PRO	HARDNESS	YLD	ASH	FALL NO.	WET GLUT	ABS	ARR	PEAK	MT	MTI	LVOL	GR/TX	SCORE	LARGE	MEDIUM	SMALL
20 ANZA	11.37	88.10	67.50	.44	314.00	27.80	61.80	2.50	5.00	5.00	60.00	870.00	CLOSE	2	69	30	1
112 YECORA ROJO	12.86	76.80	66.60	.44	342.00	29.26	60.20	1.75	10.00	22.25	20.00	1010.00	CLOSE	5	76	24	0
221 PHOENIX	11.30	84.70	70.00	.45	322.00	27.64	60.20	2.00	4.50	9.50	30.00	920.00	CLOSE	3	70	29	1
353 YOLO	10.84	76.70	74.10	.43	363.00	27.05	58.60	1.75	3.50	8.50	30.00	845.00	CLOSE	1	70	30	1
415 KLASIC	12.30	61.50	69.40	.40	292.00	28.96	57.80	1.50	8.00	21.50	10.00	960.00	CLOSE	4	83	17	0
538 PROBRANO 775	12.17	70.90	70.00	.46	348.00	28.17	60.20	2.25	8.00	25.75	20.00	935.00	CLOSE	4	67	32	1
544 TADINIA	11.60	80.90	73.10	.45	309.00	27.64	54.20	1.25	3.00	6.75	40.00	845.00	CLOSE	2	65	34	1
638 SERRA	11.55	57.40	73.10	.45	302.00	26.75	57.80	1.50	10.00	25.50	20.00	920.00	CLOSE	3	70	29	1
716 BAKER	13.12	83.60	71.00	.48	293.00	30.35	59.40	2.00	11.00	26.00	10.00	875.00	CLOSE	2	73	26	1
784 UC 784	13.33	72.10	67.40	.46	349.00	30.59	60.00	1.25	6.00	16.75	30.00	890.00	HARSH, CLOSE	3	84	16	0
785 UC 785	12.77	84.20	65.80	.45	348.00	30.66	60.00	1.75	6.00	14.25	20.00	950.00	OPEN	4	75	24	1
786 UC 786	12.13	91.20	67.80	.45	359.00	28.27	60.60	2.50	6.50	15.50	20.00	905.00	CLOSE	3	75	24	1
788 DA 984-034	13.21	76.50	66.70	.46	387.00	33.41	63.80	3.50	10.00	12.50	40.00	970.00	OPEN	3	78	22	0
804 FMC BR 5144	11.42	76.10	70.20	.41	351.00	28.27	59.00	1.50	6.00	12.00	20.00	875.00	CLOSE	2	66	33	1
821 FMC BR 5236	12.15	52.40	71.20	.42	310.00	28.87	58.00	1.50	8.00	20.50	10.00	1000.00	CLOSE	5	75	25	0
822 FMC BR 5450	12.35	84.40	70.70	.48	413.00	27.67	58.00	1.50	10.00	28.00	10.00	945.00	CLOSE	4	58	41	1
823 FMC BR 5678	12.66	74.00	71.70	.46	325.00	29.19	59.40	1.00	7.00	13.00	20.00	955.00	CLOSE	4	78	22	0
827 CONT BR 5702	13.06	79.80	68.40	.42	301.00	29.48	58.40	1.50	12.00	25.50	20.00	970.00	SL OPEN	5	80	20	0
828 CONT BR 5710	12.78	60.50	68.20	.40	326.00	30.69	58.80	1.75	9.00	24.50	20.00	970.00	CLOSE	5	85	15	0
829 CONT BR 5738	13.36	77.50	69.70	.51	351.00	30.56	59.60	1.50	6.00	14.50	20.00	930.00	SL OPEN	4	79	21	0
838 QT 588	11.70	60.80	67.30	.39	321.00	28.40	58.40	1.50	5.00	13.50	50.00	900.00	CLOSE	3	79	21	0
839 UC 839	12.00	63.60	65.60	.40	338.00	26.09	58.40	1.25	2.50	8.34	20.00	960.00	CLOSE	5	54	45	1
840 UC 840	12.29	60.00	64.20	.43	312.00	29.29	60.40	1.25	2.50	12.25	20.00	860.00	CLOSE	3	74	25	0
841 UC 841	12.68	72.80	65.60	.40	329.00	30.28	60.60	1.25	7.00	22.75	20.00	980.00	CLOSE	5	61	38	1
842 UC 842	13.19	78.20	69.70	.41	410.00	30.76	56.80	1.25	10.00	22.75	10.00	1015.00	CLOSE	5	68	32	0
843 UC 843	13.06	73.70	70.30	.44	345.00	31.75	59.40	2.00	7.50	23.00	30.00	1000.00	OPEN	5	59	40	1
844 UC 844	13.27	60.40	68.20	.45	334.00	30.45	57.60	1.50	8.50	24.00	20.00	975.00	OPEN	5	64	36	0
845 UC 845	12.54	76.40	74.60	.43	372.00	33.15	62.00	3.00	6.50	19.50	20.00	960.00	CLOSE	5	83	17	0
846 UC 846	12.71	75.30	73.90	.44	335.00	31.28	60.20	2.00	10.00	24.00	30.00	970.00	CLOSE	5	76	24	1
847 UC 847	12.99	84.30	70.20	.46	345.00	29.73	61.40	3.00	10.50	22.00	20.00	985.00	CLOSE	5	82	17	0
848 YECORA ROJO 87W	12.41	88.10	67.10	.44	354.00	28.99	62.20	2.50	8.00	12.50	20.00	925.00	CLOSE	3	74	25	1
849 UC 849	14.00	89.40	72.60	.45	350.00	32.08	61.20	3.00	5.50	15.50	30.00	980.00	CLOSE	5	71	29	0
850 UC 850	11.30	34.80	58.60	.40	313.00	32.39	56.40	1.50	3.00	7.50	50.00	890.00	CLOSE	3	--	--	--
852 UC 852	12.10	34.00	59.10	.45	320.00	34.45	57.20	1.50	2.50	5.00	60.00	880.00	CLOSE	2	--	--	--
859 WS 2501	12.85	87.00	67.70	.41	284.00	30.59	60.40	2.50	8.00	23.50	20.00	905.00	CLOSE	3	75	25	1
860 WS 2502	12.78	85.60	67.08	.46	292.00	28.04	59.00	2.00	7.00	18.00	20.00	885.00	CLOSE	3	67	31	1
862 PIONEER R810104	11.45	78.70	63.50	.49	207.00	27.21	60.60	1.75	4.00	5.75	70.00	815.00	CLOSE	1	79	20	1
863 PIONEER R810161	12.63	84.60	65.00	.46	314.00	29.76	61.40	1.75	4.00	9.25	50.00	915.00	CLOSE	3	84	15	0
864 UC 864	12.16	85.00	66.30	.45	342.00	27.57	59.40	1.75	10.00	21.25	30.00	880.00	CLOSE	3	85	15	0
865 PH 984-75	12.48	76.20	66.80	.43	331.00	29.99	59.20	2.00	11.00	25.00	10.00	980.00	SLTLY OPEN	5	72	28	1
866 OA 984-02	12.70	86.20	65.60	.43	265.00	33.17	62.20	3.00	7.00	12.00	20.00	990.00	OPEN	5	79	20	0
867 PH 986-61	12.95	83.70	70.40	.48	364.00	31.49	62.20	2.50	8.50	16.50	20.00	1050.00	SLTLY OPEN	5	76	24	0
868 PH 986-66	11.95	92.90	63.90	.42	378.00	26.80	61.60	1.50	8.00	28.50	20.00	890.00	CLOSE	3	73	27	1
872 S87-0149	12.15	81.30	64.60	.53	280.00	26.69	63.80	1.50	4.50	7.25	40.00	800.00	CLOSE	1	72	26	1
873 N89-4005	12.93	97.60	66.00	.50	326.00	28.89	62.60	1.50	6.50	14.50	30.00	905.00	CLOSE	3	71	28	1
874 QT 589	11.63	68.80	67.00	.43	333.00	28.14	60.60	1.25	3.50	12.75	20.00	940.00	CLOSE	4	77	22	1
875 QT 577	12.22	59.90	66.60	.44	316.00	30.25	59.40	1.50	4.50	15.00	20.00	920.00	CLOSE	3	69	30	1
876 XH1075	11.29	63.50	68.80	.44	347.00	27.84	59.00	1.25	3.50	10.25	30.00	890.00	CLOSE	2	76	23	1
882 FMC BR 7381	12.17	87.70	65.00	.46	416.00	29.03	61.80	2.00	7.50	16.00	30.00	920.00	CLOSE	4	60	38	1
883 CONT BR 5901	12.16	75.00	65.10	.43	341.00	28.58	59.40	1.25	10.00	29.50	10.00	970.00	CLOSE	5	55	43	1

*Quality analyses were performed by California Wheat Commission Quality Laboratory, Woodland, CA. WHT PRO = protein percentage, 12% m.b.; YLD = percent flour yield; ASH = flour ash percentage; FALL NO. = falling number (seconds); WET GLUT = wet gluten percentage, 14% m.b.; ABS = absorption percentage; ARR = arrival (minutes); PEAK = mixing peak (minutes); MT = mixing tolerance (minutes); MTI = mixing tolerance index, Brabender units; LVOL = loaf volume (cc); GR/TX = grain and texture; SCORE = 1=unsatisfactory, 2=questionable, 3=satisfactory-questionable, 4=satisfactory, 5=excellent. Kernel size: percentage of kernels above 0.111 in (large), 0.0787 in (medium), and 0.0661 in (small) diameter screens.

TABLE 25. 1990 UC DAVIS DURUM WHEAT TEST

Entry	Yield (lbs/acre)	Lodging on 5/7	Lodging at Harvest	BYDV	Stripe Rust	Days to Heading from 3/1	Days to Maturity from 3/1	Plant Height (inches)	Test Weight (lbs/bu)	Black Point	Yellow-berry	Thousand Kernel Weight (grams)	Percent Protein
112 YECORA ROJO (HRS)	6580 (25)	1.5	6.3	1.8	1.0	42	89	36	62.6	1.0	1.0	45.0	12.3
169 MEXICALI 75	5740 (30)	3.0	6.5	1.3	1.0	46	98	40	61.1	1.0	1.5	49.2	12.9
410 ALDURA	7720 (6)	1.0	2.5	1.0	1.0	52	100	35	63.5	2.0	1.0	46.3	12.8
496 YAVAROS 79	7720 (5)	1.0	7.3	1.0	1.0	50	100	38	64.9	2.0	1.0	52.1	12.6
522 WESTBRED 881	6220 (28)	1.0	7.5	1.0	1.3	47	99	39	60.6	2.5	1.0	47.8	13.6
674 WESTBRED TURBO	7700 (7)	1.0	7.5	1.0	1.0	50	98	41	62.8	1.0	1.5	46.3	12.4
676 IMPERIAL	6570 (26)	1.3	6.8	1.0	1.0	51	100	41	61.9	1.0	1.0	54.6	13.6
712 UC 712	6930 (19)	1.0	7.0	1.3	1.0	49	96	42	62.3	1.0	1.5	47.8	13.3
714 ALTAR 84	7450 (10)	1.0	7.3	1.0	1.0	52	101	41	63.6	1.0	2.0	39.3	13.2
742 UC 742	7020 (14)	2.5	6.8	1.3	1.0	51	99	39	63.3	1.5	1.0	47.2	13.4
743 UC 743	7120 (12)	1.5	5.8	1.0	1.0	49	100	40	63.8	1.0	1.0	43.3	13.4
780 UC 780	6650 (23)	1.3	7.3	1.5	1.0	46	97	39	61.4	1.0	1.0	43.3	13.1
781 UC 781	6970 (18)	1.0	6.8	1.3	1.0	49	99	37	61.4	1.0	1.0	42.8	13.3
782 UC 782	7370 (11)	1.5	6.8	1.0	1.0	47	92	40	63.8	1.0	1.0	45.5	13.1
783 CARCOMUN "S"	6860 (22)	1.0	8.0	1.0	1.0	50	100	38	63.3	1.5	2.0	45.3	12.5
795 NUDURA	6580 (24)	1.0	5.3	1.0	1.0	50	100	35	63.4	2.0	1.0	54.6	13.8
798 FMC D5317	6900 (21)	1.5	6.3	1.0	1.0	49	96	38	63.0	1.0	1.0	45.9	13.0
809 DUREX	6990 (17)	1.0	6.5	1.3	1.0	48	102	40	61.2	2.5	1.0	51.9	14.2
814 FMC D5730	8100 (1)	1.0	6.5	1.0	1.0	47	100	38	63.0	2.0	1.0	52.5	12.6
820 FMC D5681	7540 (9)	1.3	7.5	1.5	1.0	40	92	39	61.4	1.0	3.0	43.8	13.1
831 PH 884-2	7010 (16)	1.3	7.0	1.0	1.0	45	97	39	62.1	1.0	1.0	47.7	13.6
832 PH 884-28	6930 (20)	1.0	6.8	1.3	1.0	49	100	38	62.3	1.0	1.0	47.2	14.3
869 PH 885-29	7560 (8)	1.0	4.0	1.0	1.0	53	101	34	62.2	2.0	1.5	45.9	13.0
870 PH 885-59	8070 (2)	1.0	5.5	1.0	1.3	47	100	40	63.0	1.0	1.0	46.3	13.1
871 PH 886-26	7040 (13)	1.0	2.8	1.0	1.0	53	99	34	61.0	1.0	1.0	38.8	13.2
877 FMC D5269	6550 (27)	1.0	7.3	1.0	1.0	51	102	39	63.4	1.0	1.0	47.6	13.4
878 CONT D5456	7010 (15)	1.0	4.0	1.0	1.0	51	100	37	62.8	1.0	1.5	44.5	13.2
879 CONT D5573	7770 (4)	1.0	7.3	1.0	1.0	42	98	38	61.0	1.0	3.5	44.9	12.7
880 CONT D5633	5750 (29)	1.0	4.8	1.0	1.0	52	100	39	63.6	1.5	1.0	47.7	14.1
881 CONT D5765	7850 (3)	1.0	6.0	1.0	1.0	50	99	41	62.3	1.0	2.0	42.8	12.8
Mean	7080	1.2	6.2	1.1	1.0	48	98	38	62.5	1.3	1.3	46.6	13.2
CV	6.7	44.7	17.5	25.6	12.8	2.5	2.2	3.9	1.0	29.4	41.2	4.6	3.5
LSD (.05)	670	0.8	1.5	0.4	NS	2	4	3	1.2	0.8	1.1	4.3	1.0

Rating scale for diseases (area of flag-1 leaf affected), lodging, and yellowberry: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, stripe rust, Septoria leaf blotch, powdery mildew.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.
Percent protein, 0.0% moisture basis.

TABLE 26. 1990 KINGS DURUM WHEAT TEST

Entry	Yield (lbs/acre)	BYDV	Plant Height (inches)	Test Weight (lbs/bu)	Black Point	Thousand Kernel Weight (grams)	Percent Protein
112 YECORA ROJO (HRS)	5530 (24)	2.0	28	63.4	1.0	42.9	14.2
169 MEXICALI 75	4800 (29)	2.8	35	62.7	1.0	50.2	13.6
410 ALDURA	6640 (3)	1.0	30	63.8	1.5	45.9	13.2
496 YAVAROS 79	6190 (9)	1.5	34	65.3	1.0	51.4	13.0
522 WESTBRED 881	5440 (25)	1.8	34	62.4	1.5	52.7	14.1
674 WESTBRED TURBO	7040 (1)	1.0	38	64.3	1.0	54.0	13.6
676 IMPERIAL	5150 (28)	3.0	36	62.3	1.5	58.0	14.3
712 UC 712	5530 (23)	1.8	36	63.7	1.0	52.5	14.0
714 ALTAR 84	5740 (17)	1.3	36	65.0	1.0	46.7	12.8
742 UC 742	5260 (27)	2.0	36	64.2	1.0	50.2	13.1
743 UC 743	5940 (13)	1.0	35	64.9	1.0	49.4	13.5
780 UC 780	5680 (21)	3.5	33	63.7	1.0	47.9	13.2
781 UC 781	5670 (22)	1.5	32	63.5	1.0	45.8	13.0
782 UC 782	5930 (14)	1.0	32	64.5	1.0	46.2	13.4
783 CARCOMUN "S"	6490 (5)	1.3	33	64.9	1.0	48.8	12.8
795 NUDURA	6150 (10)	1.0	32	64.1	1.0	53.5	13.6
798 FMC D5317	5900 (15)	1.3	33	63.3	1.0	47.3	13.7
809 DUREX	5440 (26)	1.3	35	62.6	2.0	53.8	13.8
814 FMC D5730	6320 (7)	1.0	32	64.2	1.0	50.3	12.9
820 FMC D5681	6330 (6)	1.8	31	62.3	1.0	46.1	13.3
831 PH 884-2	5730 (18)	1.8	34	63.2	1.5	49.1	14.0
832 PH 884-28	5720 (19)	1.5	34	64.5	1.0	54.8	14.3
869 PH 885-29	6520 (4)	1.3	31	63.5	1.0	47.3	12.9
870 PH 885-59	6760 (2)	1.3	33	64.4	1.0	47.1	13.6
871 PH 886-26	5710 (20)	1.0	32	62.6	1.0	40.8	13.2
877 FMC D5269	6000 (12)	1.0	31	64.5	1.0	49.7	13.1
878 CONT D5456	6020 (11)	1.5	33	63.9	1.0	47.7	13.1
879 CONT D5573	5880 (16)	1.0	31	61.5	1.0	44.1	13.6
880 CONT D5633	4770 (30)	1.0	33	64.2	1.0	48.5	14.1
881 CONT D5765	6230 (8)	1.0	33	63.9	1.0	49.0	13.1
Mean	5880	1.5	33	63.7	1.1	49.1	13.5
CV	5.7	33.4	3.7	0.4	23.9	2.6	1.7
LSD (.05)	470	0.7	3	0.5	0.5	2.6	0.5

Rating scale for diseases (area of flag-1 leaf affected): 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, stripe rust, Septoria leaf blotch, powdery mildew.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.
Percent protein, 0.0% moisture basis.

TABLE 27. 1990 IMPERIAL DURUM WHEAT TEST

Entry	Yield (lbs/acre)	Test Weight (lbs/bu	Days to Heading	Days to Maturity	Plant Height (inches)	Lodging at Harvest	Shatter	Black Point	Thousand Kernel Weight (grams)	Percent Protein
112 YECORA ROJO (HRS)	7440 (30)	61.3	84	130	30	1.0	1.0	2.0	43.8	17.1
169 MEXICALI 75	8120 (28)	60.8	83	133	36	5.8	1.8	1.5	46.1	13.9
410 ALDURA	8780 (18)	62.0	89	137	31	1.0	1.0	3.5	45.8	14.6
496 YAVAROS 79	9230 (9)	63.8	89	135	36	5.0	1.0	2.0	49.0	13.4
522 WESTBRED 881	8350 (25)	59.8	84	134	33	3.3	1.5	1.5	50.2	14.9
674 WESTBRED TURBO	9860 (2)	61.8	88	136	37	5.0	2.0	2.5	48.8	14.1
676 IMPERIAL	9240 (8)	59.5	89	136	37	3.0	1.8	2.0	54.3	15.5
712 UC 712	8890 (16)	62.5	87	133	36	2.3	1.3	2.0	49.1	14.6
714 ALTAR 84	8480 (24)	64.0	89	133	35	3.8	1.0	1.5	39.5	13.5
742 UC 742	8940 (14)	63.0	86	132	37	3.5	1.3	1.0	46.5	14.5
743 UC 743	9180 (11)	63.3	86	133	36	3.8	1.5	1.0	46.4	14.3
780 UC 780	8700 (22)	61.5	82	131	35	6.0	1.3	1.0	43.5	14.4
781 UC 781	9220 (10)	61.0	85	131	34	3.5	2.3	1.5	41.6	13.9
782 UC 782	9330 (7)	63.0	86	131	34	2.8	1.5	1.0	44.3	14.1
783 CARCOMUN "S"	9350 (6)	62.0	88	133	34	5.3	1.0	3.5	43.0	13.6
795 NUDURA	8750 (20)	63.8	86	138	33	1.0	1.0	2.5	52.8	14.8
798 FMC 05317	8250 (27)	60.5	88	133	34	6.3	1.5	1.0	41.8	14.1
809 DUREX	8250 (26)	60.8	85	136	36	2.3	2.5	2.0	50.6	15.0
814 FMC D5730	9480 (4)	62.0	86	135	34	2.0	1.0	3.5	48.5	13.9
820 FMC D5681	8760 (19)	58.5	81	131	33	3.3	1.8	2.5	42.0	14.2
831 PH 884-2	8890 (15)	60.8	84	131	34	2.8	1.0	1.0	41.2	14.4
832 PH 884-28	9030 (13)	62.0	85	131	35	2.0	1.8	2.0	49.5	14.7
869 PH 885-29	8730 (21)	61.3	86	135	32	1.0	1.0	3.0	42.0	14.3
870 PH 885-59	9880 (1)	62.5	88	138	33	1.3	2.3	2.0	45.0	14.2
871 PH 886-26	9420 (5)	61.0	88	136	33	1.3	1.0	1.5	39.9	13.9
877 FMC D5269	9080 (12)	63.0	86	134	34	3.3	1.3	1.5	44.7	14.2
878 CONT D5456	9610 (3)	62.5	89	134	32	1.3	1.0	1.5	42.2	14.0
879 CONT D5573	8570 (23)	59.0	82	131	33	2.8	1.8	1.5	39.2	14.1
880 CONT D5633	7790 (29)	63.5	91	135	36	1.3	2.0	2.0	50.0	14.9
881 CONT D5765	8830 (17)	61.5	92	136	34	2.5	1.0	1.5	44.3	13.9
Mean	8880	61.7	86	134	34	3.0	1.4	1.9	45.5	14.4
CV	4.8	0.8	1.9	1.0	3.5	35.9	32.4	27.0	3.4	1.9
LSD (.05)	600	0.7	2	2	2	1.5	0.6	1.0	3.2	0.6

Rating scale for lodging, shatter, and black point: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.
Percent protein, 0.0% moisture basis.

TABLE 28. 1990 AND 1988-90 DURUM WHEAT YIELD SUMMARY (LBS/ACRE)

	ENTRY	1990 3 LOC	1989-90 7 LOC/YR	1988-90 11 LOC/YR
112	YECORA ROJO (HRS)	6520 (28)	5920 (22)	6370 (17)
169	MEXICALI 75	6220 (29)	6100 (20)	6690 (16)
410	ALDURA	7710 (5)	6990 (8)	7400 (5)
496	YAVAROS 79	7710 (4)	7130 (5)	7540 (4)
522	WESTBRED 881	6670 (27)	6300 (19)	6720 (15)
674	WESTBRED TURBO	8200 (2)	7600 (1)	7920 (1)
676	IMPERIAL	6990 (25)	6570 (16)	6860 (13)
712	UC 712	7120 (21)	6700 (13)	7150 (8)
714	ALTAR 84	7230 (17)	6660 (14)	7220 (6)
742	UC 742	7070 (22)	6730 (12)	6990 (10)
743	UC 743	7410 (12)	6770 (11)	7000 (9)
780	UC 780	7010 (24)	6480 (17)	6970 (11)
781	UC 781	7290 (15)	7130 (6)	7570 (3)
782	UC 782	7540 (10)	6930 (9)	7210 (7)
783	CARCOMUN "S"	7570 (8)	7260 (3)	7690 (2)
795	NUDURA	7160 (20)	6580 (15)	6900 (12)
798	FMC D5317	7020 (23)	6370 (18)	6820 (14)
809	DUREX	6890 (26)	6030 (21)	
814	FMC D5730	7970 (3)	7400 (2)	
820	FMC D5681	7540 (11)	7140 (4)	
831	PH 884-2	7210 (19)	7020 (7)	
832	PH 884-28	7230 (16)	6830 (10)	
869	PH 885-29	7600 (7)		
870	PH 885-59	8230 (1)		
871	PH 886-26	7390 (14)		
877	FMC D5269	7210 (18)		
878	CONT D5456	7550 (9)		
879	CONT D5573	7410 (13)		
880	CONT D5633	6100 (30)		
881	CONT D5765	7640 (6)		
MEAN		7280	6760	7120
CV		5.7	7.3	7.0
LSD (.05)		330	260	210

Numbers in parentheses indicate relative rank in column.

TABLE 29. 1989 SACRAMENTO-SAN JOAQUIN DELTA AND IMPERIAL DURUM WHEAT TESTS, QUALITY EVALUATION*

ENTRY	WHT PRO	HARDNESS	FALL NO.	TOT EXT	SEMO EXT	SPK	DUS	MX	SEMO PRO	VI	FIRM	SCORE
SACRAMENTO-SAN JOAQUIN DELTA												
169 MEXICALI 75	12.5	127	400	78.0	63.6	50	85	6	11.5	8.0	6.00	2
410 ALDURA	12.4	132	400	79.1	63.5	50	95	3	11.7	8.0	6.09	3
496 YAVAROS 79	11.8	127	400	78.0	63.3	37	75	4	10.8	7.5	5.79	1
522 WESTBRED 881	14.2	135	400	76.6	60.6	50	95	7	13.5	8.5	6.42	4
674 WESTBRED TURBO	12.8	131	400	77.1	60.8	43	85	5	11.3	8.0	5.59	3
676 IMPERIAL	14.5	123	400	77.9	61.7	50	85	6	14.0	8.5	7.39	4
712 UC 712	13.2	130	400	76.7	60.6	33	95	7	12.0	8.5	6.16	4
714 ALTAR 84	11.6	123	400	79.9	64.9	20	95	6	10.2	8.0	6.52	1
742 UC 742	13.1	131	400	77.5	60.9	17	85	4	11.6	9.0	6.26	4
743 UC 743	13.1	136	400	76.5	59.9	33	90	5	11.9	8.5	6.72	2
747 PH 884-11	13.1	128	400	76.2	60.0	43	90	7	12.2	9.0	7.17	3
780 UC 780	12.4	130	400	76.8	59.9	47	75	5	11.5	8.0	5.79	1
781 UC 781	12.8	124	400	76.2	59.5	37	80	6	11.4	8.0	6.24	1
782 UC 782	12.0	130	400	76.5	59.6	43	90	4	10.6	8.5	5.94	1
783 CARCOMUN "S"	11.8	122	400	79.2	63.3	43	65	4	10.7	6.0	6.57	1
795 NUDURA	13.2	129	400	78.0	62.0	50	95	7	12.1	9.5	6.78	4
798 FMC D5317	13.1	120	400	75.9	59.5	47	85	6	12.5	8.0	6.52	3
809 DUREX	13.2	129	376	78.2	61.2	47	85	6	12.1	9.0	6.33	4
814 FMC D5730	12.5	126	400	76.3	60.9	47	95	2	11.0	8.5	5.72	1
819 FMC D5171	13.3	124	400	78.1	62.6	40	90	5	12.4	8.0	6.46	4
820 FMC D5681	13.0	123	400	78.0	60.0	47	75	5	12.0	8.0	5.70	1
831 PH 884-2	13.6	128	400	76.0	60.1	33	95	6	12.6	9.0	7.13	3
832 PH 884-28	14.0	126	400	76.0	59.7	53	100	6	12.7	9.5	7.17	3
833 PH 885-60	12.7	125	400	77.9	60.6	33	90	7	11.8	9.5	6.93	3
IMPERIAL												
169 MEXICALI 75	12.1	119	400	80.0	65.7	27	85	4	11.1	8.0	6.07	2
410 ALDURA	12.3	124	400	79.1	62.1	13	90	2	11.2	8.5	5.29	1
496 YAVAROS 79	12.2	120	400	78.5	63.6	57	70	2	10.7	7.5	5.49	1
522 WEST8RED 881	13.5	121	400	78.4	62.6	63	95	7	12.5	9.5	7.02	3
674 WEST8RED TUR80	11.9	121	400	79.2	63.0	43	85	2	9.9	7.5	5.40	1
676 IMPERIAL	13.4	122	400	78.0	61.6	33	90	5	12.7	7.5	6.87	4
712 UC 712	13.2	121	400	79.5	62.4	50	100	5	12.0	9.0	6.07	3
714 ALTAR 84	12.1	125	400	79.2	64.2	30	80	4	10.5	8.0	5.88	1
742 UC 742	11.8	116	400	79.8	63.2	50	100	3	10.6	9.0	5.72	1
743 UC 743	12.8	120	400	79.3	63.0	47	100	4	12.0	9.0	6.16	4
747 PH 884-11	12.6	113	400	80.2	61.5	53	90	5	11.6	9.0	6.16	3
780 UC 780	11.9	113	400	79.2	62.8	30	95	5	10.7	8.0	5.46	1
781 UC 781	12.6	114	400	78.3	62.0	43	95	3	11.3	9.0	5.23	3
782 UC 782	12.0	117	400	78.7	60.7	50	85	5	10.9	8.5	5.68	1
783 CARCOMUN "S"	11.5	117	400	78.4	62.1	30	60	3	9.7	6.0	5.75	1
795 NUDURA	13.1	121	400	79.6	63.4	43	100	5	12.1	9.0	6.20	4
798 FMC D5317	13.1	114	400	78.5	63.2	53	95	6	12.6	9.0	6.61	3
809 DUREX	13.0	119	400	77.6	61.6	33	95	6	12.0	9.0	6.31	4
814 FMC D5730	12.4	121	400	77.8	62.3	60	105	2	11.1	9.0	4.84	1
819 FMC D5171	13.1	112	400	78.9	62.3	57	85	5	12.0	9.0	6.26	3
820 FMC D5681	12.8	118	400	79.6	63.0	60	90	4	11.8	8.5	6.42	3
831 PH 884-2	13.7	119	400	77.8	61.9	47	85	6	13.3	9.5	6.93	3
832 PH 884-28	13.2	111	400	78.8	63.0	27	110	6	12.4	9.5	6.09	4
833 PH 885-60	12.6	116	400	80.0	63.2	57	105	6	12.1	9.5	5.98	2
854 SCEPTRE	12.2	112	400	79.3	62.4	27	100	3	11.6	9.0	5.44	2
855 TITAN	12.4	116	400	79.3	63.7	30	60	2	11.1	5.5	5.57	1

*Quality analyses were performed by the Hard Red Spring and Durum Wheat Quality Laboratory, USDA, North Dakota State University, Fargo, ND.

WHT PR = wheat protein percentage, 14% m.b.; FALL NO. = Semolina falling number value (seconds); TOT EXT = total extraction percentage; SEMO EXT = Semolina extraction percentage; SPK = Semolina speck count; DUS = Semolina dust color score (high score desirable); MX = mixograph score (higher number = stronger curve); SEMO PRO = Semolina protein percentage; VI = spaghetti visual color score (higher score is more desirable); FIRM = cooked spaghetti firmness score (6.50-8.50 = desirable); SCORE = 1=no promise, 2=little promise, 3=some promise, 4=good promise.

TABLE 30. 1990 SUTTER TRITICALE TEST

Entry	Yield (lbs/acre)	Lodging on 5/8	Lodging at Harvest	Shatter	BYDV	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
1 SISKIYOU	2250 (15)	6.0	7.8	1.8	1.0	56	50.8	39.8
12 JUAN	4710 (5)	6.5	7.3	1.3	1.5	54	52.2	42.4
54 UC 54	4530 (7)	7.0	8.0	1.0	1.0	56	56.3	39.8
61 UC 61	4040 (11)	7.8	7.8	1.0	1.0	58	52.2	39.8
63 ERONGA 83	4730 (4)	6.5	7.3	1.0	1.8	56	56.8	45.2
64 PLATYPUSS "S"	4070 (10)	6.8	7.8	1.3	1.0	56	53.5	41.8
65 FARO "S"	5360 (1)	6.5	7.0	1.0	1.0	55	54.1	41.3
76 YUMA	4380 (8)	7.3	7.8	1.3	1.0	58	55.8	39.2
77 FF 81T211	3520 (14)	7.3	7.8	1.0	2.0	48	50.0	34.3
82 STIER	5340 (2)	4.5	7.3	1.3	1.5	57	58.2	41.3
83 RHINO "S"	4660 (6)	6.0	7.5	1.5	1.0	56	57.9	39.2
84 UC 84	4890 (3)	6.8	7.8	1.0	1.0	54	56.4	40.3
85 HIPPO "S"	4270 (9)	5.5	7.5	1.0	1.0	47	56.1	30.1
86 UC 86	3900 (12)	7.5	8.0	1.3	1.0	51	55.9	33.8
353 YOLO (WHEAT)	3840 (13)	6.3	7.8	1.0	1.0	42	59.0	29.6
Mean	4300	6.5	7.6	1.2	1.2	54	55.0	38.5
CV	12.4	16.8	8.3	27.6	52.6	4.7	2.9	5.1
LSD (.05)	760	1.6	NS	0.5	NS	5	3.4	4.2

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, stripe rust, Septoria leaf blotch.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 31. 1990 UC DAVIS TRITICALE TEST

Entry	Yield (lbs/acre)	Lodging on 5/7	Lodging at Harvest	BYDV	Days to Heading from 3/1	Days to Maturity from 3/1	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
1 SISKIYOU	3390 (15)	4.0	5.8	2.5	50	101	53	52.5	41.0
12 JUAN	6640 (6)	4.5	5.8	2.0	45	100	58	55.6	45.5
54 UC 54	6930 (3)	3.8	6.5	1.5	46	94	56	58.5	44.1
61 UC 61	6890 (4)	4.3	7.0	1.3	40	89	51	55.7	48.3
63 ERONGA 83	6300 (9)	4.0	6.3	2.3	38	94	57	56.7	49.5
64 PLATYPUSS "S"	6300 (8)	4.5	6.5	1.8	44	96	54	56.2	44.5
65 FARO "S"	6400 (7)	3.3	6.0	1.0	44	99	57	55.7	42.0
76 YUMA	5240 (12)	4.8	6.3	2.8	42	90	54	57.0	44.2
77 FF 81T211	5650 (11)	4.5	7.0	1.0	36	96	46	55.0	42.5
82 STIER	7320 (1)	1.8	5.5	1.3	45	96	52	60.0	44.5
83 RHINO "S"	6940 (2)	4.5	6.5	1.8	38	94	55	59.4	43.3
84 UC 84	6770 (5)	3.0	6.8	1.3	39	98	54	59.3	48.7
85 HIPPO "S"	4820 (13)	2.3	5.0	2.0	44	99	45	59.0	33.4
86 UC 86	4670 (14)	5.5	6.8	2.0	39	98	47	57.5	33.0
353 YOLO (WHEAT)	5950 (10)	1.5	6.0	1.3	51	101	40	60.5	34.3
Mean	6010	3.7	6.2	1.7	43	96	52	57.2	42.6
CV	11.7	30.5	14.0	33.1	2.7	3.7	4.7	1.9	9.5
LSD (.05)	1010	1.6	1.2	0.8	2	8	5	2.3	8.7

Rating scale for diseases (area of flag-1 leaf affected) and lodging: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, stripe rust, Septoria leaf blotch.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 32. 1990 KINGS TRITICALE TEST

Entry	Yield (lbs/acre)	BYDV	Plant Height (inches)	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
1 SISKIYOU	3780 (15)	2.3	49	54.8	40.5
12 JUAN	5900 (3)	1.5	47	56.2	46.0
54 UC 54	5950 (2)	1.0	50	58.4	43.0
61 UC 61	5730 (8)	1.3	46	56.9	43.3
63 ERONGA 83	5810 (4)	1.8	51	56.0	45.7
64 PLATYPUSS "S"	5750 (6)	2.0	48	57.4	45.3
65 FARO "S"	5560 (9)	1.0	49	57.8	44.7
76 YUMA	4990 (12)	2.0	50	58.5	41.0
77 FF 81T211	5170 (11)	2.5	39	55.9	40.6
82 STIER	6180 (1)	1.3	46	59.2	42.7
83 RHINO "S"	5750 (5)	1.3	46	60.2	43.2
84 UC 84	5500 (10)	1.5	46	59.0	42.6
85 HIPPO "S"	3910 (14)	1.0	38	58.9	31.9
86 UC 86	4970 (13)	2.0	39	59.6	37.4
353 YOLO (WHEAT)	5740 (7)	1.0	36	63.3	33.6
Mean	5380	1.5	45	58.1	41.4
CV	5.6	27.7	2	0.7	3.6
LSD (.05)	430	0.6	2	0.9	3.2

Rating scale for diseases (area of flag-1 leaf affected): 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: leaf rust, stripe rust, Septoria leaf blotch.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 33. 1990 IMPERIAL TRITICALE TEST

Entry	Yield (lbs/acre)	Test Weight (lbs/bu)	Days to Heading	Days to Maturity	Plant Height (inches)	Lodging at Harvest	Shatter	Thousand Kernel Weight (grams)
1 SISKIYOU	5250 (14)	54.0	91	135	47	2.5	1.8	44.5
12 JUAN	7580 (9)	54.0	86	132	46	3.3	1.5	42.4
54 UC 54	7840 (5)	57.3	86	130	44	3.0	1.8	39.7
61 UC 61	7420 (10)	55.3	84	132	45	4.3	2.0	40.8
63 ERONGA 83	7610 (7)	54.3	84	130	46	3.5	1.5	44.4
64 PLATYPUSS "S"	7790 (6)	54.3	86	131	45	1.5	1.3	40.5
65 FARO "S"	7610 (8)	55.5	86	131	44	1.5	1.8	42.8
76 YUMA	6820 (13)	57.3	87	131	46	2.8	1.8	39.3
77 FF 81T211	7040 (12)	54.0	82	130	39	1.5	1.5	38.8
82 STIER	8370 (1)	57.8	87	131	47	1.8	1.5	38.3
83 RHINO "S"	7880 (2)	59.3	84	130	43	1.3	1.0	40.0
84 UC 84	7870 (3)	57.8	84	131	42	1.8	1.0	41.1
85 HIPPO "S"	5090 (15)	57.8	84	130	38	1.0	3.3	30.3
86 UC 86	7130 (11)	58.3	85	132	37	1.0	1.5	33.0
353 YOLO (WHEAT)	7850 (4)	61.8	87	129	37	1.0	3.5	32.5
Mean	7280	56.5	85	131	43	2.1	1.8	39.2
CV	8.3	1.6	3.5	1.6	5.1	36.3	32.4	3.3
LSD (.05)	860	1.3	4	3	3	1.1	0.8	2.7

Rating scale for lodging and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.

TABLE 34. 1990 AND 1988-90 TRITICALE YIELD SUMMARY (LBS/ACRE)

	ENTRY	1990 4 LOC	1989-90 9 LOC/YR	1988-90 13 LOC/YR
1	SISKIYOU	3670 (15)	3800 (10)	3940 (8)
12	JUAN	6210 (6)	5850 (1)	6260 (2)
54	UC 54	6310 (2)	5820 (2)	6210 (3)
61	UC 61	6020 (8)	5670 (6)	6090 (5)
63	ERONGA 83	6110 (7)	5810 (3)	6190 (4)
64	PLATYPUSS "S"	5980 (9)	5740 (4)	6040 (6)
65	FARO "S"	6230 (5)	5720 (5)	6310 (1)
76	YUMA	5360 (11)	5320 (7)	
77	FF 81T211	5340 (12)	5230 (9)	
82	STIER	6800 (1)		
83	RHINO "S"	6310 (3)		
84	UC 84	6260 (4)		
85	HIPPO "S"	4520 (14)		
86	UC 86	5170 (13)		
353	YOLO (WHEAT)	5840 (10)	5250 (8)	5610 (7)
MEAN		5740	5420	5830
CV		9.7	11.8	11.3
LSD (.05)		390	300	250

Numbers in parentheses indicate relative rank in column.

TABLE 35. 1990 UC OAVIS OAT GRAIN TEST

Entry	Yield (lbs/acre)	Lodging on 5/7	Lodging at Harvest	Shatter	BYDV	Powdery Mildew	Crown Rust	Stem Rust	Plant Height (inches)	Test Weight (lbs/bu)	Days to Heading	Days to Maturity	Thousand Kernel Weight (grams)
2 SIERRA	3140 (5)	3.8	7.0	2.0	4.0	1.3	1.0	1.3	54	37.6	53	88	36.0
3 MONTEZUMA	2430 (6)	6.3	8.0	2.8	4.0	3.5	3.3	1.3	50	37.3	43	82	34.0
4 CAL RED	780 (18)	6.3	8.0	2.5	6.5	1.0	1.0	1.0	53	37.3	69	99	29.2
6 KANOTA	1680 (16)	7.5	7.8	2.5	4.3	1.5	1.3	1.0	56	39.5	52	86	24.0
10 SWAN	3510 (3)	4.8	6.8	2.0	2.5	1.5	2.3	1.5	57	43.9	52	94	40.9
22 CAYUSE	2040 (12)	5.0	7.0	2.0	4.5	1.0	1.0	1.0	58	38.5	74	102	30.4
89 MO 06072	1960 (13)	6.3	7.0	2.3	2.8	1.0	1.0	1.0	56	41.5	71	100	27.9
95 75Q-036-83-1D	4820 (1)	2.3	2.8	1.3	1.5	1.3	1.0	1.0	49	41.1	69	109	30.4
96 OGLE	3950 (2)	3.3	3.8	1.5	2.5	1.0	1.0	1.0	61	42.9	63	99	31.6
98 A82-0034	3330 (4)	4.0	6.3	2.0	2.0	1.5	1.0	1.0	55	42.4	57	91	31.9
102 A82-0039	2330 (7)	7.0	7.3	2.0	2.8	1.5	1.0	1.0	53	41.9	71	106	35.1
103 A82-0058	2110 (10)	6.5	7.0	2.0	2.5	1.3	1.0	1.0	54	41.7	59	101	32.2
104 A81-0006	1620 (17)	2.0	3.3	1.0	4.5	1.0	1.0	1.0	48	41.7	69	106	29.5
106 82SH163	1950 (14)	5.5	6.5	1.8	3.0	1.5	1.0	1.0	54	42.2	68	103	35.1
107 COKER 81C72	2100 (11)	5.3	6.5	1.8	3.0	2.0	1.0	1.0	50	42.9	59	98	33.8
108 83SH137	2140 (9)	1.3	3.5	1.3	1.3	2.8	1.0	1.0	42	44.1	65	102	33.8
109 84SH182	2210 (8)	6.3	7.3	2.3	3.3	1.0	1.0	1.0	51	40.5	68	102	31.0
111 OT 03669	1710 (15)	4.0	6.3	3.0	3.5	1.0	1.0	1.0	62	49.3	53	81	28.0
Mean	2440	4.8	6.2	2.0	3.2	1.5	1.2	1.1	53	41.5	62	97	31.9
CV	25.9	24.5	18.5	23.8	32.2	43.4	17.2	20.5	4.8	1.9	5.0	3.4	3.9
LSD (.05)	900	1.7	1.6	0.7	1.5	0.9	0.3	0.3	5.	1.7	7	7	2.6

Rating scale for diseases (area of flag-1 leaf affected), lodging, and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.
BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

TABLE 36. 1990 TULARE OAT GRAIN TEST

Entry	Yield (lbs/acre)	Lodging on 5/21	Test Weight (lbs/bu)	Thousand Kernel Weight (grams)
2 SIERRA	3990 (7)	2.8	30.2	28.0
3 MONTEZUMA	3620 (11)	3.0	37.2	31.6
4 CAL RED	2340 (18)	5.0	34.4	24.8
6 KANOTA	3470 (15)	5.5	36.7	24.6
10 SWAN	4070 (5)	3.8	38.2	34.4
22 CAYUSE	3220 (16)	1.5	33.3	27.2
89 MO 06072	4070 (6)	1.3	38.4	22.3
95 75Q-036-83-1D	3910 (8)	1.0	34.5	28.3
96 OGLE	4600 (2)	1.0	34.4	22.9
98 A82-0034	3880 (9)	1.5	37.4	27.0
102 A82-0039	3840 (10)	3.0	38.6	30.9
103 A82-0058	4080 (4)	2.5	37.8	28.5
104 A81-0006	3620 (12)	1.3	38.1	27.8
106 82SH163	4620 (1)	1.0	39.5	32.3
107 COKER 81C72	3590 (13)	2.0	34.4	27.4
108 83SH137	3490 (14)	1.0	37.9	26.7
109 84SH182	4100 (3)	2.0	36.1	30.5
111 OT 03669	2840 (17)	2.8	46.4	20.7
Mean	3740	2.3	36.9	27.5
CV	16.5	58.8	5.5	9.1
LSD (.05)	880	1.9	4.3	5.3

Rating scale for lodging: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Diseases assessed but occurring in trace or less amounts: BYDV, powdery mildew, crown rust, stem rust.
Numbers in parentheses indicate relative rank in column.

TABLE 37. 1990 YOLO DRYLAND OAT GRAIN TEST

Entry	Yield (lbs/acre)	Lodging at Harvest	Shatter	Plant Height (inches)	Thousand Kernel Weight (grams)
2 SIERRA	1070 (3)	2.0	2.5	31	29.4
3 MONTEZUMA	1360 (1)	1.5	2.3	30	27.7
6 KANOTA	580 (7)	1.8	2.5	31	21.9
10 SWAN	1080 (2)	1.0	1.8	32	30.0
89 MO 06072	280 (13)	2.0	2.0	24	22.0
96 OGLE	540 (8)	1.3	1.5	27	21.5
98 A82-0034	780 (4)	1.3	1.8	24	25.1
102 A82-0039	260 (14)	1.0	2.3	23	27.0
103 A82-0058	630 (6)	1.3	1.8	25	24.9
104 A81-0006	320 (12)	1.0	1.0	22	23.8
106 82SH163	380 (9)	1.5	1.8	27	27.8
107 COKER 81C72	670 (5)	1.0	1.0	22	28.1
108 83SH137	350 (11)	1.0	1.0	18	25.5
109 84SH182	260 (15)	1.0	2.3	23	24.3
111 OT 03669	360 (10)	2.3	2.5	32	19.9
Mean	600	1.4	1.9	26	25.2
CV	18.5	45.7	33.4	10.0	7.6
LSD (.05)	160	0.9	0.9	6	4.1

Rating scale for lodging and shatter: 1 = 0-3%, 2 = 4-14%; 3 = 15-29%; 4 = 30-49%; 5 = 50-69%; 6 = 70-84%; 7 = 85-95%; 8 = 96-100%.
Numbers in parentheses indicate relative rank in column.

TABLE 38. 1990 AND 1988-90 OAT GRAIN YIELD SUMMARY (LBS/ACRE)

	ENTRY	1990 2 LOC	1989-90 5 LOC/YR	1988-90 7 LOC/YR
2	SIERRA	3560 (5)	2960 (4)	3180 (4)
3	MONTEZUMA	3020 (10)	2530 (12)	2830 (8)
4	CAL RED	1560 (18)	1490 (18)	1570 (15)
6	KANOTA	2570 (16)	2380 (15)	2360 (14)
10	SWAN	3790 (3)	3070 (3)	3320 (3)
22	CAYUSE	2630 (14)	2380 (14)	2620 (12)
89	MO 06072	3010 (11)	2580 (10)	
95	75Q-036-83-1D	4370 (1)	4100 (1)	4130 (1)
96	OGLE	4280 (2)	3220 (2)	3400 (2)
98	A82-0034	3610 (4)	2940 (5)	3130 (5)
102	A82-0039	3080 (9)	2810 (7)	3010 (6)
103	A82-0058	3090 (8)	2860 (6)	2910 (7)
104	A81-0006	2620 (15)	2190 (16)	
106	82SH163	3290 (6)	2620 (8)	2750 (10)
107	COKER 81C72	2850 (12)	2590 (9)	2780 (9)
108	83SH137	2820 (13)	2470 (13)	2550 (13)
109	84SH182	3160 (7)	2530 (11)	2670 (11)
111	OT 03669	2270 (17)	1920 (17)	
MEAN		3090	2650	2880
CV		20.2	20.2	18.3
LSD (.05)		620	330	280

Numbers in parentheses indicate relative rank in column.

TABLE 39. 1990 STANISLAUS, TULARE, AND KINGS OAT HAY TESTS

		FORAGE YIELD (TONS/ACRE)			TULARE			KINGS		
	ENTRY	STANISLAUS	TULARE	KINGS	STEM FINE (in)	PLANT HT	% LODG	TDN % (in)	STEM DIAM (in)	PLANT HT
2	SIERRA	13.9 (17)	9.7 (19)	15.1 (6)	4.3	56	20	53.9	4.8	45
3	MONTEZUMA	15.3 (13)	12.4 (10)	13.3 (16)	2.0	55	20	53.9	3.0	38
4	CAL RED	19.8 (6)	11.7 (14)	11.2 (20)	2.0	52	34	48.9	3.4	46
6	KANOTA	11.9 (19)	10.4 (18)	16.9 (4)	2.5	55	61	52.2	3.4	52
10	SUAN	15.3 (14)	14.5 (7)	18.8 (1)	3.5	57	48	56.9	3.7	47
22	CAYUSE	22.7 (3)	11.1 (15)	14.6 (9)	3.5	54	0	48.5	4.6	37
89	MO 06072	20.6 (5)	16.1 (1)	15.8 (5)	2.5	53	14	45.0	3.5	43
95	75Q-036-83-1D	23.4 (1)	15.3 (5)	18.6 (2)	3.8	55	15	53.0	5.3	35
96	OGLE	14.4 (16)	15.9 (2)	17.5 (3)	4.0	59	15	47.1	4.9	46
98	A82-0034	14.7 (15)	12.0 (13)	14.2 (10)	2.5	55	18	47.7	3.9	43
102	A82-0039	17.7 (8)	14.9 (6)	13.8 (13)	3.0	56	16	46.3	3.9	40
103	A82-0058	11.6 (20)	15.4 (4)	12.2 (18)	2.0	58	6	47.6	3.4	38
104	A82-0006	23.2 (2)	12.5 (9)	13.6 (14)	3.8	49	10	50.1	5.2	34
106	82SH163	18.0 (7)	15.6 (3)	13.9 (12)	3.3	54	1	49.2	4.1	40
107	COKER 81C72	15.8 (11)	12.4 (11)	14.7 (8)	3.0	52	1	46.1	4.0	38
108	83SH137	16.3 (10)	12.0 (12)	11.4 (19)	2.5	43	13	54.7	4.9	31
109	84SH182	17.6 (9)	9.3 (20)	13.9 (11)	3.0	55	18	47.2	4.9	39
111	OT 03669	12.0 (18)	13.5 (8)	15.0 (7)	3.5	59	18	53.2	4.5	48
474	DIRKWIN WHEAT	21.4 (4)	10.4 (17)	13.6 (15)	2.3	49	2	49.8	3.2	37
801	WESTFORD BARLEY	15.3 (12)	11.1 (16)	13.6 (17)	4.0	56	40	54.0	4.5	40
MEAN		17.0	12.8	14.6	3.0	54	18	50.3	4.2	41
CV %		19.0	13.5	19.0						
LSD (.05)		4.6	2.3	1.2						

Numbers in parentheses indicate relative rank in column
Forage yield, tons/ac @ 70% moisture
Stem fineness: 1 = very fine; 2 = fine; 3 = medium; 4 = thick; 5 = very thick
TDN (%): Total digestible nutrients @ 10% moisture
Stem diam: Stem diameter (inches)