

## **2016 Regional Common Wheat & Triticale, Durum Wheat and Barley Performance Tests In California**

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## 1. Introduction

This report summarizes the results of small grains variety tests conducted by the University of California Cooperative Extension Small Grains Program between 2014 and 2016. The format and information content of the current report differs from previous years. The Small Grains Program has begun a process of changing field and analytical methodologies to encompass the most up-to-date science regarding crop variety evaluation. The goal for these changes is to produce reliable and user-friendly variety performance estimates for small grains in California. The Small Grains Program is also in the process of transitioning away from written reports to an online system. Supplementary information for the current report, including summary information for individual locations, will therefore be available at <http://smallgrains.ucanr.edu/Variety/>.

The California small grain crop in 2015-16 consisted of approximately 500 thousand planted acres (Table 1 & Figure 1). Approximately 45% of the planted area of wheat was harvested for grain. Total wheat acres in California were similar between 2014 and 2016, although lower than peaks in 2008. The declines are largely due to drought conditions and low grain prices.

Table 1: Small grain area in California in the 2015-2016 [1].

Species	Region	County	Acres planted by region	Total by species
WHEAT	SAN JOAQUIN VALLEY	OTHER (COMBINED) COUNTIES	138,000	
		TULARE	105,000	
		KERN	25,500	
		SAN JOAQUIN	21,000	
		MADERA	19,000	
		STANISLAUS	9,000	
	SACRAMENTO VALLEY	OTHER (COMBINED) COUNTIES	32,500	
		SOLANO	12,000	
		SACRAMENTO	8,500	
		SUTTER	5,500	
	SOUTHERN CALIFORNIA	OTHER (COMBINED) COUNTIES	20,000	
	SISKIYOU-SHASTA	OTHER (COMBINED) COUNTIES	8,900	
	NORTHEAST	OTHER (COMBINED) COUNTIES	6,100	411,000
DURUM	SAN JOAQUIN VALLEY	FRESNO	13,000	
		KINGS	10,300	
		OTHER (COMBINED) COUNTIES	5,700	
	SACRAMENTO VALLEY	GLENN	6,500	
	SOUTHERN CALIFORNIA	OTHER (COMBINED) COUNTIES	24,000	59,500
BARLEY	CENTRAL COAST	SAN LUIS OBISPO	14,000	
		OTHER (COMBINED) COUNTIES	6,000	20,000
OATS	SACRAMENTO VALLEY	OTHER (COMBINED) COUNTIES	17,200	17,200

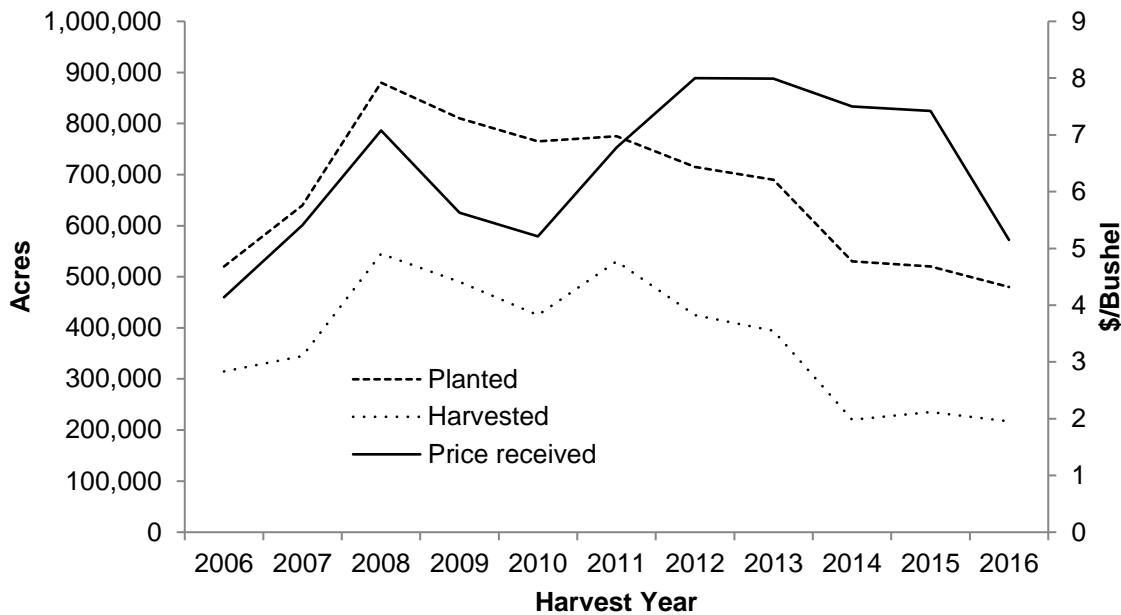


Figure 1: Planted acreage and price received for wheat in California between 2006 and 2016 [1]

Varieties of common wheat, durum wheat, triticale and barley were grown in a statewide multi-environment trials between 2014 and 2016. Entries in the tests included standard cultivars, new and soon-to-be-released cultivars, and advanced breeding lines from both public and private breeding programs. Summaries of the number of unique species tested are given in Table 2 and Table 3. Tests were conducted at University of California Field Stations or in fields of cooperating growers. Details regarding the test locations are reported in Table 52 & Table 53.

Table 2: The number of unique entries tested between 2014 and 2016

	Intermountain	Non-Intermountain
Wheat (fall sown)	104	76
Triticale	-	14
Durum	-	54
Barley	98	48
Wheat (spring sown)	88	-

Table 3: The number of unique entries tested at each location in each season between 2014 and 2016.

Location	Year	Barley	Durum	Wheat (Spring Sown)	Triticale	Wheat (Fall Sown)
Chico	2015	36	-	-	-	-
Clarksburg	2014	29	-	-	5	45
Clarksburg	2015	36	-	-	11	50
Clarksburg	2016	33	-	-	8	41
Colusa	2014	-	-	-	5	46
Colusa	2016	-	-	-	8	41
Davis	2014	-	34	-	5	47
Davis	2015	-	34	-	11	50
Davis	2016	-	28	-	8	41
Davis (rainfed)	2014	29	-	-	5	47
Davis (rainfed)	2015	36	-	-	11	50
Davis (rainfed)	2016	33	-	-	8	41
Delta	2014	-	-	-	5	47
Delta	2015	-	-	-	11	50

Delta	2016	-	-	-	8	41
Fresno	2014	29	34	-	5	47
Fresno	2015	36	36	-	11	50
Fresno	2016	33	28	-	8	41
Fresno2	2016	-	28	-	8	41
Imperial	2014	-	35	-	5	47
Imperial	2015	-	36	-	11	50
Imperial	2016	-	28	-	7	41
Kern	2014	-	34	-	5	47
Kern	2015	-	33	-	11	50
Kern	2016	-	28	-	8	41
Kings	2014	-	34	-	5	47
Kings	2015	-	36	-	11	50
Lassen	2014	40	-	41	-	-
Lassen	2015	26	-	45	-	-
Siskiyou	2014	-	-	-	-	56
Siskiyou	2015	26	-	45	-	54
Siskiyou	2016	-	-	-	-	46
San Luis Obispo (rainfed)	2016	33	-	-	-	-
Tehama (rainfed)	2014	29	-	-	-	-
Tehama (rainfed)	2015	36	-	-	-	-
Tehama (rainfed)	2016	33	-	-	-	-
Tulare (rainfed)	2016	33	-	-	7	41
Tulelake	2014	70	-	41	-	56
Tulelake	2015	26	-	45	-	54
Tulelake	2016	42	-	52	-	46

Randomized complete block designs with four replications were used at all trials locations, except the Intermountain regions, for which three replications were used. Tests were sown at seeding rates of approximately 1.0 million seeds per acre for all tests (equivalent to 61 to 107 lbs/acre for common wheat, 78 to 99 lbs/acre for triticale, 75 to 140 lbs/acre for durum wheat and 77 to 113 lbs/acre for barley, depending on the variety). Each plot was six or nine drill rows wide (5 to 9-inch row spacing) and 15 to 20 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 penultimate leaves (flag leaf) affected. Barley Yellow Dwarf Virus (BYDV) assessments, however, were based on the percentage of plants showing symptoms. Yield, test weight, kernel weight, plant height, days to heading and maturity, lodging, shattering, disease reaction, and grain quality were determined as indicated in the tables.

To explore genotype×environment effects the trial data were analyzed and interpreted according to the genotype plus genotype×environment biplot method [2-5]. We believe it is beyond the scope of this report to present a detail discussion of this method or the results of the analyses. We refer readers to Yan [5] for an overview of how biplot analyses are applied to multi-environment crop trial data. Details regard the analytical results are provided on our program website<sup>1</sup>.

The analyses of genotype×environment patterns suggest that, for all the species tested, California can be subdivided into five sub-regions that may display different rankings of small grains varieties, particularly in the case of common wheat yield. These regions are the Inter-Mountain, Sacramento Valley, Northern San Joaquin

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<sup>1</sup> ([http://smallgrains.ucanr.edu/Variety/Genotype\\_x\\_Environment/](http://smallgrains.ucanr.edu/Variety/Genotype_x_Environment/))

Valley, Southern San Joaquin Valley, and the Imperial Valley. Please note that these sub-regions may change given new data or the introduction of new varieties.

Within the sub-regions, the variety performance, in terms of yield and protein content, is now summarized using a linear mixed model approach. Analyses using linear mixed models have advantages for analyzing data from multi-environment trials as compared to ordinary linear models such as analysis of variance (ANOVA), [6]. These include the ease with which incomplete data (i.e. not all varieties in all years and locations) can be handled, the ability to use more realistic within-trial models for error variation (e.g. spatial correlation models), improved means estimates by better ascribing variance to different experimental factors, and the ability to assume some sets of effects (e.g. trial location) to be random rather than fixed [6].

Predictions regarding crop performance are more accurate when based on multiple seasons and locations [5]. For this reason, wherever possible, variety performance will now be reported primarily as a summary across multiple seasons and locations.

The 2014-2016 seasons were characterized by considerably below average rainfall and growing season temperatures that were slightly above average (Figure 2 to Figure 7).

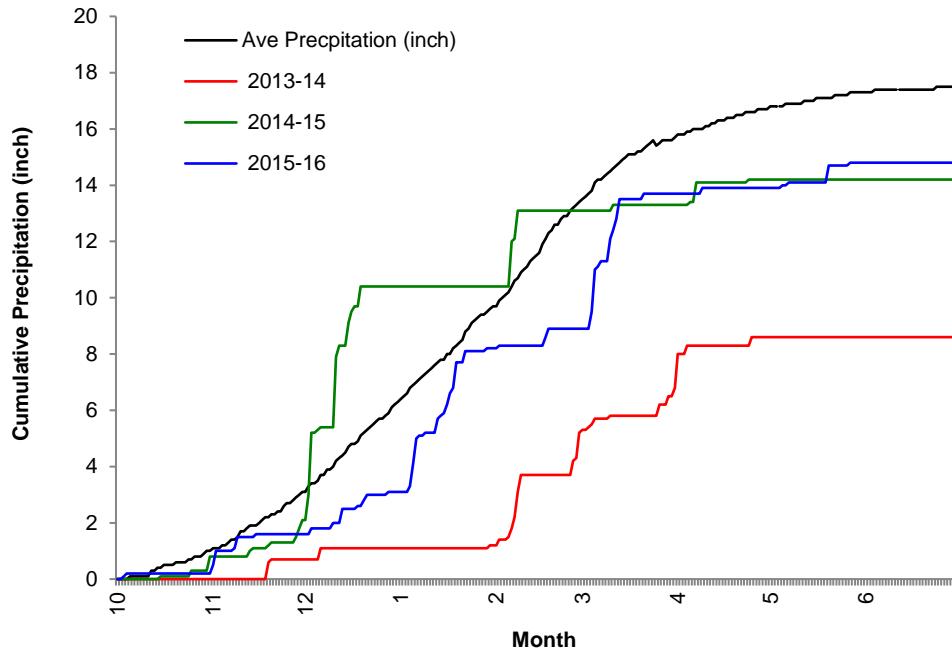


Figure 2: Growing season rainfall for the 2013-14, 2014-15 and 2015-16 seasons for the Sacramento Valley [7].

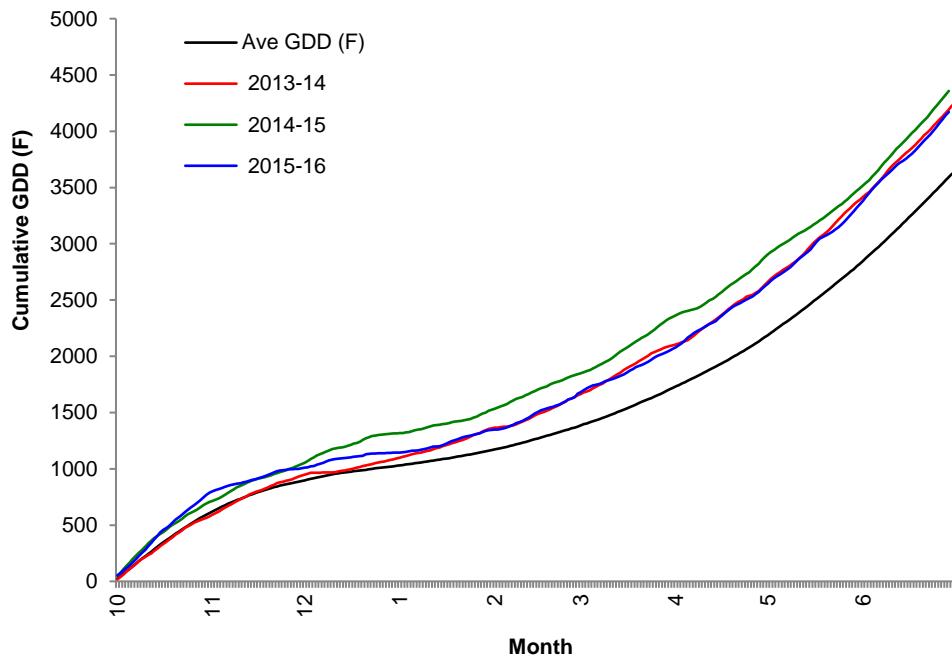


Figure 3: Growing season rainfall for the 2013-14, 2014-15 and 2015-16 seasons for the Sacramento Valley [7].

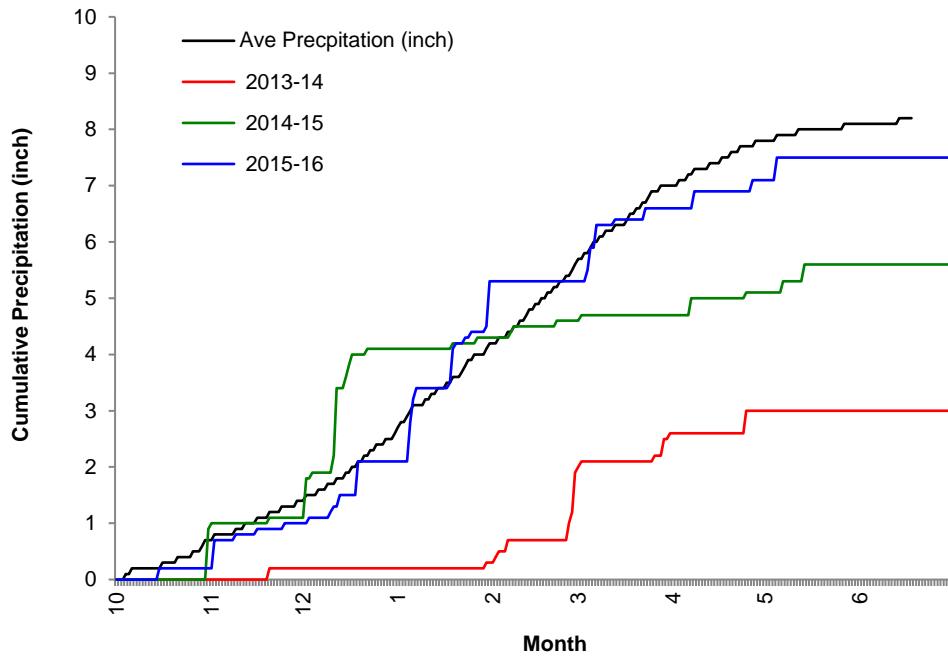


Figure 4: Growing season rainfall for the 2013-14, 2014-15 and 2015-16 seasons for the San Joaquin Valley [7].

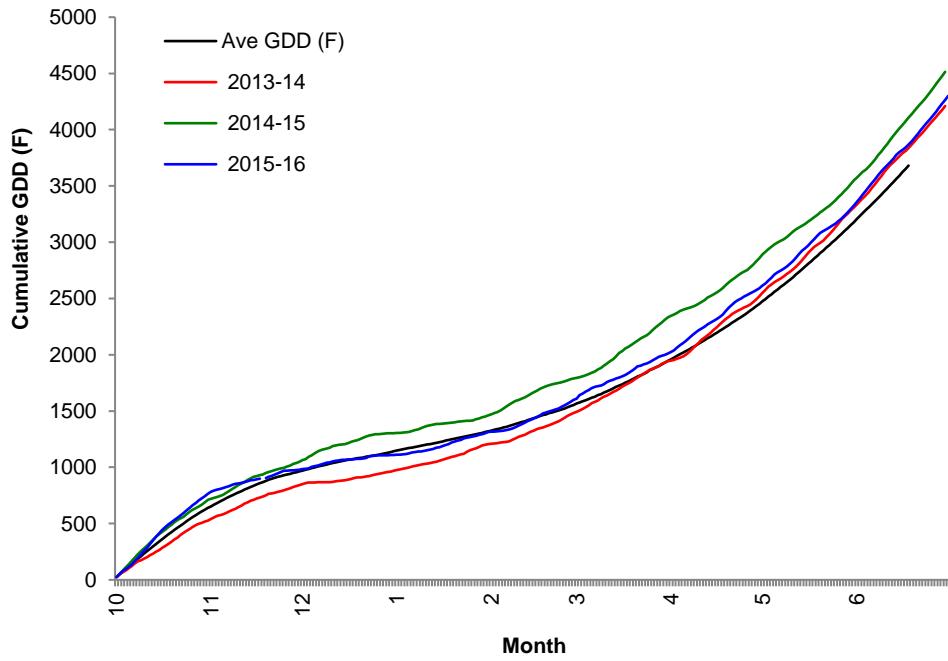


Figure 5: Growing season rainfall for the 2013-14, 2014-15 and 2015-16 seasons for the San Joaquin Valley [7].

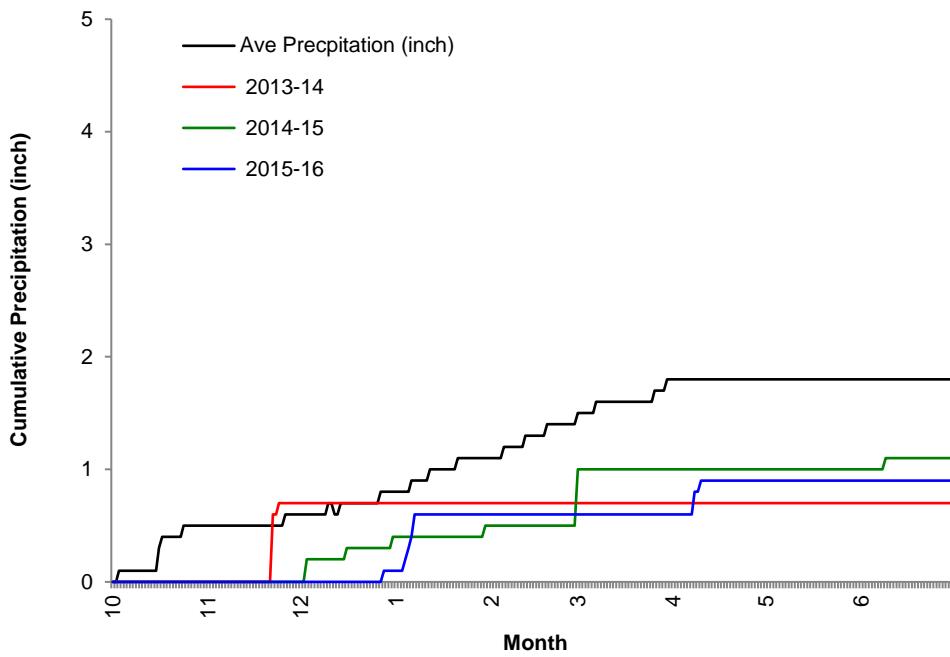


Figure 6: Growing season rainfall for the 2013-14, 2014-15 and 2015-16 seasons for the Imperial Valley [7].

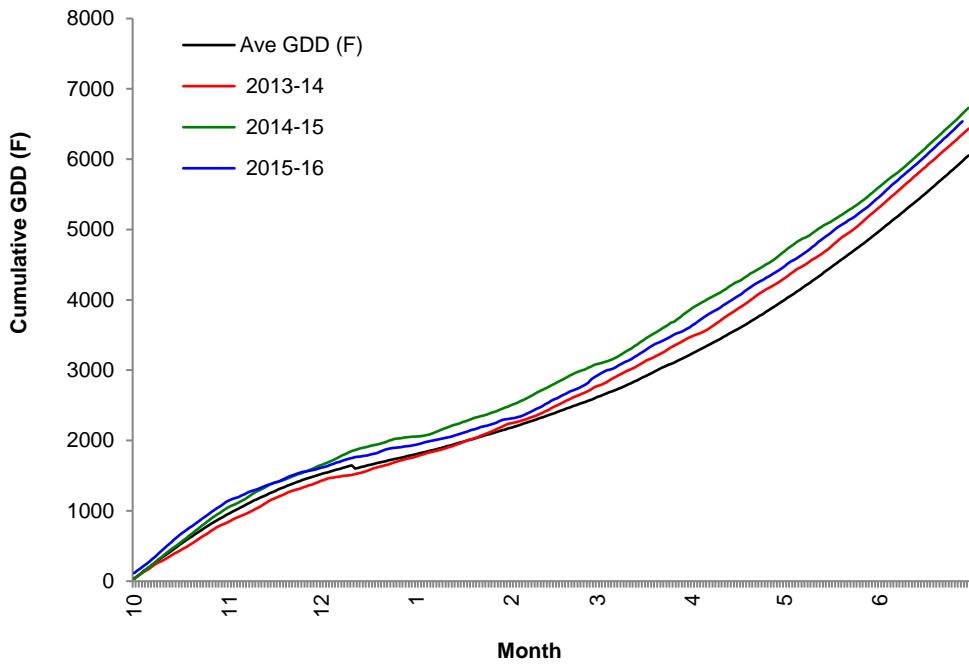


Figure 7: Growing season rainfall for the 2013-14, 2014-15 and 2015-16 seasons for the Imperial Valley [7].

## **2. Variety performance summaries - Central and Imperial Valleys**

The follow summaries of variety performance are divided by crop species and type – common wheat & triticale, durum wheat, winter wheat, and barley. Both grain yield (lbs/acre) and protein content (%) are given, with the trial locations grouped into the regions described in the methods - Sacramento Valley, Northern San Joaquin Valley, Southern San Joaquin Valley, Imperial Valley, Rainfed, and Intermountain locations. The varieties are ordered from the highest to the lowest yielding, or highest to the lowest protein content, across all seasons. In some instances there was insufficient data to generate meaningful single year summaries and therefore no data is presented. A summary of variety performance in individual seasons is also given in each table. Please note that not all crop species and types were evaluated in all locations, and protein content was only measured for common and durum wheat. Agronomic and disease traits are reported, for each crop species and type, on a statewide rather than regional basis. The agronomic and disease traits tables are arranged alpha-numerically by variety name.

## 2.1. Common wheat & Triticale

Table 4: Sacramento Valley region, common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
WB 7566	1802	HWS	6720	284	1	1358	161	6821	283	1	6828	510	1	-	-	-
APB 500553	1806	HRS	6563	341	2	1201	246	-	-	-	6492	510	3	-	-	-
UC 15013 15	1816	HWS	6440	317	3	1078	214	6676	283	3	-	-	-	-	-	-
LCS ATOMO	1723	HWS	6381	266	4	1019	129	6737	283	2	6209	510	5	6152	573	1
UC 15014 4	1817	HRS	6332	317	5	970	214	6568	283	4	-	-	-	-	-	-
UC PATWIN 515HP	1743	HWS	6325	317	6	963	214	6561	283	5	-	-	-	-	-	-
UC 15010 27	1815	HWS	6282	317	7	920	214	6518	283	6	-	-	-	-	-	-
UC 15010 5	1814	HRS	6226	317	8	864	214	6462	283	7	-	-	-	-	-	-
LCS 12SB0224	1831	HWS	6157	317	9	795	214	6393	283	8	-	-	-	-	-	-
APB 8238	1821		6104	321	10	742	219	6348	285	10	-	-	-	-	-	-
LCS STAR	1688	HWS	6076	266	11	714	129	6053	283	18	6455	510	4	5811	573	3
APB 500709	1819	HRS	6039	317	12	677	214	6275	283	12	-	-	-	-	-	-
LCS UI PLATINUM	1805	HWS	6036	341	13	674	246	-	-	-	5965	510	8	-	-	-
UC 13010 23	1767	HRS	6009	284	14	647	161	-	-	-	6046	510	6	5743	573	7
SY SUMMIT 515	1658	HRS	6002	266	15	640	129	6351	283	9	5875	510	10	5745	573	6
SY 034	1794	HRS	5989	341	16	628	246	-	-	-	5919	510	9	-	-	-
UC YUROK	1745	HRS	5927	266	17	565	129	5708	283	29	6548	510	2	5678	573	8
WB 7618	1749	HWS	5920	266	18	558	129	6118	283	15	5822	510	12	5794	573	4
UC 14010 20	1790	HRS	5854	341	19	492	246	-	-	-	5784	510	14	-	-	-
SY BLANCA ROYALE	1522	HWS	5852	266	20	490	129	6113	283	16	5621	510	16	5763	573	5
WB 7390	1750	HWS	5794	266	21	432	129	6277	283	11	4840	510	42	6025	573	2
SY BLANCA GRANDE 515	1657	HWS	5784	267	22	422	130	5778	285	26	6023	510	7	5605	573	10
LCS 12SB0197	1830	HRS	5728	317	23	366	214	5964	283	21	-	-	-	-	-	-
SY REDWING	1521	HRS	5720	266	24	358	129	6158	283	14	5435	510	23	5493	573	15
WB 9229	1730	HRS	5701	266	25	339	129	5952	283	22	5616	510	17	5511	573	12
APB 501089	1828	HRS	5698	317	26	336	214	5934	283	23	-	-	-	-	-	-
UC 13010 34	1769	HWS	5693	317	27	332	213	-	-	-	-	-	-	5508	573	13
SY ULTRA	1590	HRS	5666	267	28	304	130	6164	285	13	5434	510	24	5352	573	20
UC 14010 17	1789	HRS	5665	341	29	303	246	-	-	-	5594	510	18	-	-	-

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err. Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err. Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
APB 501129	1820	HRS	5663	317	30	301	214	5899	283	24	-	-	-	-	-	-
LCS 11SB0096	1772	HRS	5633	290	31	271	171	-	-	5374	510	25	5626	579	9	
APB 12104	1780	HRS	5614	317	32	252	213	-	-	-	-	-	5428	573	16	
SY 314	1660	HRS	5602	266	33	240	129	5894	283	25	5512	510	21	5375	573	18
LCS 08SB0738	1726	HWS	5561	317	34	199	213	-	-	-	-	-	5376	573	17	
ASSL TAM 204	1778	SRS	5542	269	35	180	133	5714	283	28	5784	510	13	5145	579	25
SY CAL ROJO	1478	HRS	5541	266	36	179	129	6021	283	19	5547	510	20	5055	573	28
UC 13010 31	1768	HRS	5513	317	37	151	213	-	-	-	-	-	5328	573	21	
UC 14010 22	1791	HWS	5507	341	38	146	246	-	-	5437	510	22	-	-	-	
LCS 11SB0097	1773	HRS	5502	290	39	141	171	-	-	5223	510	28	5514	579	11	
WB 9112	1748	HRS	5493	266	40	131	129	6054	283	17	5068	510	35	5249	573	23
UC PATWIN 515	1680	HWS	5478	266	41	116	129	5975	283	20	5589	510	19	4895	573	34
APB 11512	1781	HWS	5448	317	42	86	213	-	-	-	-	-	5263	573	22	
LCS 10SB0087 B	1804	HRS	5433	341	43	71	246	-	-	5362	510	26	-	-	-	
WB DA907 005	1803	HRS	5349	341	44	-13	246	-	-	5278	510	27	-	-	-	
APB 501189	1807	HRS	5339	284	45	-22	161	5149	283	38	5837	510	11	-	-	-
WB PERLA	1729	HWS	5336	284	46	-26	161	-	-	4791	510	43	5506	573	14	
UC LASSIK	1495	HRS	5327	266	47	-35	129	5485	283	30	5770	510	15	4835	573	36
WB 9904	1751	HRS	5286	266	48	-76	129	5753	283	27	4937	510	40	5080	573	27
UC 14010 29	1792	HRS	5245	341	49	-117	246	-	-	5174	510	30	-	-	-	
WB ROCKLAND	1650	HRS	5204	266	50	-158	129	5322	283	35	5145	510	31	5128	573	26
UC 14014 42	1793	HWS	5195	341	51	-167	246	-	-	5125	510	32	-	-	-	
UC 15014 35	1818	HRS	5185	317	52	-177	214	5421	283	31	-	-	-	-	-	-
WB JOAQUIN ORO	1728	HRS	5184	266	53	-178	129	5350	283	32	4732	510	44	5355	573	19
UC PATWIN	1419	HWS	5176	284	54	-186	161	-	-	5192	510	29	4926	573	33	
UC CLEAR WHITE	1361	HWS	5165	341	55	-197	246	-	-	5095	510	33	-	-	-	
UC 1744	1744	HWS	5157	317	56	-205	213	-	-	-	-	-	4971	573	30	
SY DAYN	1795	HWS	5150	341	57	-212	246	-	-	5079	510	34	-	-	-	
APB 770229	1746	HWS	5148	317	58	-214	213	-	-	-	-	-	4962	573	31	
WB PATRON	1731	HRS	5115	266	59	-247	129	5343	283	33	4948	510	39	5011	573	29
APB 8155	1829		5106	317	60	-256	214	5342	283	34	-	-	-	-	-	-
WWW FV 2808	1608	HRS	5028	266	61	-334	129	5182	283	36	4908	510	41	4961	573	32
UC ANZA	20	HRS	4980	279	62	-382	153	5155	285	37	-	-	-	4847	573	35
WWW COI565W	1774	HWS	4968	317	63	-394	213	-	-	-	-	-	4782	573	37	

Name	UC Number	Crop Type	3-yr Yield (lb/acre)		3-yr St.Err.Yield (lb/acre)		3-yr Yield Rank		St Err.Dif. from overall mean		2016 Yield (lb/acre)		2016 St.Err.Yield (lb/acre)		2015 Yield (lb/acre)		2015 St.Err.Yield (lb/acre)		2014 Yield (lb/acre)		2014 St.Err.Yield (lb/acre)		2014 Yield Rank			
WB PR 1404	1526	HRS	4939	284	64	-423	161	-	-	-	-	4966	510	38	4681	573	38	4639	573	39	3984	573	41	3913	573	42
WWW BR0202W	1498	HWS	4824	317	65	-538	213	-	-	-	-	3077	510	48	5217	573	24	-	-	-	-	-	-	-	-	-
WB JOAQUIN	1424	HRS	4436	284	66	-926	161	-	-	-	-	5030	510	36	3613	573	43	-	-	-	-	-	-	-	-	-
SY VACA	1766	SRS	4357	267	67	-1005	130	4595	285	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
APB 430701	1747	HRS	4170	317	68	-1192	213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WWW AUBR6122W	1775	HWS	4098	317	69	-1264	213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BAG NEW DIRKWIN HP	1779	SWS	4061	284	70	-1301	161	-	-	-	-	4968	510	37	3143	573	45	-	-	-	-	-	-	-	-	-
WB TRIPLE IV	1550	HRS	3989	267	71	-1373	130	4406	285	40	3192	510	47	4159	573	40	-	-	-	-	-	-	-	-	-	
APB 430429	1808	HRS	3979	341	72	-1383	246	-	-	-	3908	510	46	-	-	-	-	-	-	-	-	-	-	-	-	
WWW MIKA	1340	HRS	3514	284	73	-1848	161	-	-	-	3074	510	49	3606	573	44	-	-	-	-	-	-	-	-	-	
BAG NEW DIRKWIN	1667	SWS	3466	268	74	-1896	132	3460	291	41	4127	510	45	2915	573	46	-	-	-	-	-	-	-	-	-	
SX908	1777	SWS	3061	317	75	-2301	213	-	-	-	-	-	-	-	-	-	-	-	2875	573	47	-	-	-	-	-
APB 717	1809	HWS	2758	341	76	-2604	246	-	-	-	2688	510	50	-	-	-	-	-	-	-	-	-	-	-	-	

Table 5: Sacramento Valley region, common wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
WB ROCKLAND	1650	HRS	13.65	0.46	1	1.4	0.11	14.12	0.25	2	14.14	0.47	2	12.78	0.46	2
WB JOAQUIN ORO	1728	HRS	13.64	0.46	2	1.39	0.11	14.17	0.25	1	14.33	0.47	1	12.26	0.46	3
UC 15014 35	1818	HRS	13.49	0.47	3	1.24	0.14	13.98	0.25	3	-	-	-	-	-	-
UC 14014 42	1793	HWS	13.28	0.52	4	1.02	0.26	-	-	-	13.67	0.47	3	-	-	-
WWW MIKA	1340	HRS	13.26	0.48	5	1.01	0.18	-	-	-	13.2	0.47	11	12.81	0.46	1
UC PATWIN 515HP	1743	HWS	13.07	0.47	6	0.82	0.14	13.56	0.25	4	-	-	-	-	-	-
APB 8155	1829		13.05	0.47	7	0.79	0.13	13.53	0.25	5	-	-	-	-	-	-
WB DA907 005	1803	HRS	13.02	0.52	8	0.77	0.26	-	-	-	13.42	0.47	6	-	-	-
SX908	1777	SWS	12.92	0.52	9	0.67	0.26	-	-	-	-	-	-	12.02	0.46	6
UC 14010 29	1792	HRS	12.91	0.52	10	0.65	0.26	-	-	-	13.3	0.47	7	-	-	-
SY DAYN	1795	HWS	12.9	0.52	11	0.64	0.26	-	-	-	13.29	0.47	8	-	-	-
APB 717	1809	HWS	12.89	0.54	12	0.64	0.3	-	-	-	13.29	0.49	9	-	-	-
UC 14010 22	1791	HWS	12.89	0.52	13	0.64	0.26	-	-	-	13.29	0.47	10	-	-	-
WB PERLA	1729	HWS	12.88	0.48	14	0.63	0.18	-	-	-	13.11	0.47	14	12.14	0.46	5
WB 9229	1730	HRS	12.87	0.46	15	0.62	0.11	13.43	0.25	6	13.47	0.47	5	11.51	0.46	18
UC 1744	1744	HWS	12.8	0.52	16	0.55	0.26	-	-	-	-	-	-	11.9	0.46	7
BAG NEW DIRKWIN HP	1779	SWS	12.72	0.48	17	0.47	0.18	-	-	-	13.09	0.47	16	11.86	0.46	8
APB 430701	1747	HRS	12.72	0.52	18	0.47	0.26	-	-	-	-	-	-	11.82	0.46	10
SY BLANCA GRANDE 515	1657	HWS	12.69	0.46	19	0.44	0.11	13.31	0.25	7	13.18	0.47	12	11.22	0.46	26
WB 9112	1748	HRS	12.68	0.46	20	0.43	0.11	13.23	0.25	9	13.09	0.47	15	11.54	0.46	17
WB 7618	1749	HWS	12.68	0.46	21	0.43	0.11	13.25	0.25	8	13.48	0.47	4	11.06	0.46	34
WB PATRON	1731	HRS	12.59	0.46	22	0.34	0.11	13.16	0.25	10	13.06	0.47	17	11.31	0.46	21
UC 14010 17	1789	HRS	12.57	0.52	23	0.32	0.26	-	-	-	12.97	0.47	18	-	-	-
WWW BR0202W	1498	HWS	12.53	0.52	24	0.28	0.26	-	-	-	-	-	-	11.64	0.46	12
UC 15010 5	1814	HRS	12.5	0.47	25	0.25	0.14	13	0.25	11	-	-	-	-	-	-
UC PATWIN 515	1680	HWS	12.4	0.46	26	0.15	0.11	12.86	0.25	12	12.82	0.47	22	11.61	0.46	14
WB JOAQUIN	1424	HRS	12.39	0.48	27	0.14	0.18	-	-	-	12.74	0.47	23	11.54	0.46	16
UC 13010 34	1769	HWS	12.39	0.52	28	0.14	0.26	-	-	-	-	-	-	11.49	0.46	19
APB 430429	1808	HRS	12.33	0.54	29	0.08	0.3	-	-	-	12.72	0.49	24	-	-	-
UC 14010 20	1790	HRS	12.32	0.52	30	0.07	0.26	-	-	-	12.71	0.47	25	-	-	-
LCS 08SB0738	1726	HWS	12.29	0.52	31	0.04	0.26	-	-	-	-	-	-	11.39	0.46	20
SY CAL ROJO	1478	HRS	12.27	0.46	32	0.02	0.11	12.71	0.25	15	12.4	0.47	31	11.84	0.46	9
LCS STAR	1688	HWS	12.25	0.46	33	0	0.11	12.71	0.25	14	12.85	0.47	20	11.23	0.46	24

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
UC PATWIN	1419	HWS	12.23	0.48	34	-0.02	0.18	-	-	-	12.88	0.47	19	11.09	0.46	31
APB 500709	1819	HRS	12.23	0.47	35	-0.02	0.13	12.71	0.25	13	-	-	-	-	-	-
SY 034	1794	HRS	12.23	0.52	36	-0.03	0.26	-	-	-	12.62	0.47	27	-	-	-
APB 770229	1746	HWS	12.19	0.52	37	-0.06	0.26	-	-	-	-	-	-	11.29	0.46	22
SY REDWING	1521	HRS	12.17	0.46	38	-0.08	0.11	12.51	0.25	23	12.82	0.47	21	11.63	0.46	13
WWW COI565W	1774	HWS	12.16	0.52	39	-0.09	0.26	-	-	-	-	-	-	11.26	0.46	23
WB TRIPLE IV	1550	HRS	12.15	0.46	40	-0.1	0.11	12.58	0.25	17	11.85	0.47	45	12.17	0.46	4
APB 8238	1821		12.13	0.47	41	-0.12	0.14	12.6	0.25	16	-	-	-	-	-	-
LCS 11SB0096	1772	HRS	12.09	0.49	42	-0.16	0.2	-	-	-	12.54	0.47	29	11.13	0.5	29
LCS 10SB0087 B	1804	HRS	12.08	0.52	43	-0.17	0.26	-	-	-	12.48	0.47	30	-	-	-
UC 15010 27	1815	HWS	12.07	0.47	44	-0.18	0.14	12.57	0.25	19	-	-	-	-	-	-
SY 314	1660	HRS	12.07	0.46	45	-0.19	0.11	12.43	0.25	27	13.17	0.47	13	10.95	0.46	36
UC 15014 4	1817	HRS	12.06	0.47	46	-0.19	0.13	12.54	0.25	21	-	-	-	-	-	-
APB 501129	1820		12.05	0.47	47	-0.2	0.13	12.54	0.25	22	-	-	-	-	-	-
APB 501189	1807	HRS	12.02	0.46	48	-0.23	0.12	12.55	0.25	20	12.23	0.47	38	-	-	-
SY SUMMIT 515	1658	HRS	12.01	0.46	49	-0.24	0.11	12.5	0.25	25	12.58	0.47	28	10.92	0.46	37
LCS 11SB0097	1773	HRS	11.99	0.49	50	-0.26	0.2	-	-	-	12.36	0.47	34	11.12	0.5	30
UC CLEAR WHITE	1361	HWS	11.98	0.52	51	-0.27	0.26	-	-	-	12.37	0.47	33	-	-	-
APB 11512	1781	HWS	11.97	0.52	52	-0.28	0.26	-	-	-	-	-	-	11.07	0.46	32
UC 13010 31	1768	HRS	11.96	0.52	53	-0.29	0.26	-	-	-	-	-	-	11.06	0.46	33
WB 9904	1751	HRS	11.96	0.46	54	-0.29	0.11	12.22	0.25	35	12.7	0.47	26	11.61	0.46	15
SY ULTRA	1590	HRS	11.96	0.46	55	-0.29	0.11	12.58	0.25	18	11.79	0.47	48	11.18	0.46	27
SY BLANCA ROYALE	1522	HWS	11.92	0.46	56	-0.33	0.11	12.43	0.25	26	12.07	0.47	41	11.15	0.46	28
APB 501089	1828	HRS	11.91	0.47	57	-0.34	0.13	12.39	0.25	28	-	-	-	-	-	-
BAG NEW DIRKWIN	1667	SWS	11.88	0.46	58	-0.37	0.11	12.31	0.25	32	12.38	0.47	32	11.23	0.46	25
LCS 12SB0197	1830	HRS	11.87	0.47	59	-0.38	0.14	12.36	0.25	31	-	-	-	-	-	-
LCS ATOMO	1723	HWS	11.85	0.46	60	-0.4	0.11	12.38	0.25	30	12.07	0.47	42	10.97	0.46	35
UC YUROK	1745	HRS	11.83	0.46	61	-0.42	0.11	12.39	0.25	29	12.09	0.47	40	10.83	0.46	38
UC LASSIK	1495	HRS	11.82	0.46	62	-0.43	0.11	12.11	0.25	36	12.18	0.47	39	11.73	0.46	11
WB 7390	1750	HWS	11.81	0.46	63	-0.44	0.11	12.51	0.25	24	11.98	0.47	44	10.39	0.46	44
UC 13010 23	1767	HRS	11.8	0.48	64	-0.45	0.18	-	-	-	12.36	0.47	35	10.75	0.46	39
LCS 12SB0224	1831	HWS	11.78	0.47	65	-0.47	0.13	12.27	0.25	34	-	-	-	-	-	-
ASSL TAM 204	1778	SRS	11.77	0.46	66	-0.48	0.11	12.3	0.25	33	12.25	0.47	37	10.56	0.5	42
APB 12104	1780	HRS	11.63	0.52	67	-0.62	0.26	-	-	-	-	-	-	10.73	0.46	40

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
WB 7566	1802	HWS	11.62	0.46	68	-0.63	0.12	12.04	0.25	37	12.3	0.47	36	-	-	-
APB 500553	1806	HRS	11.62	0.52	69	-0.63	0.26	-	-	-	12.02	0.47	43	-	-	-
UC 15013 15	1816	HWS	11.53	0.47	70	-0.72	0.13	12.02	0.25	38	-	-	-	-	-	-
WWW AUBR6122W	1775	HWS	11.46	0.52	71	-0.79	0.26	-	-	-	-	-	-	10.57	0.46	41
LCS UI PLATINUM	1805	HWS	11.45	0.52	72	-0.8	0.26	-	-	-	11.85	0.47	46	-	-	-
WB PR 1404	1526	HRS	11.35	0.48	73	-0.9	0.18	-	-	-	11.79	0.47	47	10.4	0.46	43
SY VACA	1766	SRS	11.09	0.46	74	-1.16	0.11	11.8	0.25	39	11.06	0.47	49	9.84	0.46	47
UC ANZA	20	HRS	10.87	0.46	75	-1.38	0.12	11.27	0.25	40	-	-	-	10.32	0.46	45
WWW FV 2808	1608	HRS	10.59	0.46	76	-1.66	0.11	11.08	0.25	41	10.8	0.47	50	9.91	0.46	46

Table 6: Northern San Joaquin Valley region, common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
UC 15010 27	1815	HWS	7285	508	1	1230	242	8085	249	2	-	-	-	-	-	-
WB 7566	1802	HWS	7193	478	2	1138	170	8105	249	1	6341	472	1	-	-	-
LCS 12SB0197	1830	HRS	7135	508	3	1080	242	7935	249	3	-	-	-	-	-	-
APB 500553	1806	HRS	6965	508	4	910	240	-	-	-	6225	472	2	-	-	-
LCS 12SB0224	1831	HWS	6812	508	5	757	242	7612	249	5	-	-	-	-	-	-
SY 034	1794	HRS	6741	508	6	686	240	-	-	-	6000	472	4	-	-	-
UC 14010 22	1791	HWS	6686	508	7	631	240	-	-	-	5946	472	7	-	-	-
APB 770229	1746	HWS	6669	508	8	614	241	-	-	-	-	-	-	6610	577	3
SY ULTRA	1590	HRS	6661	467	9	606	139	7685	249	4	5983	472	5	6313	577	11
APB 8238	1821		6645	508	10	590	242	7445	249	11	-	-	-	-	-	-
SY REDWING	1521	HRS	6596	467	11	541	139	7547	249	9	5970	472	6	6272	577	14
APB 501089	1828	HRS	6595	508	12	539	242	7395	249	12	-	-	-	-	-	-
LCS ATOMO	1723	HWS	6589	467	13	534	139	7344	249	14	5615	472	19	6807	577	1
UC 13010 23	1767	HRS	6550	478	14	495	170	-	-	-	5686	472	15	6614	577	2
UC 14010 20	1790	HRS	6535	508	15	480	240	-	-	-	5794	472	9	-	-	-
UC PATWIN 515HP	1743	HWS	6527	508	16	472	242	7327	249	16	-	-	-	-	-	-
UC PATWIN 515	1680	HWS	6519	467	17	464	139	7570	249	8	5660	472	17	6326	577	9
UC 15010 5	1814	HRS	6508	508	18	453	242	7308	249	18	-	-	-	-	-	-
APB 12104	1780	HRS	6505	508	19	450	241	-	-	-	-	-	-	6446	577	5
UC LASSIK	1495	HRS	6483	467	20	427	139	7317	249	17	5837	472	8	6294	577	12
WB 9904	1751	HRS	6462	467	21	407	139	7349	249	13	5690	472	14	6345	577	8
APB 11512	1781	HWS	6460	508	22	405	241	-	-	-	-	-	-	6401	577	6
UC 13010 34	1769	HWS	6435	508	23	379	241	-	-	-	-	-	-	6375	577	7
APB 501129	1820		6403	508	24	347	242	7203	249	21	-	-	-	-	-	-
WB 7390	1750	HWS	6384	467	25	329	139	7604	249	7	5665	472	16	5883	577	27
LCS UI PLATINUM	1805	HWS	6374	508	26	319	240	-	-	-	5633	472	18	-	-	-
APB 500709	1819	HRS	6365	508	27	309	242	7165	249	23	-	-	-	-	-	-
ASSL TAM 204	1778	SRS	6359	467	28	304	139	7019	249	26	5769	472	11	6290	577	13
LCS STAR	1688	HWS	6359	467	29	304	139	7093	249	25	5515	472	21	6469	577	4
SY CAL ROJO	1478	HRS	6325	467	30	269	139	7605	249	6	5551	472	20	5818	577	30
UC 15014 4	1817	HRS	6302	508	31	247	242	7102	249	24	-	-	-	-	-	-
LCS 11SB0096	1772	HRS	6274	478	32	219	170	-	-	-	5727	472	13	6021	577	20
UC YUROK	1745	HRS	6269	467	33	214	139	6833	249	29	6060	472	3	5915	577	26

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err. Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
SY SUMMIT 515	1658	HRS	6265	467	34	209	139	7480	249	10	5772	472	10	5542	577	37
SY 314	1660	HRS	6232	467	35	177	139	7237	249	19	5486	472	23	5972	577	25
UC 14010 29	1792	HRS	6227	508	36	172	240	-	-	-	5487	472	22	-	-	-
LCS 08SB0738	1726	HWS	6223	508	37	168	241	-	-	-	-	-	-	6164	577	15
WB 9229	1730	HRS	6196	467	38	141	139	7220	249	20	5347	472	32	6020	577	21
WB DA907 005	1803	HRS	6159	508	39	104	240	-	-	-	5418	472	25	-	-	-
WB 7618	1749	HWS	6156	467	40	101	139	7337	249	15	5451	472	24	5680	577	36
LCS 11SB0097	1773	HRS	6153	478	41	98	170	-	-	-	5760	472	12	5745	577	33
SY BLANCA ROYALE	1522	HWS	6145	468	42	89	142	7171	266	22	5265	472	36	6013	577	22
SY DAYN	1795	HWS	6116	508	43	61	240	-	-	-	5375	472	29	-	-	-
UC 13010 31	1768	HRS	6112	508	44	57	241	-	-	-	-	-	-	6053	577	18
WB PR 1404	1526	HRS	6111	478	45	56	170	-	-	-	5291	472	34	6130	577	16
UC CLEAR WHITE	1361	HWS	6104	508	46	49	240	-	-	-	5364	472	31	-	-	-
SY BLANCA GRANDE 515	1657	HWS	6086	467	47	31	139	6834	249	28	5106	472	37	6319	577	10
UC 14010 17	1789	HRS	6058	508	48	3	240	-	-	-	5317	472	33	-	-	-
WB PATRON	1731	HRS	6040	467	49	-15	139	6867	249	27	5280	472	35	5973	577	24
WB 9112	1748	HRS	6003	468	50	-53	142	6749	266	31	5380	472	27	5859	577	29
WB PERLA	1729	HWS	5972	478	51	-83	170	-	-	-	5398	472	26	5746	577	32
UC 15013 15	1816	HWS	5963	508	52	-92	242	6763	249	30	-	-	-	-	-	-
UC PATWIN	1419	HWS	5949	478	53	-106	170	-	-	-	5366	472	30	5732	577	34
WWW AUBR6122W	1775	HWS	5873	508	54	-182	241	-	-	-	-	-	-	5814	577	31
LCS 10SB0087 B	1804	HRS	5766	508	55	-289	240	-	-	-	5026	472	39	-	-	-
WWW FV 2808	1608	HRS	5757	467	56	-298	139	6545	249	32	4862	472	42	5865	577	28
UC 1744	1744	HWS	5755	508	57	-300	241	-	-	-	-	-	-	5696	577	35
APB 8155	1829		5734	508	58	-321	242	6534	249	33	-	-	-	-	-	-
UC 14014 42	1793	HWS	5726	508	59	-330	240	-	-	-	4985	472	41	-	-	-
UC 15014 35	1818	HRS	5687	508	60	-368	242	6487	249	34	-	-	-	-	-	-
UC ANZA	20	HRS	5609	478	61	-447	170	5964	249	37	-	-	-	5993	577	23
APB 430701	1747	HRS	5596	508	62	-459	241	-	-	-	-	-	-	5537	577	38
WB ROCKLAND	1650	HRS	5526	467	63	-529	139	6373	249	35	5014	472	40	5191	577	42
APB 430429	1808	HRS	5476	508	64	-579	240	-	-	-	4736	472	43	-	-	-
WWW COI565W	1774	HWS	5462	508	65	-593	241	-	-	-	-	-	-	5403	577	39
WB JOAQUIN ORO	1728	HRS	5437	468	66	-618	142	5913	266	38	5071	472	38	5293	577	40
SY VACA	1766	SRS	5400	467	67	-655	139	5973	249	36	4117	472	45	6111	577	17

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err. Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err. Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err. Yield (lb/acre)	2014 Yield Rank
APB 501189	1807	HRS	5259	478	68	-796	170	5200	249	40	5377	472	28	-	-	-
WB JOAQUIN	1424	HRS	5253	478	69	-802	170	-	-	-	3664	472	47	6043	577	19
BAG NEW DIRKWIN HP	1779	SWS	5194	478	70	-861	170	-	-	-	4358	472	44	5230	577	41
WWW BR0202W	1498	HWS	4994	508	71	-1061	241	-	-	-	-	-	-	4934	577	46
WB TRIPLE IV	1550	HRS	4651	467	72	-1404	139	5256	249	39	3628	472	48	5070	577	44
WWW MIKA	1340	HRS	4613	478	73	-1442	170	-	-	-	3301	472	49	5125	577	43
BAG NEW DIRKWIN	1667	SWS	4581	467	74	-1474	139	4790	249	41	3905	472	46	5048	577	45
SX908	1777	SWS	4107	508	75	-1948	241	-	-	-	-	-	-	4048	577	47
APB 717	1809	HWS	3496	508	76	-2560	240	-	-	-	2755	472	50	-	-	-

Table 7: Northern San Joaquin Valley region, common wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
UC 15014 35	1818	HRS	13.75	0.54	1	1.68	0.24	14.34	0.47	1	-	-	-	-	-	-
WB ROCKLAND	1650	HRS	13.56	0.52	2	1.5	0.18	14.15	0.47	2	13.74	1.49	1	12.8	0.59	3
WB JOAQUIN ORO	1728	HRS	13.46	0.52	3	1.39	0.19	13.97	0.48	3	13.68	1.49	2	12.86	0.59	1
WB PERLA	1729	HWS	13.35	0.56	4	1.28	0.28	-	-	-	13.29	1.49	5	12.81	0.59	2
SX908	1777	SWS	13.17	0.63	5	1.11	0.4	-	-	-	-	-	-	12.31	0.59	4
UC 14014 42	1793	HWS	13.14	0.63	6	1.08	0.4	-	-	-	13.41	1.49	3	-	-	-
LCS 08SB0738	1726	HWS	13.07	0.63	7	1	0.4	-	-	-	-	-	-	12.21	0.59	5
APB 717	1809	HWS	13.05	0.63	8	0.98	0.4	-	-	-	13.31	1.49	4	-	-	-
WWW MIKA	1340	HRS	12.9	0.56	9	0.84	0.28	-	-	-	13.16	1.49	6	12.05	0.59	6
APB 8155	1829		12.85	0.54	10	0.78	0.24	13.44	0.47	6	-	-	-	-	-	-
WB 9229	1730	HRS	12.73	0.52	11	0.66	0.18	13.46	0.47	5	12.43	1.49	22	12.01	0.59	7
APB 430429	1808	HRS	12.71	0.63	12	0.65	0.4	-	-	-	12.98	1.49	7	-	-	-
UC 15014 4	1817	HRS	12.69	0.54	13	0.63	0.24	13.29	0.47	8	-	-	-	-	-	-
WB PATRON	1731	HRS	12.69	0.52	14	0.62	0.18	13.46	0.47	4	12.89	1.49	9	11.36	0.59	19
UC 14010 29	1792	HRS	12.67	0.63	15	0.61	0.4	-	-	-	12.94	1.49	8	-	-	-
LCS 10SB0087 B	1804	HRS	12.59	0.63	16	0.53	0.4	-	-	-	12.86	1.49	10	-	-	-
SY BLANCA GRANDE 515	1657	HWS	12.58	0.52	17	0.52	0.18	13.34	0.47	7	12.75	1.49	12	11.33	0.59	21
APB 430701	1747	HRS	12.55	0.63	18	0.48	0.4	-	-	-	-	-	-	11.69	0.59	10
WWW BR0202W	1498	HWS	12.54	0.63	19	0.48	0.4	-	-	-	-	-	-	11.68	0.59	11
APB 500709	1819	HRS	12.41	0.54	20	0.35	0.24	13.01	0.47	9	-	-	-	-	-	-
UC 1744	1744	HWS	12.41	0.63	21	0.34	0.4	-	-	-	-	-	-	11.55	0.59	15
BAG NEW DIRKWIN HP	1779	SWS	12.36	0.56	22	0.29	0.28	-	-	-	12.49	1.49	19	11.63	0.59	14
SY DAYN	1795	HWS	12.33	0.63	23	0.27	0.4	-	-	-	12.6	1.49	15	-	-	-
APB 500553	1806	HRS	12.32	0.63	24	0.26	0.4	-	-	-	12.59	1.49	16	-	-	-
WB 7618	1749	HWS	12.32	0.52	25	0.25	0.18	12.99	0.47	10	12.47	1.49	21	11.32	0.59	22
UC PATWIN 515HP	1743	HWS	12.3	0.54	26	0.24	0.24	12.9	0.47	12	-	-	-	-	-	-
LCS 11SB0096	1772	HRS	12.29	0.56	27	0.22	0.28	-	-	-	12.18	1.49	32	11.79	0.59	9
SY 034	1794	HRS	12.26	0.63	28	0.2	0.4	-	-	-	12.53	1.49	18	-	-	-
WB 9112	1748	HRS	12.26	0.52	29	0.19	0.2	12.96	0.5	11	12.07	1.49	36	11.67	0.59	12
APB 8238	1821		12.23	0.54	30	0.16	0.24	12.83	0.47	13	-	-	-	-	-	-
WB DA907 005	1803	HRS	12.21	0.63	31	0.15	0.4	-	-	-	12.48	1.49	20	-	-	-
APB 770229	1746	HWS	12.19	0.63	32	0.13	0.4	-	-	-	-	-	-	11.33	0.59	20
UC YUROK	1745	HRS	12.16	0.52	33	0.1	0.18	12.65	0.47	15	12.58	1.49	17	11.48	0.59	17

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err:Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
UC 13010 23	1767	HRS	12.15	0.56	34	0.08	0.28	-	-	-	12.19	1.49	31	11.52	0.59	16
UC PATWIN 515	1680	HWS	12.09	0.52	35	0.02	0.18	12.57	0.47	17	12.27	1.49	29	11.64	0.59	13
UC 14010 17	1789	HRS	12.07	0.63	36	0	0.4	-	-	-	12.33	1.49	27	-	-	-
SY SUMMIT 515	1658	HRS	12.03	0.52	37	-0.03	0.18	12.81	0.47	14	12.32	1.49	28	10.61	0.59	35
WB 9904	1751	HRS	12.03	0.52	38	-0.03	0.18	12.25	0.47	28	12.78	1.49	11	11.82	0.59	8
WB TRIPLE IV	1550	HRS	11.99	0.52	39	-0.08	0.18	12.4	0.47	23	12.74	1.49	13	11.17	0.59	24
LCS 11SB0097	1773	HRS	11.99	0.56	40	-0.08	0.28	-	-	-	12.39	1.49	24	10.98	0.59	28
WWW COI565W	1774	HWS	11.96	0.63	41	-0.1	0.4	-	-	-	-	-	-	11.1	0.59	25
UC 15010 27	1815	HWS	11.95	0.54	42	-0.12	0.24	12.54	0.47	18	-	-	-	-	-	-
UC 13010 34	1769	HWS	11.94	0.63	43	-0.12	0.4	-	-	-	-	-	-	11.08	0.59	26
UC 14010 22	1791	HWS	11.9	0.63	44	-0.17	0.4	-	-	-	12.16	1.49	34	-	-	-
UC 15010 5	1814	HRS	11.9	0.54	45	-0.17	0.24	12.49	0.47	19	-	-	-	-	-	-
APB 501129	1820		11.89	0.54	46	-0.18	0.24	12.49	0.47	20	-	-	-	-	-	-
UC PATWIN	1419	HWS	11.81	0.56	47	-0.26	0.28	-	-	-	12.2	1.49	30	10.83	0.59	31
UC 15013 15	1816	HWS	11.8	0.54	48	-0.26	0.24	12.4	0.47	24	-	-	-	-	-	-
LCS STAR	1688	HWS	11.8	0.52	49	-0.27	0.18	12.41	0.47	21	12.35	1.49	25	10.6	0.59	37
WB 7390	1750	HWS	11.77	0.52	50	-0.3	0.18	12.41	0.47	22	12.14	1.49	35	10.65	0.59	34
APB 11512	1781	HWS	11.76	0.63	51	-0.31	0.4	-	-	-	-	-	-	10.9	0.59	29
WB JOAQUIN	1424	HRS	11.75	0.56	52	-0.32	0.28	-	-	-	11.46	1.49	46	11.45	0.59	18
SY 314	1660	HRS	11.71	0.52	53	-0.35	0.18	12.62	0.47	16	11.88	1.49	41	10.01	0.59	44
BAG NEW DIRKWIN	1667	SWS	11.69	0.52	54	-0.37	0.18	12.21	0.47	30	12.4	1.49	23	10.61	0.59	36
UC 14010 20	1790	HRS	11.68	0.63	55	-0.39	0.4	-	-	-	11.94	1.49	38	-	-	-
ASSL TAM 204	1778	SRS	11.67	0.52	56	-0.39	0.19	12.29	0.48	26	12.18	1.49	33	10.5	0.59	39
APB 501189	1807	HRS	11.67	0.52	57	-0.39	0.2	12.3	0.47	25	11.84	1.49	42	-	-	-
SY ULTRA	1590	HRS	11.65	0.52	58	-0.41	0.18	12.23	0.47	29	11.88	1.49	40	10.88	0.59	30
SY BLANCA ROYALE	1522	HWS	11.65	0.52	59	-0.42	0.19	12.13	0.48	33	11.81	1.49	43	11.2	0.59	23
SY REDWING	1521	HRS	11.62	0.52	60	-0.44	0.18	12.28	0.47	27	11.91	1.49	39	10.55	0.59	38
UC LASSIK	1495	HRS	11.62	0.52	61	-0.45	0.18	11.86	0.47	38	12.65	1.49	14	11.03	0.59	27
APB 501089	1828	HRS	11.57	0.54	62	-0.49	0.24	12.17	0.47	32	-	-	-	-	-	-
LCS ATOMO	1723	HWS	11.56	0.52	63	-0.5	0.18	11.99	0.47	35	12.35	1.49	26	10.69	0.59	32
WWW AUBR6122W	1775	HWS	11.55	0.63	64	-0.52	0.4	-	-	-	-	-	-	10.69	0.59	33
LCS 12SB0224	1831	HWS	11.53	0.54	65	-0.54	0.24	12.12	0.47	34	-	-	-	-	-	-
SY CAL ROJO	1478	HRS	11.46	0.52	66	-0.61	0.18	12.18	0.47	31	11.68	1.49	44	10.25	0.59	42
WB 7566	1802	HWS	11.42	0.52	67	-0.65	0.2	11.91	0.47	37	11.97	1.49	37	-	-	-

Name	UC Number	Crop Type	3-yr Protein (%)		3-yr St.Err.Protein (%)		3-yr Protein Rank		Diff. from overall mean		St.Err.Dif. from overall mean		2016 Protein (%)		2016 St.Err:Protein (%)		2016 Protein Rank		2015 Protein (%)		2015 St.Err.Protein (%)		2015 Protein Rank		2014 Protein (%)		2014 St.Err.Protein (%)		2014 Protein Rank	
LCS 12SB0197	1830	HRS	11.33	0.54	68	-0.74	0.24	11.92	0.47	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
UC 13010 31	1768	HRS	11.32	0.63	69	-0.75	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
UC CLEAR WHITE	1361	HWS	11.32	0.63	70	-0.75	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
APB 12104	1780	HRS	11.21	0.63	71	-0.86	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
LCS UI PLATINUM	1805	HWS	10.96	0.63	72	-1.11	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB PR 1404	1526	HRS	10.94	0.56	73	-1.13	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
UC ANZA	20	HRS	10.58	0.52	74	-1.49	0.2	11.08	0.47	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WWW FV 2808	1608	HRS	10.31	0.52	75	-1.76	0.18	10.81	0.47	41	10.85	1.49	49	9.45	0.59	46	-	-	-	-	-	-	-	-	-	-	-	-		
SY VACA	1766	SRS	10.31	0.52	76	-1.76	0.18	11.37	0.47	39	9.63	1.49	50	8.98	0.59	47	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 8: Southern San Joaquin Valley region, common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
APB 12104	1780	HRS	6562	1014	1	1597	340	-	-	-	-	-	-	7420	216	1
UC 14010 29	1792	HRS	6344	1033	2	1378	392	-	-	-	7295	397	1	-	-	-
APB 501189	1807	HRS	6047	974	3	1081	197	5242	1912	1	6800	356	9	-	-	-
APB 500553	1806	HRS	5923	1014	4	957	341	-	-	-	6991	356	3	-	-	-
SY BLANCA GRANDE 515	1657	HWS	5876	971	5	910	182	4858	1912	3	6894	468	6	6876	216	3
UC 15014 4	1817	HRS	5864	984	6	898	243	4901	1912	2	-	-	-	-	-	-
LCS 11SB0097	1773	HRS	5820	984	7	854	240	-	-	-	6931	356	5	6635	216	7
WB JOAQUIN	1424	HRS	5772	988	8	806	257	-	-	-	6843	397	7	6626	216	8
LCS UI PLATINUM	1805	HWS	5735	1033	9	769	392	-	-	-	6685	397	11	-	-	-
APB 500709	1819	HRS	5600	984	10	634	243	4637	1912	6	-	-	-	-	-	-
UC 14010 22	1791	HWS	5594	1014	11	628	341	-	-	-	6662	356	12	-	-	-
SY SUMMIT 515	1658	HRS	5576	971	12	611	182	4433	1912	10	6321	468	23	6878	216	2
SY 034	1794	HRS	5545	1014	13	579	341	-	-	-	6613	356	13	-	-	-
UC 15013 15	1816	HWS	5522	984	14	557	243	4559	1912	7	-	-	-	-	-	-
WB JOAQUIN ORO	1728	HRS	5519	969	15	553	171	4794	1912	5	6490	356	15	5999	216	18
UC 13010 34	1769	HWS	5505	1014	16	539	340	-	-	-	-	-	-	6363	216	9
WB 7390	1750	HWS	5469	969	17	503	171	4834	1912	4	6478	356	16	5730	216	23
LCS 11SB0096	1772	HRS	5462	984	18	496	240	-	-	-	6081	356	30	6769	216	5
WB 7618	1749	HWS	5411	969	19	445	171	4456	1912	9	6445	356	18	6287	216	10
UC 14010 17	1789	HRS	5402	1033	20	437	392	-	-	-	6470	397	17	-	-	-
UC 15010 27	1815	HWS	5379	984	21	413	243	4416	1912	11	-	-	-	-	-	-
APB 8238	1821		5352	984	22	387	243	4389	1912	12	-	-	-	-	-	-
UC 14010 20	1790	HRS	5325	1033	23	360	392	-	-	-	6500	397	14	-	-	-
WB 9112	1748	HRS	5320	969	24	354	171	4518	1912	8	6940	356	4	5305	216	33
LCS 12SB0224	1831	HWS	5312	984	25	347	243	4350	1912	13	-	-	-	-	-	-
WWW BR0202W	1498	HWS	5301	1014	26	335	340	-	-	-	-	-	-	6159	216	14
UC 13010 23	1767	HRS	5293	988	27	327	257	-	-	-	6209	397	28	6273	216	11
UC YUROK	1745	HRS	5289	971	28	324	182	4197	1912	18	5681	468	38	6822	216	4
LCS ATOMO	1723	HWS	5273	970	29	307	176	4276	1912	15	7103	397	2	5636	216	25
LCS STAR	1688	HWS	5270	970	30	304	176	4124	1912	22	6807	397	8	6151	216	15
UC 14014 42	1793	HWS	5261	1014	31	295	341	-	-	-	6329	356	22	-	-	-
WB 9229	1730	HRS	5232	970	32	266	176	4338	1912	14	6389	397	19	5882	216	20

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
SY REDWING	1521	HRS	5221	970	33	255	176	4197	1912	17	6387	397	20	6205	216	13
LCS 10SB0087 B	1804	HRS	5220	1014	34	254	341	-	-	-	6288	356	24	-	-	-
UC 15010 5	1814	HRS	5205	984	35	239	243	4242	1912	16	-	-	-	-	-	-
WB PERLA	1729	HWS	5205	984	36	239	240	-	-	-	6745	356	10	5590	216	27
SY 314	1660	HRS	5199	970	37	233	176	4103	1912	23	6335	397	21	6273	216	12
UC CLEAR WHITE	1361	HWS	5158	1014	38	193	341	-	-	-	6227	356	26	-	-	-
APB 770229	1746	HWS	5158	1014	39	192	340	-	-	-	-	-	-	6015	216	17
APB 717	1809	HWS	5149	1172	40	184	673	-	-	-	6220	635	27	-	-	-
UC 15014 35	1818	HRS	5087	984	41	121	243	4124	1912	21	-	-	-	-	-	-
SY BLANCA ROYALE	1522	HWS	5076	969	42	110	171	4129	1912	20	6227	356	25	5817	216	22
LCS 08SB0738	1726	HWS	5068	1014	43	102	340	-	-	-	-	-	-	5925	216	19
APB 8155	1829		5032	984	44	66	243	4069	1912	26	-	-	-	-	-	-
APB 501089	1828	HRS	5005	984	45	39	243	4042	1912	27	-	-	-	-	-	-
APB 430429	1808	HRS	4989	1014	46	23	341	-	-	-	6058	356	31	-	-	-
APB 11512	1781	HWS	4964	1014	47	-2	340	-	-	-	-	-	-	5822	216	21
WB DA907 005	1803	HRS	4879	1014	48	-87	341	-	-	-	5947	356	33	-	-	-
UC LASSIK	1495	HRS	4846	971	49	-120	182	4184	1912	19	4923	468	46	5587	216	28
LCS 12SB0197	1830	HRS	4828	984	50	-137	243	3866	1912	30	-	-	-	-	-	-
UC PATWIN 515HP	1743	HWS	4808	984	51	-158	243	3845	1912	31	-	-	-	-	-	-
APB 501129	1820		4806	984	52	-160	243	3843	1912	32	-	-	-	-	-	-
WWW COI565W	1774	HWS	4780	1014	53	-186	340	-	-	-	-	-	-	5637	216	24
SY ULTRA	1590	HRS	4770	970	54	-196	176	3801	1912	33	5349	397	43	6086	216	16
WB ROCKLAND	1650	HRS	4756	972	55	-210	190	3927	1912	28	5455	635	42	5427	216	31
WB PATRON	1731	HRS	4718	969	56	-247	171	4095	1912	24	6034	356	32	4649	216	41
WB TRIPLE IV	1550	HRS	4685	969	57	-281	171	4087	1912	25	5497	356	40	5069	216	37
WWW FV 2808	1608	HRS	4657	970	58	-309	176	3746	1912	34	6097	397	29	5141	216	35
UC 13010 31	1768	HRS	4638	1014	59	-328	340	-	-	-	-	-	-	5495	216	30
WB 9904	1751	HRS	4615	971	60	-351	182	3652	1912	35	5922	468	34	5344	216	32
SY CAL ROJO	1478	HRS	4592	970	61	-374	176	3909	1912	29	5457	397	41	5041	216	38
WB 7566	1802	HWS	4537	974	62	-429	197	3462	1912	37	5829	356	35	-	-	-
UC ANZA	20	HRS	4532	974	63	-434	198	3511	1912	36	-	-	-	5506	216	29
UC PATWIN 515	1680	HWS	4477	969	64	-489	171	3258	1912	38	5771	356	36	5618	216	26
UC PATWIN	1419	HWS	4452	994	65	-513	277	-	-	-	5768	468	37	5265	216	34
SY DAYN	1795	HWS	4221	1033	66	-744	392	-	-	-	5303	397	44	-	-	-

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
UC 1744	1744	HWS	4213	1014	67	-752	340	-	-	-	-	-	-	5071	216	36
WB PR 1404	1526	HRS	4189	988	68	-777	257	-	-	-	5585	397	39	4880	216	40
ASSL TAM 204	1778	SRS	4128	970	69	-838	176	2401	1912	39	4950	397	45	6698	216	6
WWW AUBR6122W	1775	HWS	3499	1014	70	-1467	340	-	-	-	-	-	-	4357	216	43
BAG NEW DIRKWIN HP	1779	SWS	3363	988	71	-1602	257	-	-	-	4148	397	49	4443	216	42
APB 430701	1747	HRS	3052	1014	72	-1914	340	-	-	-	-	-	-	3909	216	45
WWW MIKA	1340	HRS	2941	988	73	-2025	257	-	-	-	4297	397	48	3592	216	46
BAG NEW DIRKWIN	1667	SWS	2938	970	74	-2028	176	1778	1912	40	4365	397	47	3920	216	44
SY VACA	1766	SRS	2924	970	75	-2042	176	1648	1912	41	3378	397	50	4880	216	39
SX908	1777	SWS	2663	1014	76	-2302	340	-	-	-	-	-	-	3521	216	47

Table 9: Southern San Joaquin Valley region, common wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr PROTEIN (%)		3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (%)	2016 St Err:PROTEIN (%)	2016 PROTEIN Rank
SX908	1777	SWS	15.11	1.15	1	1.48	0.68	-	-	-	-
APB 430429	1808	HRS	14.92	1.15	2	1.28	0.68	-	-	-	-
UC PATWIN 515HP	1743	HWS	14.91	0.96	3	1.27	0.29	16.18	0.68	1	
WWW MIKA	1340	HRS	14.81	1.03	4	1.18	0.48	-	-	-	-
UC 1744	1744	HWS	14.58	1.15	5	0.95	0.68	-	-	-	-
UC PATWIN	1419	HWS	14.57	1.03	6	0.94	0.48	-	-	-	-
UC PATWIN 515	1680	HWS	14.5	0.95	7	0.86	0.25	15.95	0.68	3	
SY DAYN	1795	HWS	14.48	1.15	8	0.84	0.68	-	-	-	-
LCS STAR	1688	HWS	14.45	0.95	9	0.82	0.25	16.03	0.68	2	
UC 14010 22	1791	HWS	14.37	1.15	10	0.73	0.68	-	-	-	-
LCS 12SB0197	1830	HRS	14.36	0.96	11	0.73	0.29	15.63	0.68	6	
UC 15014 35	1818	HRS	14.33	0.96	12	0.69	0.29	15.59	0.68	7	
SY ULTRA	1590	HRS	14.31	0.95	13	0.67	0.25	15.54	0.68	8	
SY BLANCA ROYALE	1522	HWS	14.3	0.95	14	0.66	0.25	15.65	0.68	5	
LCS 08SB0738	1726	HWS	14.29	1.15	15	0.66	0.68	-	-	-	-
WB ROCKLAND	1650	HRS	14.18	0.95	16	0.55	0.26	15.43	0.68	9	
BAG NEW DIRKWIN HP	1779	SWS	14.18	1.03	17	0.55	0.48	-	-	-	-
WB DA907 005	1803	HRS	14.16	1.15	18	0.52	0.68	-	-	-	-
UC CLEAR WHITE	1361	HWS	14.13	1.15	19	0.49	0.68	-	-	-	-
ASSL TAM 204	1778	SRS	14.11	0.95	20	0.47	0.25	15.76	0.68	4	
WB 7618	1749	HWS	14.04	0.95	21	0.41	0.25	15.3	0.68	10	
UC 13010 34	1769	HWS	13.98	1.15	22	0.35	0.68	-	-	-	-
LCS 10SB0087 B	1804	HRS	13.94	1.15	23	0.3	0.68	-	-	-	-
SY REDWING	1521	HRS	13.9	0.95	24	0.26	0.25	15.11	0.68	13	
UC 15010 5	1814	HRS	13.9	0.96	25	0.26	0.29	15.16	0.68	11	
WB JOAQUIN ORO	1728	HRS	13.89	0.95	26	0.26	0.25	14.93	0.68	18	
UC 14010 17	1789	HRS	13.82	1.15	27	0.18	0.68	-	-	-	-
WB 7566	1802	HWS	13.8	0.95	28	0.17	0.26	15.09	0.68	14	
BAG NEW DIRKWIN	1667	SWS	13.76	0.95	29	0.13	0.25	15.06	0.68	15	
LCS 12SB0224	1831	HWS	13.75	0.96	30	0.12	0.29	15.02	0.68	16	
SY VACA	1766	SRS	13.72	0.95	31	0.09	0.25	15.12	0.68	12	
WB JOAQUIN	1424	HRS	13.7	1.03	32	0.07	0.48	-	-	-	-
WB 9229	1730	HRS	13.69	0.95	33	0.05	0.25	14.83	0.68	19	

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
APB 770229	1746	HWS	13.65	1.15	34	0.02	0.68	-	-	-
WB PATRON	1731	HRS	13.63	0.95	35	0	0.25	14.77	0.68	20
SY CAL ROJO	1478	HRS	13.61	0.95	36	-0.03	0.25	14.76	0.68	21
LCS ATOMO	1723	HWS	13.58	0.95	37	-0.06	0.25	15	0.68	17
SY 034	1794	HRS	13.56	1.15	38	-0.08	0.68	-	-	-
WB PERLA	1729	HWS	13.53	1.03	39	-0.1	0.48	-	-	-
UC 14010 20	1790	HRS	13.53	1.15	40	-0.11	0.68	-	-	-
LCS 11SB0097	1773	HRS	13.52	1.03	41	-0.11	0.48	-	-	-
APB 717	1809	HWS	13.51	1.15	42	-0.13	0.68	-	-	-
WB PR 1404	1526	HRS	13.5	1.03	43	-0.13	0.48	-	-	-
WWW BR0202W	1498	HWS	13.46	1.15	44	-0.17	0.68	-	-	-
WWW AUBR6122W	1775	HWS	13.45	1.15	45	-0.18	0.68	-	-	-
APB 8238	1821		13.43	0.96	46	-0.2	0.29	14.7	0.68	22
APB 500553	1806	HRS	13.43	1.15	47	-0.21	0.68	-	-	-
APB 430701	1747	HRS	13.41	1.15	48	-0.22	0.68	-	-	-
APB 8155	1829		13.4	0.96	49	-0.23	0.29	14.67	0.68	23
WWW COI565W	1774	HWS	13.4	1.15	50	-0.23	0.68	-	-	-
UC 15010 27	1815	HWS	13.4	0.96	51	-0.24	0.29	14.66	0.68	24
SY 314	1660	HRS	13.35	0.95	52	-0.28	0.25	14.57	0.68	26
UC 15014 4	1817	HRS	13.35	0.96	53	-0.28	0.29	14.62	0.68	25
APB 501129	1820		13.3	0.96	54	-0.34	0.29	14.56	0.68	27
UC YUROK	1745	HRS	13.26	0.95	55	-0.38	0.25	14.46	0.68	28
WB 9112	1748	HRS	13.24	0.95	56	-0.39	0.25	14.39	0.68	33
APB 11512	1781	HWS	13.24	1.15	57	-0.39	0.68	-	-	-
APB 500709	1819	HRS	13.19	0.96	58	-0.44	0.29	14.46	0.68	29
UC 13010 31	1768	HRS	13.16	1.15	59	-0.47	0.68	-	-	-
APB 501089	1828	HRS	13.16	0.96	60	-0.47	0.29	14.43	0.68	31
UC 15013 15	1816	HWS	13.15	0.96	61	-0.48	0.29	14.42	0.68	32
SY BLANCA GRANDE 515	1657	HWS	13.13	0.95	62	-0.51	0.25	14.46	0.68	30
WB 9904	1751	HRS	13.11	0.95	63	-0.53	0.25	14.34	0.68	34
UC 14014 42	1793	HWS	13.06	1.15	64	-0.58	0.68	-	-	-
SY SUMMIT 515	1658	HRS	13.05	0.95	65	-0.58	0.25	14.27	0.68	35
UC 13010 23	1767	HRS	13.03	1.03	66	-0.6	0.48	-	-	-
WB 7390	1750	HWS	12.95	0.95	67	-0.69	0.25	14.24	0.68	36

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff.from overall mean	St.Err.Diff. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
UC LASSIK	1495	HRS	12.95	0.95	68	-0.69	0.25	14.08	0.68	38
LCS 11SB0096	1772	HRS	12.86	1.03	69	-0.77	0.48	-	-	-
WB TRIPLE IV	1550	HRS	12.8	0.95	70	-0.84	0.25	13.97	0.68	40
UC ANZA	20	HRS	12.76	0.95	71	-0.87	0.26	14.12	0.68	37
APB 501189	1807	HRS	12.76	0.95	72	-0.87	0.26	13.97	0.68	39
UC 14010 29	1792	HRS	12.67	1.15	73	-0.97	0.68	-	-	-
APB 12104	1780	HRS	12.5	1.15	74	-1.13	0.68	-	-	-
LCS UI PLATINUM	1805	HWS	12.22	1.15	75	-1.42	0.68	-	-	-
WWW FV 2808	1608	HRS	12.01	0.95	76	-1.63	0.25	13.16	0.68	41

Table 10: Imperial Valley region, common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
UC 15010 27	1815	HWS	7211	611	1	1641	303	8018	259	1	-	-	-	-	-	-
APB 500709	1819	HRS	7161	611	2	1590	303	7967	259	2	-	-	-	-	-	-
SY SUMMIT 515	1658	HRS	6947	558	3	1376	174	7739	259	3	6911	295	2	6190	240	4
UC 13010 23	1767	HRS	6855	572	4	1285	213	-	-	-	6932	295	1	5972	240	6
LCS ATOMO	1723	HWS	6710	558	5	1139	174	7453	259	4	6420	295	13	6257	240	1
SY ULTRA	1590	HRS	6651	558	6	1081	174	7228	259	11	6532	295	11	6194	240	3
WB 9904	1751	HRS	6647	558	7	1077	174	7168	259	14	6562	295	10	6211	240	2
UC 15014 4	1817	HRS	6630	611	8	1059	303	7436	259	5	-	-	-	-	-	-
WB PR 1404	1526	HRS	6612	572	9	1042	213	-	-	-	6761	295	4	5657	240	8
WB 7390	1750	HWS	6523	558	10	953	174	7379	259	7	6273	295	18	5917	240	7
WB 9229	1730	HRS	6499	558	11	929	174	7401	259	6	6453	295	12	5644	240	9
WB 7566	1802	HWS	6472	572	12	902	213	7122	259	16	6818	295	3	-	-	-
UC 15013 15	1816	HWS	6455	611	13	884	303	7261	259	9	-	-	-	-	-	-
UC PATWIN 515	1680	HWS	6439	558	14	868	174	7059	259	20	6145	295	22	6113	240	5
SY DAYN	1795	HWS	6435	611	15	864	301	-	-	-	6625	295	9	-	-	-
UC 15010 5	1814	HRS	6394	611	16	823	303	7200	259	13	-	-	-	-	-	-
WB 7618	1749	HWS	6394	558	17	823	174	7067	259	19	6678	295	6	5435	240	11
LCS 12SB0224	1831	HWS	6316	611	18	746	303	7123	259	15	-	-	-	-	-	-
APB 501129	1820	6282	611	19	711	303	7088	259	17	-	-	-	-	-	-	-
UC PATWIN	1419	HWS	6253	572	20	682	213	-	-	-	6380	295	14	5319	240	15
UC LASSIK	1495	HRS	6239	558	21	668	174	7226	259	12	6341	295	16	5149	240	18
APB 8238	1821	6238	611	22	668	303	7045	259	21	-	-	-	-	-	-	-
UC ANZA	20	HRS	6213	571	23	642	213	6898	259	23	-	-	-	5338	240	14
SY BLANCA GRANDE 515	1657	HWS	6133	558	24	563	174	7320	259	8	6150	295	21	4930	240	20
SY CAL ROJO	1478	HRS	6121	558	25	550	174	6976	259	22	5910	295	30	5476	240	10
UC 14010 22	1791	HWS	6084	611	26	513	301	-	-	-	6273	295	17	-	-	-
SY 034	1794	HRS	6083	611	27	513	301	-	-	-	6273	295	19	-	-	-
APB 501089	1828	HRS	6064	611	28	493	303	6870	259	24	-	-	-	-	-	-
APB 770229	1746	HWS	6044	611	29	474	302	-	-	-	-	-	-	5048	240	19
SY 314	1660	HRS	6032	558	30	462	174	6798	259	26	5874	295	32	5425	240	12
WB PATRON	1731	HRS	6021	558	31	451	174	6760	259	27	6058	295	26	5245	240	16
LCS UI PLATINUM	1805	HWS	5998	611	32	427	301	-	-	-	6187	295	20	-	-	-
UC YUROK	1745	HRS	5972	558	33	402	174	6669	259	30	6014	295	29	5233	240	17

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)			2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)			2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)			2014 St.Err.Yield (lb/acre)	2014 Yield Rank
			3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank					2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank			2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank	
APB 500553	1806	HRS	5952	611	34	381	301	-	-	-	6141	295	23	-	-	-	-	-	-	-	-	-	-	
WB DA907 005	1803	HRS	5943	611	35	373	301	-	-	-	6133	295	24	-	-	-	-	-	-	-	-	-	-	
UC PATWIN 515HP	1743	HWS	5924	611	36	353	303	6730	259	29	-	-	-	-	-	-	-	-	-	-	-	-	-	
WWW AUBR6122W	1775	HWS	5916	611	37	346	302	-	-	-	-	-	-	-	-	-	-	4920	240	21	-	-	-	
WB 9112	1748	HRS	5881	558	38	311	174	7070	259	18	6046	295	27	4528	240	24	-	-	-	-	-	-	-	
SY REDWING	1521	HRS	5864	558	39	294	174	7254	259	10	4955	295	46	5383	240	13	-	-	-	-	-	-	-	
UC 14010 17	1789	HRS	5845	611	40	275	301	-	-	-	6035	295	28	-	-	-	-	-	-	-	-	-	-	
APB 501189	1807	HRS	5752	572	41	181	213	6805	259	25	5695	295	38	-	-	-	-	-	-	-	-	-	-	
LCS 11SB0096	1772	HRS	5742	572	42	171	213	-	-	-	6692	295	5	3985	240	33	-	-	-	-	-	-	-	
WB ROCKLAND	1650	HRS	5738	558	43	168	174	6756	259	28	5726	295	36	4732	240	23	-	-	-	-	-	-	-	
UC 14010 20	1790	HRS	5698	611	44	127	301	-	-	-	5888	295	31	-	-	-	-	-	-	-	-	-	-	
SY VACA	1766	SRS	5630	558	45	59	174	6144	259	32	6662	295	7	4083	240	29	-	-	-	-	-	-	-	
SY BLANCA ROYALE	1522	HWS	5623	558	46	52	174	5913	259	36	6106	295	25	4849	240	22	-	-	-	-	-	-	-	
UC 14010 29	1792	HRS	5600	611	47	29	301	-	-	-	5789	295	34	-	-	-	-	-	-	-	-	-	-	
ASSL TAM 204	1778	SRS	5502	558	48	-68	174	6029	259	34	6353	295	15	4124	240	28	-	-	-	-	-	-	-	
LCS 11SB0097	1773	HRS	5364	572	49	-206	213	-	-	-	6625	295	8	3297	240	39	-	-	-	-	-	-	-	
LCS 08SB0738	1726	HWS	5291	611	50	-279	302	-	-	-	-	-	-	4295	240	26	-	-	-	-	-	-	-	
APB 430429	1808	HRS	5291	611	51	-280	301	-	-	-	5480	295	40	-	-	-	-	-	-	-	-	-	-	
WB JOAQUIN	1424	HRS	5264	572	52	-306	213	-	-	-	5844	295	33	3878	240	34	-	-	-	-	-	-	-	
LCS 12SB0197	1830	HRS	5264	611	53	-306	303	6071	259	33	-	-	-	-	-	-	-	-	-	-	-	-	-	
UC 14014 42	1793	HWS	5237	611	54	-333	301	-	-	-	5427	295	41	-	-	-	-	-	-	-	-	-	-	
WB PERLA	1729	HWS	5231	572	55	-339	213	-	-	-	5601	295	39	4055	240	31	-	-	-	-	-	-	-	
APB 11512	1781	HWS	5219	611	56	-352	302	-	-	-	-	-	-	4222	240	27	-	-	-	-	-	-	-	
LCS 10SB0087 B	1804	HRS	5213	611	57	-358	301	-	-	-	5403	295	42	-	-	-	-	-	-	-	-	-	-	
UC CLEAR WHITE	1361	HWS	5145	611	58	-425	301	-	-	-	5335	295	43	-	-	-	-	-	-	-	-	-	-	
WWW MIKA	1340	HRS	5132	572	59	-439	213	-	-	-	5146	295	44	4311	240	25	-	-	-	-	-	-	-	
APB 8155	1829		5114	611	60	-456	303	5921	259	35	-	-	-	-	-	-	-	-	-	-	-	-		
WB JOAQUIN ORO	1728	HRS	5007	558	61	-563	174	6160	259	31	4794	295	48	4067	240	30	-	-	-	-	-	-	-	
WWW FV 2808	1608	HRS	4863	558	62	-707	174	5775	259	37	5720	295	37	3093	240	41	-	-	-	-	-	-	-	
BAG NEW DIRKWIN HP	1779	SWS	4847	572	63	-724	213	-	-	-	4832	295	47	4055	240	32	-	-	-	-	-	-	-	
BAG NEW DIRKWIN	1667	SWS	4838	558	64	-732	174	5758	259	38	5119	295	45	3638	240	38	-	-	-	-	-	-	-	
UC 13010 34	1769	HWS	4813	611	65	-758	302	-	-	-	-	-	-	3817	240	36	-	-	-	-	-	-	-	
APB 12104	1780	HRS	4683	611	66	-888	302	-	-	-	-	-	-	3686	240	37	-	-	-	-	-	-	-	
WB TRIPLE IV	1550	HRS	4536	558	67	-1035	174	5274	259	39	4508	295	49	3826	240	35	-	-	-	-	-	-	-	
LCS STAR	1688	HWS	4218	567	68	-1352	201	4761	484	40	5765	295	35	1957	240	44	-	-	-	-	-	-	-	

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
UC 13010 31	1768	HRS	4153	611	69	-1418	302	-	-	-	-	-	-	3156	240	40
APB 430701	1747	HRS	3721	611	70	-1849	302	-	-	-	-	-	-	2725	240	42
UC 15014 35	1818	HRS	3451	636	71	-2120	348	4253	293	41	-	-	-	-	-	-
UC 1744	1744	HWS	3292	611	72	-2278	302	-	-	-	-	-	-	2296	240	43
APB 717	1809	HWS	3040	611	73	-2530	301	-	-	-	3230	295	50	-	-	-
WWW BR0202W	1498	HWS	2629	611	74	-2941	302	-	-	-	-	-	-	1633	240	45
SX908	1777	SWS	2520	611	75	-3051	302	-	-	-	-	-	-	1524	240	46
WWW COI565W	1774	HWS	2243	611	76	-3328	302	-	-	-	-	-	-	1246	240	47

Table 11: Imperial Valley region, common wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
SX908	1777	SWS	16.63	0.6	1	3.39	0.27	-	-	-
UC 15014 35	1818	HRS	15.47	0.57	2	2.24	0.19	15.17	0.15	1
WB JOAQUIN ORO	1728	HRS	14.96	0.55	3	1.73	0.12	14.5	0.12	2
WB PERLA	1729	HWS	14.81	0.57	4	1.57	0.19	-	-	-
WB ROCKLAND	1650	HRS	14.59	0.55	5	1.36	0.12	14.23	0.12	4
APB 8155	1829		14.59	0.56	6	1.36	0.16	14.27	0.12	3
UC 1744	1744	HWS	14.48	0.6	7	1.24	0.27	-	-	-
WB JOAQUIN	1424	HRS	14.39	0.57	8	1.16	0.19	-	-	-
WB 9229	1730	HRS	14.29	0.55	9	1.05	0.12	13.83	0.12	5
UC 14010 29	1792	HRS	14.22	0.6	10	0.98	0.27	-	-	-
WWW MIKA	1340	HRS	14.11	0.57	11	0.87	0.19	-	-	-
WB 9112	1748	HRS	14.11	0.55	12	0.87	0.12	13.8	0.12	6
UC 14010 22	1791	HWS	13.9	0.6	13	0.66	0.27	-	-	-
WB 7618	1749	HWS	13.87	0.55	14	0.63	0.12	13.6	0.12	7
UC PATWIN 515HP	1743	HWS	13.86	0.56	15	0.62	0.16	13.53	0.12	8
LCS 08SB0738	1726	HWS	13.84	0.6	16	0.6	0.27	-	-	-
APB 430701	1747	HRS	13.83	0.6	17	0.59	0.27	-	-	-
UC 14014 42	1793	HWS	13.81	0.6	18	0.57	0.27	-	-	-
APB 770229	1746	HWS	13.73	0.6	19	0.49	0.27	-	-	-
WWW BR0202W	1498	HWS	13.72	0.6	20	0.48	0.27	-	-	-
UC 15010 5	1814	HRS	13.69	0.56	21	0.46	0.16	13.37	0.12	10
APB 717	1809	HWS	13.48	0.6	22	0.24	0.27	-	-	-
SY BLANCA GRANDE 515	1657	HWS	13.46	0.55	23	0.22	0.12	13.13	0.12	11
UC 14010 17	1789	HRS	13.46	0.6	24	0.22	0.27	-	-	-
UC 15014 4	1817	HRS	13.46	0.56	25	0.22	0.16	13.13	0.12	12
APB 500709	1819	HRS	13.46	0.56	26	0.22	0.16	13.13	0.12	13
UC 13010 34	1769	HWS	13.45	0.6	27	0.21	0.27	-	-	-
UC PATWIN	1419	HWS	13.45	0.57	28	0.21	0.19	-	-	-
SY DAYN	1795	HWS	13.44	0.6	29	0.2	0.27	-	-	-
APB 501189	1807	HRS	13.44	0.55	30	0.2	0.13	13.5	0.12	9
SY 034	1794	HRS	13.42	0.6	31	0.18	0.27	-	-	-
APB 430429	1808	HRS	13.39	0.6	32	0.15	0.27	-	-	-

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Diff. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
WWW COI565W	1774	HWS	13.38	0.6	33	0.14	0.27	-	-	-
WB TRIPLE IV	1550	HRS	13.35	0.55	34	0.12	0.12	12.97	0.12	17
WB DA907 005	1803	HRS	13.33	0.6	35	0.09	0.27	-	-	-
LCS 10SB0087 B	1804	HRS	13.3	0.6	36	0.06	0.27	-	-	-
APB 8238	1821		13.29	0.56	37	0.06	0.16	12.97	0.12	16
APB 11512	1781	HWS	13.26	0.6	38	0.02	0.27	-	-	-
WB PATRON	1731	HRS	13.19	0.55	39	-0.04	0.12	12.97	0.12	14
LCS 12SB0224	1831	HWS	13.16	0.56	40	-0.08	0.16	12.83	0.12	18
UC 14010 20	1790	HRS	13.15	0.6	41	-0.09	0.27	-	-	-
UC PATWIN 515	1680	HWS	13.11	0.55	42	-0.12	0.12	12.63	0.12	24.5
APB 501089	1828	HRS	13.09	0.56	43	-0.14	0.16	12.77	0.12	21
SY 314	1660	HRS	13.05	0.55	44	-0.19	0.12	12.97	0.12	15
LCS 12SB0197	1830	HRS	13.02	0.56	45	-0.21	0.16	12.7	0.12	23
SY CAL ROJO	1478	HRS	13.02	0.55	46	-0.21	0.12	12.8	0.12	20
ASSL TAM 204	1778	SRS	13.01	0.55	47	-0.23	0.12	12.8	0.12	19
SY SUMMIT 515	1658	HRS	13	0.55	48	-0.23	0.12	12.73	0.12	22
UC CLEAR WHITE	1361	HWS	12.96	0.6	49	-0.28	0.27	-	-	-
APB 501129	1820		12.96	0.56	50	-0.28	0.16	12.63	0.12	24.5
LCS STAR	1688	HWS	12.95	0.56	51	-0.28	0.15	12.42	0.2	29
WB 7566	1802	HWS	12.94	0.55	52	-0.3	0.13	12.6	0.12	26
UC 15010 27	1815	HWS	12.92	0.56	53	-0.31	0.16	12.6	0.12	27
LCS 11SB0096	1772	HRS	12.83	0.57	54	-0.4	0.19	-	-	-
LCS 11SB0097	1773	HRS	12.8	0.57	55	-0.43	0.19	-	-	-
SY REDWING	1521	HRS	12.8	0.55	56	-0.44	0.12	12.5	0.12	28
BAG NEW DIRKWIN HP	1779	SWS	12.72	0.57	57	-0.51	0.19	-	-	-
APB 500553	1806	HRS	12.72	0.6	58	-0.52	0.27	-	-	-
SY ULTRA	1590	HRS	12.65	0.55	59	-0.59	0.12	12.37	0.12	30
UC YUROK	1745	HRS	12.65	0.55	60	-0.59	0.12	12.23	0.12	31
SY BLANCA ROYALE	1522	HWS	12.57	0.55	61	-0.66	0.12	12.17	0.12	32
UC 13010 31	1768	HRS	12.56	0.6	62	-0.68	0.27	-	-	-
WB 7390	1750	HWS	12.52	0.55	63	-0.72	0.12	12.13	0.12	33
UC LASSIK	1495	HRS	12.51	0.55	64	-0.73	0.12	12.03	0.12	34.5
LCS ATOMO	1723	HWS	12.5	0.55	65	-0.73	0.12	12.03	0.12	34.5

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)							
					3-yr PROTEIN RANK						
						Diff. from overall mean					
						St.Err.Diff. from overall mean					
UC 13010 23	1767	HRS	12.38	0.57	66	-0.86	0.19	-	-	-	-
LCS UI PLATINUM	1805	HWS	12.34	0.6	67	-0.9	0.27	-	-	-	-
SY VACA	1766	SRS	12.22	0.55	68	-1.01	0.12	11.87	0.12	36	
WB 9904	1751	HRS	11.95	0.55	69	-1.29	0.12	11.63	0.12	37	
APB 12104	1780	HRS	11.9	0.6	70	-1.34	0.27	-	-	-	
UC 15013 15	1816	HWS	11.89	0.56	71	-1.34	0.16	11.57	0.12	38	
BAG NEW DIRKWIN	1667	SWS	11.81	0.55	72	-1.43	0.12	11.5	0.12	39	
WB PR 1404	1526	HRS	11.66	0.57	73	-1.57	0.19	-	-	-	
UC ANZA	20	HRS	11.49	0.55	74	-1.75	0.14	11.13	0.12	40	
WWW AUBR6122W	1775	HWS	11.19	0.6	75	-2.05	0.27	-	-	-	
WWW FV 2808	1608	HRS	11.07	0.55	76	-2.17	0.12	10.77	0.12	41	

Table 12: Rainfed locations, common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
APB 500553	1806	HRS	5089	841	1	1132	413	-	-	-	6365	182	2	-	-	-
UC 15014 4	1817	HRS	4750	788	2	793	295	4196	1448	1	-	-	-	-	-	-
WB 7566	1802	HWS	4746	769	3	789	240	3886	1448	7	6633	182	1	-	-	-
UC 13010 23	1767	HRS	4715	788	4	758	292	-	-	-	6055	182	5	4485	670	5
LCS UI PLATINUM	1805	HWS	4706	841	5	749	413	-	-	-	5982	182	6	-	-	-
SY 034	1794	HRS	4687	841	6	730	413	-	-	-	5963	182	7	-	-	-
UC 14010 20	1790	HRS	4630	841	7	673	413	-	-	-	5906	182	10	-	-	-
LCS STAR	1688	HWS	4605	759	8	648	207	3886	1448	6	6172	182	3	4473	670	6
SY SUMMIT 515	1658	HRS	4594	759	9	637	207	3716	1448	18	5922	182	9	5021	670	1
LCS 12SB0224	1831	HWS	4562	788	10	605	295	4007	1448	3	-	-	-	-	-	-
UC 15010 27	1815	HWS	4553	788	11	596	295	3999	1448	4	-	-	-	-	-	-
UC 15013 15	1816	HWS	4522	788	12	565	295	3968	1448	5	-	-	-	-	-	-
SY BLANCA GRANDE 515	1657	HWS	4516	759	13	559	207	3869	1448	10	5940	182	8	4385	670	9
UC 14010 22	1791	HWS	4514	841	14	557	413	-	-	-	5790	182	11	-	-	-
APB 501089	1828	HRS	4439	788	15	482	295	3885	1448	8	-	-	-	-	-	-
UC 14010 17	1789	HRS	4431	841	16	474	413	-	-	-	5707	182	14	-	-	-
UC 15010 5	1814	HRS	4426	788	17	469	295	3871	1448	9	-	-	-	-	-	-
UC YUROK	1745	HRS	4409	759	18	452	207	3473	1448	28	6171	182	4	4520	670	4
APB 500709	1819	HRS	4404	788	19	447	295	3850	1448	12	-	-	-	-	-	-
SY BLANCA ROYALE	1522	HWS	4389	759	20	432	207	3800	1448	13	5667	182	15	4289	670	11
UC 13010 34	1769	HWS	4367	842	21	410	413	-	-	-	-	-	-	4200	670	15
UC 14010 29	1792	HRS	4354	841	22	397	413	-	-	-	5630	182	18	-	-	-
WB PERLA	1729	HWS	4353	788	23	396	292	-	-	-	5104	182	34	4712	670	3
LCS ATOMO	1723	HWS	4349	759	24	392	207	4018	1448	2	5465	182	25	3895	670	23
APB 501129	1820		4335	788	25	378	295	3781	1448	15	-	-	-	-	-	-
APB 11512	1781	HWS	4323	842	26	366	413	-	-	-	-	-	-	4156	670	16
WB 7618	1749	HWS	4314	759	27	357	207	3706	1448	19	5614	182	20	4231	670	13
APB 8238	1821		4312	788	28	355	295	3757	1448	17	-	-	-	-	-	-
APB 501189	1807	HRS	4301	769	29	344	240	3767	1448	16	5536	182	23	-	-	-
LCS 11SB0096	1772	HRS	4283	788	30	326	292	-	-	-	5462	182	26	4212	670	14
WWW BR0202W	1498	HWS	4277	842	31	320	413	-	-	-	-	-	-	4110	670	17
LCS 11SB0097	1773	HRS	4259	788	32	302	292	-	-	-	5746	182	13	3881	670	24

Name	UC Number	Crop Type	3-yr Yield (lb/acre)		3-yr St.Err.Yield (lb/acre)		Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)		2016 St.Err.Yield (lb/acre)		2016 Yield Rank		2015 Yield (lb/acre)		2015 St.Err.Yield (lb/acre)		2015 Yield Rank		2014 Yield (lb/acre)		2014 St.Err.Yield (lb/acre)		2014 Yield Rank	
			3-yr Yield	St.Err.	3-yr Yield Rank	St.Err.			2016 Yield	St.Err.	2016 Yield Rank	2015 Yield	St.Err.	2015 Yield Rank	2014 Yield	St.Err.	2014 Yield Rank	2013 Yield	St.Err.	2013 Yield Rank	2012 Yield	St.Err.	2012 Yield Rank			
SY REDWING	1521	HRS	4212	759	33	255	207	3648	1448	22	5580	182	21	3970	670	20										
WB JOAQUIN ORO	1728	HRS	4205	759	34	248	207	3791	1448	14	4976	182	37	4262	670	12										
WB 9229	1730	HRS	4188	759	35	231	207	3863	1448	11	5094	182	35	3930	670	22										
WB 7390	1750	HWS	4151	759	36	194	207	3517	1448	27	5269	182	31	4301	670	10										
SY 314	1660	HRS	4151	759	37	194	207	3561	1448	25	5544	182	22	3936	670	21										
WB 9112	1748	HRS	4150	759	38	193	207	3692	1448	20	5648	182	16	3569	670	30										
SY CAL ROJO	1478	HRS	4105	759	39	148	207	3341	1448	34	5331	182	30	4409	670	8										
UC 15014 35	1818	HRS	4095	788	40	138	295	3540	1448	26	-	-	-	-	-	-										
WB ROCKLAND	1650	HRS	4080	759	41	123	207	3637	1448	23	4978	182	36	4066	670	18										
WB DA907 005	1803	HRS	4057	841	42	100	413	-	-	-	5333	182	29	-	-	-										
UC PATWIN 515HP	1743	HWS	4017	788	43	60	295	3463	1448	29	-	-	-	-	-	-										
UC LASSIK	1495	HRS	3994	759	44	37	207	3652	1448	21	5360	182	28	3312	670	35										
LCS 12SB0197	1830	HRS	3976	788	45	19	295	3421	1448	30	-	-	-	-	-	-										
LCS 08SB0738	1726	HWS	3972	842	46	15	413	-	-	-	-	-	-	3805	670	25										
WWW FV 2808	1608	HRS	3952	759	47	-5	207	3224	1448	37	4915	182	39	4444	670	7										
UC 13010 31	1768	HRS	3941	842	48	-16	413	-	-	-	-	-	-	3774	670	27										
WWW COI565W	1774	HWS	3941	842	49	-16	413	-	-	-	-	-	-	3774	670	28										
APB 8155	1829		3914	788	50	-43	295	3360	1448	31	-	-	-	-	-	-										
LCS 10SB0087 B	1804	HRS	3914	841	51	-43	413	-	-	-	5190	182	32	-	-	-										
SY ULTRA	1590	HRS	3884	759	52	-73	207	3612	1448	24	4749	182	44	3562	670	31										
WB 9904	1751	HRS	3883	759	53	-74	207	3280	1448	35	5172	182	33	3800	670	26										
UC 1744	1744	HWS	3828	842	54	-129	413	-	-	-	-	-	-	3661	670	29										
UC PATWIN	1419	HWS	3815	788	55	-142	292	-	-	-	5620	182	19	3120	670	36										
UC PATWIN 515	1680	HWS	3807	759	56	-150	207	3354	1448	32	5646	182	17	2874	670	40										
UC ANZA	20	HRS	3735	769	57	-222	240	3241	1448	36	-	-	-	3447	670	34										
APB 12104	1780	HRS	3705	842	58	-252	413	-	-	-	-	-	-	3538	670	32										
WB PR 1404	1526	HRS	3648	788	59	-309	292	-	-	-	4958	182	38	3448	670	33										
ASSL TAM 204	1778	SRS	3628	759	60	-329	207	3068	1448	39	5431	182	27	2944	670	39										
UC CLEAR WHITE	1361	HWS	3619	841	61	-338	413	-	-	-	4895	182	40	-	-	-										
UC 14014 42	1793	HWS	3600	841	62	-357	413	-	-	-	4876	182	41	-	-	-										
SY DAYN	1795	HWS	3539	841	63	-418	413	-	-	-	4815	182	42	-	-	-										
WB JOAQUIN	1424	HRS	3524	788	64	-433	292	-	-	-	3159	182	48	4998	670	2										
WB TRIPLE IV	1550	HRS	3520	759	65	-437	207	3351	1448	33	3316	182	47	4062	670	19										

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
WB PATRON	1731	HRS	3515	759	66	-442	207	3130	1448	38	4811	182	43	2986	670	38
BAG NEW DIRKWIN HP	1779	SWS	3494	788	67	-463	292	-	-	-	5788	182	12	2310	670	44
APB 770229	1746	HWS	3195	842	68	-762	413	-	-	-	-	-	-	3028	670	37
APB 430701	1747	HRS	3026	842	69	-931	413	-	-	-	-	-	-	2859	670	41
SY VACA	1766	SRS	2807	761	70	-1150	214	1971	1450	41	5504	182	24	1725	670	46
BAG NEW DIRKWIN	1667	SWS	2753	763	71	-1204	221	2266	1452	40	4510	182	45	1933	670	45
WWW AUBR6122W	1775	HWS	2479	842	72	-1478	413	-	-	-	-	-	-	2312	670	43
APB 430429	1808	HRS	2414	841	73	-1543	413	-	-	-	3691	182	46	-	-	-
WWW MIKA	1340	HRS	2241	788	74	-1716	292	-	-	-	2733	182	49	2857	670	42
SX908	1777	SWS	1459	842	75	-2498	413	-	-	-	-	-	-	1292	670	47
APB 717	1809	HWS	1085	841	76	-2872	413	-	-	-	2361	182	50	-	-	-

Table 13: Rainfed locations, common wheat protein 3-year (2014 to 2016) and single year (2016) means.

Name	UC Number	2-yr PROTEIN (lb/acre)	2-yr St.Err.PROTEIN (lb/acre)	2-yr PROTEIN Rank	Diff. from overall mean	St.Err. Diff. from overall mean	2016 PROTEIN (lb/acre)	2016 St.Err.PROTEIN (lb/acre)	2016 PROTEIN Rank
LCS 12SB0197	1830	14.65	1	1	1.16	0.76	14.95	1.48	4
WB-ROCKLAND	1650	14.58	0.91	2	1.09	0.64	15.08	1.47	1
UC 14010/29	1792	14.56	1.8	3	1.07	1.66	-	-	-
UC-PATWIN 515HP	1743	14.43	0.95	4	0.94	0.7	15.05	1.47	2
WWW-MIKA	1340	14.31	1.8	5	0.82	1.66	-	-	-
WB DA907-005	1803	14.3	1.8	6	0.81	1.66	-	-	-
LCS-STAR	1688	14.29	0.91	7	0.8	0.64	15.04	1.47	3
UC 14010/17	1789	14.2	1.8	8	0.71	1.66	-	-	-
WB-7618	1749	14.17	0.91	9	0.68	0.64	14.7	1.47	5
UC 14014/42	1793	14.16	1.8	10	0.67	1.66	-	-	-
SY-DAYN	1795	14.15	1.8	11	0.66	1.66	-	-	-
WB-JOAQUIN ORO	1728	14.1	0.91	12	0.61	0.64	14.55	1.47	9
UC-PATWIN 515	1680	14.02	0.91	13	0.53	0.64	14.61	1.47	6
UC-PATWIN	1419	14.01	1.8	14	0.52	1.66	-	-	-
UC 14010/22	1791	13.97	1.8	15	0.48	1.66	-	-	-
UC 15014-35	1818	13.96	0.95	16	0.47	0.7	14.58	1.47	7
BAG NEW DIRKWIN HP	1779	13.96	1.8	17	0.47	1.66	-	-	-
LCS 10SB0087-B	1804	13.87	1.8	18	0.38	1.66	-	-	-
SY-BLANCA ROYALE	1522	13.79	0.91	19	0.29	0.64	14.56	1.47	8
WB-PERLA	1729	13.76	1.8	20	0.27	1.66	-	-	-
SY-REDWING	1521	13.71	0.91	21	0.22	0.64	14.34	1.47	12
WB-9229	1730	13.7	0.91	22	0.21	0.64	14.14	1.47	15
WB-PATRON	1731	13.69	0.91	23	0.2	0.64	14.34	1.47	13
LCS-ATOMO	1723	13.62	0.91	24	0.13	0.64	14.4	1.47	11
SY-ULTRA	1590	13.58	0.91	25	0.09	0.64	14.43	1.47	10
SY-CAL ROJO	1478	13.55	0.91	26	0.06	0.64	14.28	1.47	14
LCS 11SB0096	1772	13.54	1.8	27	0.05	1.66	-	-	-
SY-BLANCA GRANDE 515	1657	13.52	0.91	28	0.02	0.64	14.06	1.47	18
APB 8155	1829	13.49	0.95	29	0	0.7	14.11	1.47	17
SY 034	1794	13.46	1.8	30	-0.03	1.66	-	-	-
UC 14010/20	1790	13.45	1.8	31	-0.04	1.66	-	-	-
ASSL-TAM 204	1778	13.39	0.91	32	-0.1	0.64	14.12	1.47	16

Name	UC Number	2-yr PROTEIN (lb/acre)	2-yr St.Err.PROTEIN (lb/acre)	2-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (lb/acre)	2016 St.Err.PROTEIN (lb/acre)	2016 PROTEIN Rank
WB-9112	1748	13.39	0.91	33	-0.1	0.64	13.9	1.47	25
LCS 11SB0097	1773	13.38	1.8	34	-0.11	1.66	-	-	-
UC 15010-5	1814	13.37	0.95	35	-0.12	0.7	13.99	1.47	20
APB 8238	1821	13.35	0.95	36	-0.14	0.7	13.97	1.47	21
WB-7390	1750	13.35	0.91	37	-0.14	0.64	13.96	1.47	22
WB-7566	1802	13.32	0.91	38	-0.18	0.64	14.03	1.47	19
LCS 12SB0224	1831	13.3	0.95	39	-0.19	0.7	13.92	1.47	24
BAG-NEW DIRKWIN	1667	13.29	0.94	40	-0.2	0.69	13.71	1.48	31
WB-JOAQUIN	1424	13.28	1.8	41	-0.21	1.66	-	-	-
UC-YUROK	1745	13.28	0.91	42	-0.21	0.64	13.94	1.47	23
APB 501129	1820	13.26	0.95	43	-0.23	0.7	13.88	1.47	26
SY-314	1660	13.2	0.91	44	-0.29	0.64	13.75	1.47	28
UC 13010-23	1767	13.19	1.8	45	-0.3	1.66	-	-	-
UC 15010-27	1815	13.14	0.95	46	-0.35	0.7	13.76	1.47	27
UC 15014-4	1817	13.12	0.95	47	-0.38	0.7	13.73	1.47	29
UC 15013-15	1816	13.1	0.95	48	-0.4	0.7	13.72	1.47	30
WB-9904	1751	13.06	0.91	49	-0.43	0.64	13.7	1.47	32
APB 500709	1819	13.04	0.95	50	-0.45	0.7	13.66	1.47	33
SY-VACA	1766	13	0.99	51	-0.49	0.75	13.21	1.49	39
APB 501089	1828	12.97	0.95	52	-0.52	0.7	13.59	1.47	34
SY-SUMMIT 515	1658	12.94	0.91	53	-0.55	0.64	13.49	1.47	35
UC-CLEAR WHITE	1361	12.89	1.8	54	-0.6	1.66	-	-	-
LCS UI-PLATINUM	1805	12.84	1.8	55	-0.65	1.66	-	-	-
WB-TRIPLE IV	1550	12.71	0.91	56	-0.78	0.64	13.37	1.47	36
APB 501189	1807	12.69	0.91	57	-0.8	0.64	13.25	1.47	38
APB 500553	1806	12.68	1.8	58	-0.81	1.66	-	-	-
UC-ANZA	20	12.65	0.95	59	-0.84	0.7	13.27	1.47	37
UC-LASSIK	1495	12.53	0.91	60	-0.96	0.64	13.09	1.47	40
WB-PR 1404	1526	12.37	1.8	61	-1.12	1.66	-	-	-
WWW-FV 2808	1608	11.9	0.91	62	-1.59	0.64	12.6	1.47	41

Table 14: Agronomic traits of common wheat 2014 to 2016.

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
ANZA	20	62	35.3	38	1	1.1	1	2	2	46	78
APB 11512	1781	62.4	37.3	43	1	3.1	2	3.9	2.5	44	80
APB 12104	1780	61	40	39.5	1	1	1	2	3	41	76
APB 430429	1808	61.7	37.8	38.5	1.5	4.6	1	6	1	26.5	77
APB 430701	1747	59.5	31.1	40	2.5	6	1.5	5.9	2	44.5	76
APB 500553	1806	62	41.7	38.5	1	1.3	1	3	2	27	77
APB 500709	1819	62.2	35.9	35	1	1	1	4	1	26	71
APB 501089	1828	60.8	39.1	30	1	1	1	1	1	25	68.5
APB 501129	1820	60	39.7	31	1	1	1	2	1	29	71.5
APB 501189	1807	62.1	39.1	35	1	2.5	1	3.8	2	22.5	69
APB 717	1809	56.7	31	39	4	7.3	1	5.7	4.8	27	79
APB 770229	1746	62	36.3	42	1	1	1	1	2	47	78
APB 8155	1829	62.6	41.1	37	1	1	1	3	2	24.5	69.5
APB 8238	1821	61.1	39.9	35	1	1	1	4	1	27	69
ASSL TAM 204	1778	59.5	30.4	40	1	1	1	2.1	2	50	84
BAG NEW DIRKWIN	1667	57.1	37.2	40	1	4	1	6	2	50	97
BAG NEW DIRKWIN HP	1779	59.3	41.8	41	1	1	1	5.4	1	67.5	88
BLANCA ROYALE	1522	62	38.3	34	1	1	1	1.9	2.5	41.5	75
CAL ROJO	1478	60.9	37.5	33.5	1	1	1	1	1	41	75
FV 2808	1608	61	33.9	42	1	1	1	2	4.5	45.5	79
JOAQUIN	1424	62	39.2	37.5	1	2	1	1	3	37	72.5
LCS 08SB0738	1726	61	34.2	38	1	1	1	1	1.5	45.5	79
LCS 10SB0087 B	1804	61	41.4	37	1	2	1	4.6	1.8	31	84
LCS 11SB0096	1772	62.1	42.3	40	1	1	1	1	2.2	42.5	76
LCS 11SB0097	1773	62.2	41.7	39.5	1	1	1	1	3	42	78
LCS 12SB0197	1830	61	38.2	37.5	1	1.3	1	3.3	2	28	75
LCS 12SB0224	1831	61	36.2	36	1	2	1	3	1.7	28	72
LCS ATOMO	1723	62.4	39.3	35.5	1	1	1	2.7	1	39	75
LCS STAR	1688	61.9	35.6	38	1	3	1	7	2	41	75
LCS UI PLATINUM	1805	62.8	44.7	37	1	1	1	4	1	23.5	74
MIKA	1340	58.3	31.4	41.5	1	1	1	1	2.5	48.5	79

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
NEW DIRKWIN	1667	57	32.6	39.5	1	2	1	2	1.5	54	83.5
NEW DIRKWIN HIGH PROTEIN	1779	57.1	33.8	40	1	2	1	1	1.5	55.5	82.5
PATWIN	1419	59	32.8	36	1	1	1	1	2.5	44	76.5
PR 1404	1526	59.5	37.2	39	1	1.1	1	2	2	49	81
REDWING	1521	60	38.1	34	1	1	1	1	2	42.5	75
SUMMIT 515	1658	61.8	36.7	36	1	1	1	1	1	42.5	76
SX908	1777	56.5	31.8	40	1.5	4	1	3	2.5	57.5	85
SY 034	1794	62.8	38.6	33.5	1	1	1	1	1	31	77
SY 314	1660	60	38.4	35	1	1	1	1	1	40.5	75.5
SY BLANCA GRANDE 515	1657	64	41.2	37	1	2	1	5.9	1	37	71
SY BLANCA ROYALE	1522	62	38.1	33	1	1	1	3	1	28	74
SY CAL ROJO	1478	60.8	38.9	32	1	1	1	2	1	28	73.5
SY DAYN	1795	62.6	40.7	40.5	1	1	1	2	2	27	81
SY REDWING	1521	60.1	39.9	32	1	1	1	1.9	1	29	74.5
SY SUMMIT 515	1658	62.5	40.1	34	1	1	1	1	1	28	73
SY ULTRA	1590	62.5	38	33	1	1	1	2	1	29	77
SY VACA	1766	56.6	32.1	40	1	2	1	4	1	56.5	95
TRIPLE IV	1550	61.5	39.3	40	1	4	2	4.9	3	35	69
UC 13010 23	1767	63	39.6	39	1	2.3	1	3	1.2	43	76
UC 13010 31	1768	61.4	40.2	39	1	1	1	2	4	42	76
UC 13010 34	1769	61.4	35.4	40	1	2.1	1	2	1.5	47	80
UC 14010 17	1789	61.8	41.3	36	1	1	1	1.7	1	27.5	76
UC 14010 20	1790	62	42.1	37	1	1.6	1	5	1	28	75
UC 14010 22	1791	62.6	39.6	36.5	1	1	1	5	2	29.5	76
UC 14010 29	1792	62.3	39.2	38	1	1	1	2.7	1	28.5	74
UC 14014 42	1793	61.5	39.2	39	1	1	1	2.6	1	27	67
UC 15010 27	1815	61.7	41.7	35	1	1	1	1	1	27	71.5
UC 15010 5	1814	61.2	39.6	33	1	1	1	2	1	29.5	68.5
UC 15013 15	1816	64.8	41.2	32	1	1	1	2	1	25	71
UC 15014 35	1818	63.4	34.1	37	1	2	1	5	3.8	28	67
UC 15014 4	1817	63.4	41.9	34	1	1	1	1	1	26	69.5
UC 1744	1744	60.7	37.5	39	3	5.1	2.5	5.9	5	42	73.5

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
UC ANZA	20	62.2	28.6	35	1	2	1	5	1	33	72.5
UC CLEAR WHITE	1361	62.4	38.6	37	1	1	1	1	1	26	73
UC LASSIK	1495	62	35.9	35	1	1	1	4	2	43.5	78.5
UC PATWIN	1419	60.7	36	33	1	1	1	2	1	36	78
UC PATWIN 515	1680	60.6	35.7	32	1	1	1	1	1	42	76
UC PATWIN 515HP	1743	61.1	35.7	33	1	1	1	1.3	1	26	66
UC YUROK	1745	63	37.4	37	1	1	1	4	1.8	44	78.5
ULTRA	1590	62.9	36.8	35.5	1	1	1	1	1	42	76
WB 7390	1750	63.2	44.5	37.5	1	1	1	2	1	39	74
WB 7566	1802	62.4	44.6	35	1	1.5	1	3	1	33	79
WB 7618	1749	62	38.4	35	1	1	1	1	1	40	74.5
WB 9112	1748	62.5	37.3	36	1	1	1	2	1	37.5	70
WB 9229	1730	62.9	38	35	1	1	1	2	1	41	76
WB 9904	1751	61.2	47.1	40	1	1	1	3	1	43	78.5
WB DA907 005	1803	62.6	36.9	34.5	1	1	1	1	1	29	79
WB JOAQUIN	1424	56	29.9	37	1	1	1	1.7	1.8	23	63
WB JOAQUIN ORO	1728	62.9	43.5	35	1	1	1	2	2	29	67
WB PATRON	1731	60.8	41.9	38	1	1.5	1	3	2	40	76
WB PERLA	1729	62	41.1	36	1	1	1	2	2	36	72.5
WB PR 1404	1526	60.8	43.8	38	1	1.3	1	5.1	1	36	87
WB ROCKLAND	1650	62	39.7	33	1	1	1	1	1	38.5	74
WB TRIPLE IV	1550	60.9	41.6	38	3	7	3	7	2	18	67
WWW AUBR6122W	1775	55.3	30	36.5	1	1	1	4	2	48	78
WWW BR0202W	1498	61.6	36.6	41	3	5	3	5	6	37	71.5
WWW COI565W	1774	61.5	41.6	46	1	1.1	1	2	6	41	74
WWW FV 2808	1608	61.5	37.4	40	1	3	1	5	2.4	36	77.5
WWW MIKA	1340	58	35.1	41.5	1	4.3	1	3.7	2	33	81

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%

Table 15: Disease ratings of common wheat 2014 to 2016.

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..rust..50th.percentile.	Stripe.rust..rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
ANZA	20	1	4	-	-	1	4	-	-	2	4
APB 11512	1781	1	1	-	-	1	1	-	-	1	4
APB 12104	1780	1	4.9	-	-	1	4.9	-	-	1	3
APB 430429	1808	-	-	3	8	3	8	-	-	2	4
APB 430701	1747	1	1	-	-	1	1	-	-	2.5	5
APB 500553	1806	-	-	4	5	4	5	-	-	1	2
APB 500709	1819	1	1.9	1	1	1	1.9	1	1	1	2
APB 501089	1828	1	1	1	1	1	1	1	1	1	3.1
APB 501129	1820	2	3	1	1	2	3	1	1	1	3
APB 501189	1807	4	7	1	3	3	6	1	1	1	3
APB 717	1809	-	-	8	8	8	8	-	-	1	2
APB 770229	1746	1	1	-	-	1	1	-	-	2	5
APB 8155	1829	1	1	1	1	1	1	1	1	2	3
APB 8238	1821	1	1	1	1	1	1	1	1	1	3
ASSL TAM 204	1778	1	2	1	3	1	3	1	1	1	3
BAG NEW DIRKWIN	1667	1	1	1	1	1	1	1	1	1	2
BAG NEW DIRKWIN HP	1779	-	-	1	1	1	1	-	-	1	2
BLANCA ROYALE	1522	1	1	-	-	1	1	-	-	1	3.5
CAL ROJO	1478	1	1	-	-	1	1	-	-	1	3.5
FV 2808	1608	1	3	-	-	1	3	-	-	2.5	6
JOAQUIN	1424	4	6	-	-	4	6	-	-	2	4
LCS 08SB0738	1726	1	1	-	-	1	1	-	-	1	4
LCS 10SB0087 B	1804	-	-	1	2	1	2	-	-	1	3
LCS 11SB0096	1772	1	1	1	2	1	1	-	-	1	3
LCS 11SB0097	1773	1	1	1	1	1	1	-	-	2	3
LCS 12SB0197	1830	1	1.9	1	1	1	1.9	1	1	1	2
LCS 12SB0224	1831	1	2	1	1	1	2	1	1	1	2.1
LCS ATOMO	1723	1	3	3	4	1	4	1	1	2	4
LCS STAR	1688	1	1	1	1	1	1	1	1	1	3
LCS UI PLATINUM	1805	-	-	3	5	3	5	-	-	1	3
MIKA	1340	1	3.9	-	-	1	3.9	-	-	2.5	6

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Leaf.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
NEW DIRKWIN	1667	1	1	-	-	1	1	-	-	2	4
NEW DIRKWIN HIGH PROTEIN	1779	1	1	-	-	1	1	-	-	1	3
PATWIN	1419	1	1	-	-	1	1	-	-	2	4
PR 1404	1526	1	1	-	-	1	1	-	-	3	5
REDWING	1521	1	1	-	-	1	1	-	-	1	3
SUMMIT 515	1658	1	1	-	-	1	1	-	-	1.5	4
SX908	1777	1	1	-	-	1	1	-	-	2	4
SY 034	1794	-	-	3	4	3	4	-	-	1	3
SY 314	1660	1	1	1	1	1	1	1	1	1	3
SY BLANCA GRANDE 515	1657	1	1	1	1	1	1	1	1	1	3
SY BLANCA ROYALE	1522	1	2	1	1	1	2	1	1	1	3
SY CAL ROJO	1478	1	1	1	1.7	1	1	1	1	1.5	3
SY DAYN	1795	-	-	1	1	1	1	-	-	2	4
SY REDWING	1521	1.5	2	2	4	2	4	1	1	1	3
SY SUMMIT 515	1658	1	1.9	1	1	1	1	1	1	1	3
SY ULTRA	1590	1	2	1	5	1	4	1	1	1	2.1
SY VACA	1766	1	1	1.5	2	1	2	1	1	1	3
TRIPLE IV	1550	1	3	-	-	1	3	-	-	3	5
UC 13010 23	1767	1	1	1	1	1	1	-	-	2	3.5
UC 13010 31	1768	1	1	-	-	1	1	-	-	2	5
UC 13010 34	1769	1	1	-	-	1	1	-	-	1	2
UC 14010 17	1789	-	-	1	1	1	1	-	-	3	5
UC 14010 20	1790	-	-	1	1	1	1	-	-	3	4
UC 14010 22	1791	-	-	1	1	1	1	-	-	2	3
UC 14010 29	1792	-	-	1	1	1	1	-	-	3	4
UC 14014 42	1793	-	-	1	1	1	1	-	-	3	4
UC 15010 27	1815	1	1.9	1	1	1	1.9	1	1	1.5	2.2
UC 15010 5	1814	1	2	1	1	1	2	1	1	2	2
UC 15013 15	1816	1	2	1	1	1	2	1	1	1	2
UC 15014 35	1818	1	1	1	1	1	1	1	1	1	2
UC 15014 4	1817	1	1	1	1	1	1	1	1	1	2
UC 1744	1744	1	1	-	-	1	1	-	-	2	4
UC ANZA	20	3	6	1	1	3	6	1	1	1	2

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Leaf.rust..90th.percentile.	Leaf.rust..50th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.	
UC CLEAR WHITE	1361	-	-	3	4	3	4	-	-	3	4
UC LASSIK	1495	1	1	1	1	1	1	1	1	1	3
UC PATWIN	1419	-	-	1	1	1	1	-	-	2	3.2
UC PATWIN 515	1680	1	1	1	1	1	1	1	1	1	3
UC PATWIN 515HP	1743	1	1	1	1	1	1	1	1	1	2.1
UC YUROK	1745	1	1	1	1	1	1	1	1	1	4
ULTRA	1590	1	1	-	-	1	1	-	-	1	3
WB 7390	1750	1	1	1	2	1	2	1	1	1	4
WB 7566	1802	1	2	1	1	1	2	1	1	1	1
WB 7618	1749	1	2	1	1	1	1.6	1	1	1	4
WB 9112	1748	1	2	1	1	1	2	1	1	2	3.4
WB 9229	1730	1	1.7	1	1	1	1	1	1	2	4
WB 9904	1751	1	1	1	1	1	1	1	1	2	4
WB DA907 005	1803	-	-	1	1	1	1	-	-	1	3
WB JOAQUIN	1424	-	-	8	8	8	8	-	-	1	2.2
WB JOAQUIN ORO	1728	1	1.8	1	1	1	1.7	1	1	2	4
WB PATRON	1731	1	1	1	1	1	1	1	1	3	4
WB PERLA	1729	1	1	1	1	1	1	-	-	2	4
WB PR 1404	1526	-	-	1	3	1	3	-	-	2	4.1
WB ROCKLAND	1650	1	1	1	1	1	1	1	1	2	4
WB TRIPLE IV	1550	4	6	7	8	5	8	1	1	2	4
WWW AUBR6122W	1775	1	1	-	-	1	1	-	-	2	5
WWW BR0202W	1498	1	2.9	-	-	1	2.9	-	-	2	4
WWW COI565W	1774	1	6	-	-	1	6	-	-	1.5	5
WWW FV 2808	1608	3	5	4	4	4	5	1	1	1	3.1
WWW MIKA	1340	-	-	5	6.1	5	6.1	-	-	2	4

Rating scale for diseases (area of flag-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%

Table 16: Sacramento Valley region, triticale yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St Err.Yield (lb/acre)	2014 Yield Rank
NS 10T50020	3178	TRIT	7706	445	1	2212	277	7750	359	1	-	-	-	-	-	-
NS TRICAL 115T	3170	TRIT	6648	379	2	1154	170	6343	359	5	7131	673	3	6565	882	1
NS CAMELOT	3168	TRIT	6625	379	3	1131	170	6703	359	4	7256	673	1	6047	882	3
NS TRICAL 158EP	3169	TRIT	6609	379	4	1115	170	6925	359	2	7146	673	2	5865	882	4
WB PACHECO	3164	TRIT	6514	379	5	1021	170	6892	359	3	6180	673	5	6362	882	2
NS TRICAL 105	3097	TRIT	5883	379	6	389	170	5645	359	6	6366	673	4	5733	882	5
APB 660049	3172	TRIT	5661	475	7	167	303	-	-	-	6005	673	6	-	-	-
APB 9919	3173	TRIT	5640	475	8	147	303	-	-	-	5984	673	7	-	-	-
BAG TYNDAL	3171	TRIT	5490	475	9	-4	303	-	-	-	5833	673	8	-	-	-
PRL 011TS 429	3177	TRIT	5330	445	10	-164	277	5374	359	7	-	-	-	-	-	-
NS 10T70126	3179	TRIT	4042	460	11	-1452	298	4085	368	8	-	-	-	-	-	-
BAG NU WHEAT	3174	TRIT	3995	475	12	-1499	303	-	-	-	4339	673	9	-	-	-
BAG BG 198 14	3175	TRIT	3580	475	13	-1914	303	-	-	-	3924	673	10	-	-	-
BAG BG 225 14	3176	TRIT	3190	475	14	-2304	303	-	-	-	3534	673	11	-	-	-

Table 17: Northern San Joaquin Valley region, triticale yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err. Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
NS 10T50020	3178	TRIT	7890	762	1	1888	266	9290	452	1	-	-	-	-	-	-
NS TRICAL 115T	3170	TRIT	6946	726	2	944	155	8435	452	4	6295	434	3	6107	669	2
WB PACHECO	3164	TRIT	6883	726	3	881	155	8506	452	2	6297	434	2	5846	669	3
NS TRICAL 158EP	3169	TRIT	6822	726	4	820	155	7954	452	5	6367	434	1	6147	669	1
NS TRICAL 105	3097	TRIT	6722	726	5	720	155	8463	452	3	6141	434	5	5562	669	5
NS CAMELOT	3168	TRIT	6544	726	6	542	155	7621	452	7	6204	434	4	5807	669	4
PRL 011TS 429	3177	TRIT	6507	762	7	505	266	7907	452	6	-	-	-	-	-	-
APB 9919	3173	TRIT	5959	762	8	-43	255	-	-	-	5441	434	6	-	-	-
BAG TYNDAL	3171	TRIT	5723	762	9	-279	255	-	-	-	5205	434	7	-	-	-
APB 660049	3172	TRIT	5590	762	10	-412	255	-	-	-	5072	434	8	-	-	-
BAG BG 198 14	3175	TRIT	4982	762	11	-1020	255	-	-	-	4464	434	9	-	-	-
BAG NU WHEAT	3174	TRIT	4929	762	12	-1073	255	-	-	-	4411	434	10	-	-	-
BAG BG 225 14	3176	TRIT	4443	762	13	-1559	255	-	-	-	3925	434	11	-	-	-
NS 10T70126	3179	TRIT	4089	790	14	-1913	328	5512	502	8	-	-	-	-	-	-

Table 18: Southern San Joaquin Valley region, triticale yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
NS 10T50020	3178	TRIT	5548	1133	1	907	270	4489	2141	2	-	-	-	-	-	-
WB PACHECO	3164	TRIT	5517	1117	2	876	193	4610	2141	1	4944	418	8	7904	245	1
BAG TYNDAL	3171	TRIT	5489	1184	3	848	396	-	-	-	5698	450	3	-	-	-
NS TRICAL 115T	3170	TRIT	5140	1118	4	499	200	3868	2141	5	5655	450	4	7123	245	2
NS CAMELOT	3168	TRIT	5101	1117	5	460	193	3909	2141	4	5789	418	1	6796	245	3
BAG NU WHEAT	3174	TRIT	5034	1166	6	393	350	-	-	-	5366	418	5	-	-	-
NS TRICAL 105	3097	TRIT	4953	1118	7	312	200	3981	2141	3	5766	450	2	6112	245	5
APB 660049	3172	TRIT	4851	1166	8	210	350	-	-	-	5183	418	6	-	-	-
BAG BG 225 14	3176	TRIT	4702	1166	9	61	350	-	-	-	5033	418	7	-	-	-
BAG BG 198 14	3175	TRIT	4626	1217	10	-15	476	-	-	-	4884	505	9	-	-	-
NS TRICAL 158EP	3169	TRIT	4579	1119	11	-62	209	3600	2141	6	4682	506	10	6332	245	4
PRL 011TS 429	3177	TRIT	4256	1133	12	-385	270	3197	2141	7	-	-	-	-	-	-
APB 9919	3173	TRIT	4120	1184	13	-521	396	-	-	-	4525	449	11	-	-	-
NS 10T70126	3179	TRIT	1060	1311	14	-3581	666	-2	2243	8	-	-	-	-	-	-

Table 19: Imperial Valley region, triticale yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err. Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
NS 10T50020	3178	TRIT	7047	330	1	1127	193	7417	216	2	-	-	-	-	-	-
WB PACHECO	3164	TRIT	6839	285	2	919	112	7424	216	1	7287	183	1	5808	320	4
NS TRICAL 105	3097	TRIT	6776	285	3	855	112	7306	216	3	6666	183	3	6355	320	2
NS TRICAL 115T	3170	TRIT	6680	285	4	759	112	6672	216	5	6866	183	2	6502	320	1
NS TRICAL 158EP	3169	TRIT	6318	285	5	397	112	6732	216	4	6392	183	5	5830	320	3
PRL 011TS 429	3177	TRIT	6292	330	6	371	193	6662	216	6	-	-	-	-	-	-
APB 660049	3172	TRIT	6262	330	7	341	182	-	-	-	6392	183	4	-	-	-
NS CAMELOT	3168	TRIT	6254	285	8	333	112	6646	216	7	6331	183	6	5786	320	5
BAG NU WHEAT	3174	TRIT	6102	330	9	181	182	-	-	-	6233	183	7	-	-	-
BAG TYNDAL	3171	TRIT	5650	330	10	-271	182	-	-	-	5781	183	8	-	-	-
APB 9919	3173	TRIT	5616	330	11	-305	182	-	-	-	5746	183	9	-	-	-
BAG BG 198 14	3175	TRIT	4294	330	12	-1626	182	-	-	-	4425	183	10	-	-	-
BAG BG 225 14	3176	TRIT	2839	330	13	-3082	182	-	-	-	2970	183	11	-	-	-

Table 20: Rainfed locations, triticale yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err. Yield (lb/acre)	2014 Yield Rank
NS 10T50020	3178	TRIT	5219	1133	1	1849	353	4579	2019	1	-	-	-	-	-	-
NS CAMELOT	3168	TRIT	4901	1103	2	1531	249	4325	2019	2	6374	203	4	4581	1022	1
NS TRICAL 158EP	3169	TRIT	4676	1103	3	1306	249	4277	2019	3	7477	203	1	2674	1022	5
WB PACHECO	3164	TRIT	4590	1103	4	1220	249	4051	2019	4	6576	203	3	3681	1022	3
NS TRICAL 115T	3170	TRIT	4430	1103	5	1060	249	3785	2019	5	6901	203	2	3250	1022	4
NS TRICAL 105	3097	TRIT	3967	1103	6	597	249	2893	2019	7	5803	203	5	4278	1022	2
PRL 011TS 429	3177	TRIT	3552	1133	7	182	353	2911	2019	6	-	-	-	-	-	-
BAG TYNDAL	3171	TRIT	3442	1189	8	71	461	-	-	5535	203	6	-	-	-	-
APB 9919	3173	TRIT	3012	1189	9	-358	461	-	-	5106	203	7	-	-	-	-
APB 660049	3172	TRIT	2936	1189	10	-434	461	-	-	5030	203	8	-	-	-	-
NS 10T70126	3179	TRIT	2437	1187	11	-933	481	1786	2032	8	-	-	-	-	-	-
BAG NU WHEAT	3174	TRIT	2034	1189	12	-1337	461	-	-	4127	203	9	-	-	-	-
BAG BG 198 14	3175	TRIT	1012	1189	13	-2358	461	-	-	3106	203	10	-	-	-	-
BAG BG 225 14	3176	TRIT	975	1189	14	-2396	461	-	-	3068	203	11	-	-	-	-

Table 21: Agronomic traits of triticale 2014 to 2016.

Name	UC.Number	Test.Weight.lb.bu.	X1000.Kernel.Weight..g.	Plant.Height.inches.	Lodging..soft.dough...50th.percentile.	Lodging..soft.dough...90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from..3.1..Davis.	Days.to.maturity..from..3.1..Davis.
NS 10T50020	3178	57.4	39.5	36	1	1	1	1.3	1	24.5	74
NS 10T70126	3179	52.7	32	51	1	3.9	3	7	1	49.5	98.5
NS CAMELOT	3168	58.1	42.8	40	1	1	1	2	1	23.5	73.5
NS TRICAL 105	3097	58.3	44.7	42	1	1	1	3	1	26	77
NS TRICAL 115T	3170	59.4	39.5	36.5	1	1	1	1	1	27	74.5
NS TRICAL 158EP	3169	59.7	38.3	37.5	1	1	1	1	1	26	73.5
PRL 011TS 429	3177	57.1	38.5	46.5	2	5	4.5	7	1	25	74.5
WB PACHECO	3164	59.5	46	40	1	1	1	3	1	25	77
APB 660049	3172	54.9	38.9	49.5	1	1	1	3.6	1.8	28.5	81
APB 9919	3173	55.8	39.4	44.5	1	1	1	2	1	37	84
BAG BG 198 14	3175	55.9	39.2	49	3	4.3	3	5	2	21	75
BAG BG 225 14	3176	55.8	46.3	54	2	4	2	4.6	3	20.5	67
BAG NU WHEAT	3174	60.8	38.6	40	1	2.3	1	5.6	1	35	79
BAG TYNDAL	3171	58.3	50.1	52	1	2	2	6	2	22	68
CAMELOT	3168	56.8	38.7	42	1	1	1	2	1.5	38	76
SY 115T	3170	58.9	38.8	38	1	1	1	1	1	41	82.5
SY 158T	3169	58.8	37.7	38	1	1	1	1	1	41	83
SY CAMELOT	3168	57.6	45.2	42	1	1	1	1	1	27	79
SY TRICAL 105	3097	59	50.5	43	1	1	1	2	1	27	80
TRICAL 105	3097	59.1	44.1	44	1	1	1	1	1	39	78
WB PACHECO	3164	60.1	46.2	43	1	1	1	2.4	1	39.5	78

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%

Table 22: Disease ratings of triticale 2014 to 2016.

Crop.Type		Name	UC Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
Triticale	NS 10T50020	3178	1	1	1	1	1	1	1	1	1
Triticale	NS 10T70126	3179	1	1	1	1	1	1	1	1	1
Triticale	NS CAMELOT	3168	1	1	1	1	1	1	1	1	1
Triticale	NS TRICAL 105	3097	1	1	1	1	2	3	1	1.1	
Triticale	NS TRICAL 115T	3170	1	1	1	1	1	1	1	1	1
Triticale	NS TRICAL 158EP	3169	1	1	1	1	1	1	1	1	
Triticale	PRL 011TS 429	3177	1	1	1	1	1	1	1	1	1.1
Triticale	WB PACHECO	3164	1	1	1	1	1	1	1	1	1
Wheat	APB 660049	3172	-	-	3	4	-	-	1	4	
Wheat	APB 9919	3173	-	-	1	1	-	-	2	3	
Wheat	BAG BG 198 14	3175	-	-	1	2	-	-	5	5	
Wheat	BAG BG 225 14	3176	-	-	1	1	-	-	3	5	
Wheat	BAG NU WHEAT	3174	-	-	3	4	-	-	1	4	
Wheat	BAG TYNDAL	3171	-	-	3.5	5	-	-	1	3	
Wheat	CAMELOT	3168	1	1	-	-	-	-	1	2	
Wheat	SY 115T	3170	1	1	1	1	-	-	1	3	
Wheat	SY 158T	3169	1	1	1	1	-	-	1	1.6	
Wheat	SY CAMELOT	3168	-	-	1	1	-	-	1	1	
Wheat	SY TRICAL 105	3097	-	-	1	1	-	-	2	3	
Wheat	TRICAL 105	3097	1	1	-	-	-	-	1	4.5	
Wheat	WB PACHECO	3164	1	1	1	1	-	-	1	2	

Rating scale for diseases (area of flag-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%

## 2.2.Durum wheat

Table 23: Sacramento Valley region, durum wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
UC 15210 12	1825	DUR	7649	723	1	1712	425	7721	333	1	-	-	-	-	-	-
AS COLOMBO	1800	DUR	7003	721	2	1066	422	-	-	-	7968	305	2	-	-	-
UC 13210 21	1771	DUR	6857	654	3	920	299	-	-	-	7980	305	1	5662	566	2
LCS 13SD0056	1833	DUR	6828	762	4	890	487	6920	373	5	-	-	-	-	-	-
UC 15210 24	1826	DUR	6758	723	5	820	425	6830	333	6	-	-	-	-	-	-
UC 1756	1756	DUR	6738	722	6	801	422	-	-	-	-	-	5702	566	1	-
UC 15210 11	1824	DUR	6713	723	7	776	425	6785	333	7	-	-	-	-	-	-
LCS 12E4006	1832	DUR	6659	723	8	722	425	6731	333	9	-	-	-	-	-	-
UC DESERT KING	1375	DUR	6592	630	9	654	244	7030	333	3	7840	305	4	4905	566	13
AS SARAGOLLA	1583	DUR	6582	630	10	645	244	7200	333	2	7064	305	14	5483	566	3
APB WESTMORE HP	1484	DUR	6495	630	11	558	244	7002	333	4	7441	305	8	5041	566	10
APB 11710	1785	DUR	6437	722	12	500	422	-	-	-	-	-	5401	566	4	-
UC DESERT KING HP	1627	DUR	6430	630	13	493	244	6751	333	8	7141	305	13	5399	566	5
WWW D3085	1801	DUR	6422	721	14	484	422	-	-	-	7386	305	10	-	-	-
APB 540505	1822	DUR	6392	723	15	455	425	6464	333	10	-	-	-	-	-	-
AS MAESTRALE	1582	DUR	6296	630	16	359	244	6281	333	13	7417	305	9	5190	566	7
UC 13210 5	1770	DUR	6275	654	17	338	299	-	-	-	7475	305	7	5003	566	11
UC 14215 14	1798	DUR	6269	721	18	332	422	-	-	-	7233	305	12	-	-	-
APB 11908	1784	DUR	6228	722	19	291	422	-	-	-	-	-	5192	566	6	-
SY FORTISSIMO	1429	DUR	6228	630	20	291	244	6283	333	12	7748	305	5	4652	566	26
WWW CROWN	1166	DUR	6211	654	21	274	299	-	-	-	7856	305	3	4494	566	27
UC 1796	1796	DUR	6198	654	22	260	299	6449	333	11	6982	305	16	-	-	-
LCS ATHORIS	1698	DUR	6189	722	23	252	422	-	-	-	-	-	5153	566	9	-
WWW TOPPER	1211	DUR	5942	654	24	5	299	-	-	-	6931	305	19	4882	566	15
APB 11705	1782	DUR	5930	722	25	-8	422	-	-	-	-	-	4893	566	14	-
APB 540165	1827	DUR	5883	723	26	-55	425	5955	333	18	-	-	-	-	-	-
WWW DURAKING	878	DUR	5854	654	27	-83	299	-	-	-	6698	305	22	4938	566	12
UC TIPAI	1585	DUR	5849	722	28	-88	422	-	-	-	-	-	4813	566	19	-
LCS KIKO	1697	DUR	5831	630	29	-106	244	6073	333	15	6732	305	21	4688	566	24

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr St.Err.Yield (lb/acre)			Diff. from overall mean			St.Err.Dif. from overall mean			2016 Yield (lb/acre)			2016 St.Err.Yield (lb/acre)			2015 Yield (lb/acre)			2015 St.Err.Yield (lb/acre)			2014 Yield (lb/acre)			2014 St.Err.Yield (lb/acre)			2014 Yield Rank		
APB 571353	1812	DUR	5826	723	30	-111	425	5898	333	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
WWW D2517	1733	DUR	5785	722	31	-153	422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22					
WWW Q MAX	1473	DUR	5768	654	32	-169	299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28						
APB 11907	1783	DUR	5766	722	33	-172	422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23						
UC MIWOK	1690	DUR	5738	630	34	-199	244	6082	333	14	6381	305	26	4753	566	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
APB 335	1813	DUR	5716	654	35	-222	299	4888	333	27	7579	305	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
LCS ALIRON	1721	DUR	5704	654	36	-234	299	-	-	-	6495	305	25	4840	566	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
UC 1758	1758	DUR	5701	722	37	-237	422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25						
SY VOLANTE	1431	DUR	5692	630	38	-245	244	5463	333	20	7272	305	11	4341	566	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
APB TIBURON	1640	DUR	5623	630	39	-314	244	5097	333	25	6933	305	18	4840	566	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
APB 571217	1810	DUR	5578	654	40	-359	299	5228	333	22	6965	305	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
UC 14215 11	1797	DUR	5567	721	41	-370	422	-	-	-	6531	305	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
WWW PLATINUM	1210	DUR	5529	654	42	-408	299	-	-	-	6119	305	30	4868	566	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
APB KRONOS	951	DUR	5518	630	43	-420	244	5983	333	16	5777	305	32	4793	566	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
APB HELIOS	1440	DUR	5504	654	44	-433	299	5225	333	23	6819	305	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
WWW D2517BELL025	1776	DUR	5477	654	45	-461	299	-	-	-	6610	305	23	4271	566	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
WB ORITA	1215	DUR	5377	630	46	-561	244	5981	333	17	5817	305	31	4332	566	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
WB MOHAVE	1654	DUR	5294	630	47	-643	244	5443	333	21	5262	305	33	5177	566	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
WB HAVASU	1479	DUR	5287	630	48	-650	244	5212	333	24	6288	305	28	4362	566	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
UC 14215 42	1799	DUR	5261	721	49	-677	422	-	-	-	6225	305	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
WB MEAD	1607	DUR	5228	630	50	-710	244	4915	333	26	6378	305	27	4390	566	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
APB 410077	1823	DUR	4802	723	51	-1135	425	4874	333	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
KAMUT	1786	DUR	1259	654	52	-4678	299	-	-	-	1181	305	34	1265	566	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

Table 24: Sacramento Valley region, durum wheat protein 3-year (2014 to 2016) and single year (2016) means.

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
KAMUT	1786	DUR	14.77	1.03	1	2.61	0.5	-	-	-
UC TIPAI	1585	DUR	14.5	1.15	2	2.33	0.71	-	-	-
APB TIBURON	1640	DUR	13.45	0.96	3	1.28	0.32	13.82	0.38	3
UC DESERT KING HP	1627	DUR	13.43	0.96	4	1.27	0.32	13.8	0.38	4
UC 14215 11	1797	DUR	13.27	1.15	5	1.11	0.71	-	-	-
WB ORITA	1215	DUR	13.17	0.96	6	1.01	0.32	13.99	0.38	2
APB 571217	1810	DUR	13.17	0.97	7	1	0.36	14.04	0.38	1
UC 1796	1796	DUR	13.04	0.97	8	0.88	0.36	13.59	0.38	6
WB MEAD	1607	DUR	12.96	0.96	9	0.8	0.32	13.62	0.38	5
WWW D2517BELL025	1776	DUR	12.92	1.03	10	0.76	0.5	-	-	-
SY FORTISSIMO	1429	DUR	12.86	0.96	11	0.7	0.32	13.02	0.38	14
APB 540165	1827	DUR	12.77	0.99	12	0.61	0.42	13.34	0.38	10
WB HAVASU	1479	DUR	12.75	0.96	13	0.59	0.32	13.51	0.38	8
APB WESTMORE HP	1484	DUR	12.75	0.96	14	0.59	0.32	12.89	0.38	16
UC MIWOK	1690	DUR	12.7	0.96	15	0.53	0.32	12.83	0.38	17
APB HELIOS	1440	DUR	12.68	0.97	16	0.52	0.36	13.41	0.38	9
APB 335	1813	DUR	12.65	0.97	17	0.49	0.36	13.57	0.38	7
UC 1758	1758	DUR	12.51	1.15	18	0.34	0.71	-	-	-
APB 410077	1823	DUR	12.44	0.99	19	0.27	0.42	13.01	0.38	15
APB KRONOS	951	DUR	12.41	0.96	20	0.25	0.32	13.11	0.38	11
WWW CROWN	1166	DUR	12.4	1.03	21	0.24	0.5	-	-	-
UC 14215 14	1798	DUR	12.39	1.15	22	0.23	0.71	-	-	-
LCS ALIRON	1721	DUR	12.36	1.03	23	0.2	0.5	-	-	-
WWW PLATINUM	1210	DUR	12.35	1.03	24	0.19	0.5	-	-	-
SY VOLANTE	1431	DUR	12.26	0.96	25	0.09	0.32	13.02	0.38	13
WB MOHAVE	1654	DUR	12.21	0.96	26	0.04	0.32	13.04	0.38	12
APB 540505	1822	DUR	12.1	0.99	27	-0.07	0.42	12.67	0.38	18
UC 15210 11	1824	DUR	12.04	0.99	28	-0.12	0.42	12.61	0.38	19
APB 571353	1812	DUR	11.96	0.99	29	-0.21	0.42	12.53	0.38	21
WWW D2517	1733	DUR	11.88	1.15	30	-0.29	0.71	-	-	-
UC 13210 5	1770	DUR	11.87	1.03	31	-0.29	0.5	-	-	-
WWW TOPPER	1211	DUR	11.86	1.03	32	-0.3	0.5	-	-	-
LCS KIKO	1697	DUR	11.86	0.96	33	-0.31	0.32	12.57	0.38	20

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
UC 13210 21	1771	DUR	11.75	1.03	34	-0.41	0.5	-	-	-
UC 15210 12	1825	DUR	11.75	0.99	35	-0.41	0.42	12.32	0.38	22
UC 14215 42	1799	DUR	11.63	1.15	36	-0.53	0.71	-	-	-
<b>UC DESERT KING</b>	1375	DUR	11.59	0.96	37	-0.57	0.32	11.74	0.38	27
APB 11907	1783	DUR	11.51	1.15	38	-0.66	0.71	-	-	-
UC 15210 24	1826	DUR	11.45	0.99	39	-0.71	0.42	12.02	0.38	23
LCS 13SD0056	1833	DUR	11.45	1.04	40	-0.71	0.51	11.91	0.44	24
APB 11908	1784	DUR	11.43	1.15	41	-0.74	0.71	-	-	-
WWW D3085	1801	DUR	11.37	1.15	42	-0.79	0.71	-	-	-
<b>WWW DURAKING</b>	878	DUR	11.32	1.03	43	-0.84	0.5	-	-	-
AS SARAGOLLA	1583	DUR	11.27	0.96	44	-0.89	0.32	11.8	0.38	26
APB 11710	1785	DUR	11.21	1.15	45	-0.96	0.71	-	-	-
AS MAESTRALE	1582	DUR	11.19	0.96	46	-0.98	0.32	11.88	0.38	25
LCS 12E4006	1832	DUR	11.12	0.99	47	-1.04	0.42	11.69	0.38	28
WWW Q MAX	1473	DUR	10.93	1.03	48	-1.23	0.5	-	-	-
AS COLOMBO	1800	DUR	10.92	1.15	49	-1.24	0.71	-	-	-
UC 1756	1756	DUR	10.88	1.15	50	-1.29	0.71	-	-	-
LCS ATHORIS	1698	DUR	10.8	1.15	51	-1.37	0.71	-	-	-
APB 11705	1782	DUR	10.16	1.15	52	-2.01	0.71	-	-	-

Table 25: Northern San Joaquin Valley region, durum wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
APB 540165	1827	DUR	7492	509	1	769	256	8367	351	3	-	-	-	-	-	-
LCS KIKO	1697	DUR	7420	462	2	697	147	8383	351	2	7045	555	2	6833	379	2
LCS 13SD0056	1833	DUR	7389	509	3	665	256	8264	351	4	-	-	-	-	-	-
UC 13210 5	1770	DUR	7349	477	4	625	185	-	-	-	7255	555	1	6502	391	10
UC 15210 24	1826	DUR	7347	509	5	624	256	8223	351	5	-	-	-	-	-	-
UC 15210 12	1825	DUR	7335	509	6	611	256	8210	351	6	-	-	-	-	-	-
APB 11705	1782	DUR	7296	509	7	572	254	-	-	-	-	-	-	6859	379	1
LCS 12E4006	1832	DUR	7276	509	8	553	256	8152	351	7	-	-	-	-	-	-
UC 15210 11	1824	DUR	7253	509	9	529	256	8128	351	8	-	-	-	-	-	-
UC 1796	1796	DUR	7243	474	10	520	180	8023	351	9	6900	555	6	-	-	-
UC 13210 21	1771	DUR	7209	475	11	485	180	-	-	-	6958	555	4	6584	379	9
APB TIBURON	1640	DUR	7206	462	12	483	147	7935	351	12	6961	555	3	6723	379	6
UC DESERT KING	1375	DUR	7197	462	13	474	147	8563	351	1	6536	555	11	6493	379	11
LCS ATHORIS	1698	DUR	7194	509	14	470	254	-	-	-	-	-	-	6758	379	4
UC TIPAI	1585	DUR	7190	509	15	466	254	-	-	-	-	-	-	6754	379	5
APB 571189	1811	DUR	7169	508	16	446	254	-	-	-	6730	555	8	-	-	-
UC 1756	1756	DUR	7095	509	17	372	254	-	-	-	-	-	-	6659	379	7
APB 540505	1822	DUR	7032	509	18	308	256	7907	351	13	-	-	-	-	-	-
WWW CROWN	1166	DUR	6975	475	19	252	180	-	-	-	6651	555	9	6424	379	15
APB 571353	1812	DUR	6963	474	20	239	180	7843	351	16	6518	555	12	-	-	-
SY FORTISSIMO	1429	DUR	6915	462	21	191	147	7892	351	14	6926	555	5	5928	379	28
APB 571217	1810	DUR	6902	474	22	178	180	7792	351	17	6448	555	14	-	-	-
WWW DURAKING	878	DUR	6891	475	23	167	180	-	-	-	6430	555	15	6476	379	12
APB 11710	1785	DUR	6886	509	24	162	254	-	-	-	-	-	-	6450	379	13
LCS ALIRON	1721	DUR	6873	475	25	150	180	-	-	-	6273	555	17	6599	379	8
WWW TOPPER	1211	DUR	6841	475	26	117	180	-	-	-	5991	555	27	6815	379	3
SY VOLANTE	1431	DUR	6789	462	27	66	147	7568	351	19	6745	555	7	6054	379	22
UC MIWOK	1690	DUR	6760	462	28	37	147	7958	351	10	6015	555	26	6309	379	18
UC DESERT KING HP	1627	DUR	6740	462	29	16	147	7940	351	11	6381	555	16	5900	379	30
APB WESTMORE HP	1484	DUR	6691	462	30	-33	147	7848	351	15	5791	555	30	6434	379	14
APB 335	1813	DUR	6627	474	31	-96	180	7495	351	21	6196	555	19	-	-	-
AS SARAGOLLA	1583	DUR	6599	462	32	-124	147	7321	351	22	6608	555	10	5869	379	32

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr St.Err.Yield (lb/acre)			3-yr Yield Rank			Diff. from overall mean			St.Err.Diff. from overall mean			2016 Yield (lb/acre)			2016 St.Err.Yield (lb/acre)			2016 Yield Rank			2015 Yield (lb/acre)			2015 St.Err.Yield (lb/acre)			2015 Yield Rank			2014 Yield (lb/acre)			2014 St.Err.Yield (lb/acre)			2014 Yield Rank		
WWW D2517BELL025	1776	DUR	6596	475	33	-127	180	-	-	-	-	6184	555	20	6134	379	21																											
APB HELIOS	1440	DUR	6589	474	34	-134	180	7518	351	20	6096	555	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
WWW PLATINUM	1210	DUR	6571	475	35	-152	180	-	-	-	5933	555	28	6334	379	16																												
WB MEAD	1607	DUR	6562	462	36	-161	147	7685	351	18	5672	555	33	6330	379	17																												
WWW D3085	1801	DUR	6558	508	37	-166	254	-	-	-	6119	555	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
UC 14215 11	1797	DUR	6520	508	38	-204	254	-	-	-	6081	555	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
WWW Q MAX	1473	DUR	6507	475	39	-216	180	-	-	-	6233	555	18	5907	379	29																												
WWW D2517	1733	DUR	6472	509	40	-251	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6036	379	23																				
APB 11907	1783	DUR	6464	509	41	-260	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6028	379	24																				
UC 1758	1758	DUR	6446	509	42	-277	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6010	379	25																				
APB KRONOS	951	DUR	6439	462	43	-285	147	7005	351	25	6054	555	24	6259	379	19																												
APB 11908	1784	DUR	6437	509	44	-287	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6001	379	26																				
AS MAESTRALE	1582	DUR	6378	466	45	-345	156	6664	377	28	6452	555	13	5815	379	33																												
UC 14215 14	1798	DUR	6360	508	46	-363	254	-	-	-	5921	555	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
WB HAVASU	1479	DUR	6282	462	47	-441	147	6913	351	26	6050	555	25	5884	379	31																												
WB ORITA	1215	DUR	6261	462	48	-463	147	7045	351	24	5558	555	34	6178	379	20																												
APB 410077	1823	DUR	6248	509	49	-475	256	7123	351	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
UC 14215 42	1799	DUR	6163	508	50	-560	254	-	-	-	5724	555	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
WB MOHAVE	1654	DUR	6128	462	51	-596	147	6697	351	27	5688	555	32	5998	379	27																												
AS COLOMBO	1800	DUR	5612	508	52	-1112	254	-	-	-	5173	555	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
-	1786	DUR	2610	475	53	-4114	180	-	-	-	1355	555	36	2989	379	34																												

Table 26: Northern San Joaquin Valley region, durum wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
KAMUT	1786	DUR	13.9	0.67	1	2.46	0.32	-	-	-	14.45	0.92	1	12.27	0.86	1
UC DESERT KING HP	1627	DUR	12.57	0.63	2	1.13	0.2	13.47	0.91	1	12.39	0.92	3	12.22	0.86	2
UC 1758	1758	DUR	12.33	0.75	3	0.89	0.45	-	-	-	-	-	-	11.38	0.86	5
UC 13210 21	1771	DUR	12.14	0.67	4	0.7	0.32	-	-	-	11.52	0.92	14	11.67	0.86	3
APB WESTMORE HP	1484	DUR	12.1	0.63	5	0.66	0.2	13	0.91	4	12.46	0.92	2	11.24	0.86	6
UC 14215 11	1797	DUR	11.97	0.75	6	0.53	0.45	-	-	-	11.83	0.92	5	-	-	-
UC 15210 11	1824	DUR	11.92	0.65	7	0.48	0.27	13.01	0.91	3	-	-	-	-	-	-
WWW DURAKING	878	DUR	11.89	0.67	8	0.45	0.32	-	-	-	11.28	0.92	20	11.42	0.86	4
UC 1796	1796	DUR	11.88	0.64	9	0.44	0.23	12.98	0.91	5	11.7	0.92	7.5	-	-	-
WB HAVASU	1479	DUR	11.86	0.63	10	0.42	0.2	13.04	0.91	2	11.13	0.92	25	11.22	0.86	7
APB 335	1813	DUR	11.83	0.64	11	0.38	0.23	12.88	0.91	7	11.77	0.92	6	-	-	-
UC 14215 14	1798	DUR	11.81	0.75	12	0.37	0.45	-	-	-	11.68	0.92	10	-	-	-
WB ORITA	1215	DUR	11.81	0.63	13	0.37	0.2	12.87	0.91	8	11.7	0.92	7.5	10.91	0.86	11
APB 410077	1823	DUR	11.77	0.65	14	0.33	0.27	12.86	0.91	10	-	-	-	-	-	-
WB MEAD	1607	DUR	11.77	0.63	15	0.32	0.2	12.55	0.91	17	12.3	0.92	4	11.05	0.86	8
SY FORTISSIMO	1429	DUR	11.75	0.63	16	0.31	0.2	12.86	0.91	9	11.58	0.92	12	10.76	0.86	13
WWW D2517BELL025	1776	DUR	11.74	0.67	17	0.3	0.32	-	-	-	11.46	0.92	16	10.93	0.86	10
WB MOHAVE	1654	DUR	11.71	0.63	18	0.27	0.2	12.82	0.91	11	11.69	0.92	9	10.58	0.86	16
UC 15210 12	1825	DUR	11.71	0.65	19	0.27	0.27	12.79	0.91	13	-	-	-	-	-	-
APB TIBURON	1640	DUR	11.68	0.63	20	0.23	0.2	12.93	0.91	6	11.24	0.92	22	10.51	0.86	18
APB HELIOS	1440	DUR	11.67	0.64	21	0.23	0.23	12.79	0.91	12	11.42	0.92	17	-	-	-
APB KRONOS	951	DUR	11.64	0.63	22	0.2	0.2	12.78	0.91	14	11.08	0.92	27	10.95	0.86	9
APB 11710	1785	DUR	11.64	0.75	23	0.2	0.45	-	-	-	-	-	-	10.69	0.86	14
APB 11908	1784	DUR	11.6	0.75	24	0.16	0.45	-	-	-	-	-	-	10.65	0.86	15
APB 571217	1810	DUR	11.59	0.64	25	0.15	0.23	12.76	0.91	15	11.21	0.92	23	-	-	-
UC MIWOK	1690	DUR	11.47	0.63	26	0.03	0.2	12.65	0.91	16	11.58	0.92	13	9.98	0.86	25
WWW Q MAX	1473	DUR	11.46	0.67	27	0.02	0.32	-	-	-	11.67	0.92	11	10.18	0.86	22
WWW D3085	1801	DUR	11.41	0.75	28	-0.03	0.45	-	-	-	11.27	0.92	21	-	-	-
LCS ALIRON	1721	DUR	11.37	0.67	29	-0.07	0.32	-	-	-	11.13	0.92	26	10.53	0.86	17
LCS KIKO	1697	DUR	11.32	0.63	30	-0.12	0.2	12.52	0.91	18	10.41	0.92	36	10.79	0.86	12
APB 571353	1812	DUR	11.31	0.64	31	-0.13	0.23	12.34	0.91	19	11.34	0.92	19	-	-	-
UC TIPAI	1585	DUR	11.27	0.75	32	-0.17	0.45	-	-	-	-	-	-	10.32	0.86	20

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Diff. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank	
UC DESERT KING	1375	DUR	11.22	0.63	33	-0.22	0.2	12.22	0.91	22	11.19	0.92	24	10.44	0.86	19
WWW TOPPER	1211	DUR	11.22	0.67	34	-0.22	0.32	-	-	-	11.52	0.92	15	9.84	0.86	28
APB 540165	1827	DUR	11.19	0.65	35	-0.25	0.27	12.28	0.91	20	-	-	-	-	-	-
UC 15210 24	1826	DUR	11.19	0.65	36	-0.26	0.27	12.27	0.91	21	-	-	-	-	-	-
UC 14215 42	1799	DUR	11.16	0.75	37	-0.28	0.45	-	-	-	11.03	0.92	29	-	-	-
WWW CROWN	1166	DUR	11.14	0.67	38	-0.3	0.32	-	-	-	11.01	0.92	30	10.19	0.86	21
WWW PLATINUM	1210	DUR	11.14	0.67	39	-0.3	0.32	-	-	-	11.36	0.92	18	9.83	0.86	29
UC 1756	1756	DUR	11.11	0.75	40	-0.33	0.45	-	-	-	-	-	-	10.17	0.86	23
APB 540505	1822	DUR	11.09	0.65	41	-0.35	0.27	12.17	0.91	24	-	-	-	-	-	-
LCS ATHONIS	1698	DUR	11.02	0.75	42	-0.42	0.45	-	-	-	-	-	-	10.08	0.86	24
SY VOLANTE	1431	DUR	10.99	0.63	43	-0.45	0.2	12.05	0.91	26	11.05	0.92	28	9.9	0.86	27
AS SARAGOLLA	1583	DUR	10.95	0.63	44	-0.49	0.2	12.15	0.91	25	10.56	0.92	33	9.91	0.86	26
AS MAESTRALE	1582	DUR	10.93	0.63	45	-0.51	0.23	12.19	0.92	23	10.84	0.92	31	9.6	0.86	32
AS COLOMBO	1800	DUR	10.81	0.75	46	-0.63	0.45	-	-	-	10.68	0.92	32	-	-	-
LCS 13SD0056	1833	DUR	10.7	0.65	47	-0.74	0.27	11.79	0.91	27	-	-	-	-	-	-
UC 13210 5	1770	DUR	10.66	0.67	48	-0.78	0.32	-	-	-	10.55	0.92	34	9.68	0.86	30
APB 571189	1811	DUR	10.62	0.75	49	-0.82	0.45	-	-	-	10.48	0.92	35	-	-	-
LCS 12E4006	1832	DUR	10.59	0.65	50	-0.85	0.27	11.67	0.91	28	-	-	-	-	-	-
APB 11907	1783	DUR	10.55	0.75	51	-0.89	0.45	-	-	-	-	-	-	9.6	0.86	31
WWW D2517	1733	DUR	10.22	0.75	52	-1.22	0.45	-	-	-	-	-	-	9.27	0.86	33
APB 11705	1782	DUR	9.97	0.75	53	-1.47	0.45	-	-	-	-	-	-	9.02	0.86	34

Table 27: Southern San Joaquin Valley region, durum wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)			3-yr St.Err.YIELD (lb/acre)			3-yr YIELD Rank			Diff. from overall mean			St.Err.Dif. from overall mean			2016 YIELD (lb/acre)			2016 St.Err.YIELD (lb/acre)			2016 YIELD Rank			2015 YIELD (lb/acre)			2015 St.Err.YIELD (lb/acre)			2015 YIELD Rank			2014 YIELD (lb/acre)			2014 St.Err.YIELD (lb/acre)			2014 YIELD Rank		
UC 1756	1756	DUR	7361	711	1	1394	425	-	-	-	-	-	-	-	-	-	-	8445	369	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
APB 540505	1822	DUR	7195	679	2	1227	371	6386	395	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
APB 11705	1782	DUR	7082	711	3	1115	425	-	-	-	-	-	-	-	-	-	-	8165	369	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
UC 14215 11	1797	DUR	6976	710	4	1009	425	-	-	-	-	-	6701	364	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
LCS KIKO	1697	DUR	6966	611	5	999	233	5803	395	7	6747	364	1	8466	369	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
LCS ATHORIS	1698	DUR	6913	711	6	946	425	-	-	-	-	-	-	-	-	-	-	7996	369	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UC 1796	1796	DUR	6910	631	7	942	280	6551	395	1	6035	364	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
UC 13210 21	1771	DUR	6901	641	8	934	300	-	-	-	-	6165	364	9	8444	369	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
APB 571217	1810	DUR	6732	631	9	764	280	6137	395	4	6172	364	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
APB 410077	1823	DUR	6695	679	10	728	371	5887	395	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
WWW D2517	1733	DUR	6684	711	11	716	425	-	-	-	-	-	-	-	-	-	-	7767	369	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UC TIPAI	1585	DUR	6682	711	12	715	425	-	-	-	-	-	-	-	-	-	-	7765	369	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
APB 11908	1784	DUR	6633	711	13	666	425	-	-	-	-	-	-	-	-	-	-	7716	369	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UC 13210 5	1770	DUR	6625	641	14	658	300	-	-	-	-	6168	364	8	7891	369	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
APB HELIOS	1440	DUR	6580	631	15	613	280	5957	395	5	6059	364	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
APB 11710	1785	DUR	6538	711	16	570	425	-	-	-	-	-	-	-	-	-	-	7621	369	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
UC MIWOK	1690	DUR	6523	611	17	556	233	5604	395	11	6147	364	10	7856	369	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
APB 540165	1827	DUR	6520	679	18	552	371	5711	395	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-											
APB TIBURON	1640	DUR	6465	611	19	498	233	5710	395	9	5875	364	16	7793	369	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
WB MOHAVE	1654	DUR	6454	611	20	487	233	5685	395	10	6588	364	3	7076	369	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
UC DESERT KING	1375	DUR	6425	611	21	457	233	4960	395	16	6264	364	6	8268	369	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
WWW D2517BELL025	1776	DUR	6371	641	22	404	300	-	-	-	-	6068	364	11	7482	369	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
APB 571353	1812	DUR	6248	679	23	281	371	5440	395	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UC 15210 24	1826	DUR	6200	679	24	233	371	5392	395	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
WB HAVASU	1479	DUR	6132	611	25	165	233	5541	395	12	6318	364	4	6466	369	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
WWW DURAKING	878	DUR	6131	641	26	164	300	-	-	-	5970	364	15	7100	369	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
APB WESTMORE HP	1484	DUR	6093	611	27	126	233	4565	395	22	5782	364	17	8172	369	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
WWW PLATINUM	1210	DUR	6073	641	28	106	300	-	-	-	5043	364	28	7911	369	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
APB KRONOS	951	DUR	6034	611	29	66	233	6371	395	3	4928	364	30	6420	369	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
AS MAESTRALE	1582	DUR	6022	611	30	54	233	4799	395	20	6303	364	5	7101	369	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
WWW CROWN	1166	DUR	5917	641	31	-50	300	-	-	-	5458	364	22	7184	369	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
UC 14215 14	1798	DUR	5866	710	32	-101	425	-	-	-	5591	364	19	-	-	-	-	-	7184	369	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
LCS ALIRON	1721	DUR	5838	641	33	-129	300	-	-	-	5301	364	24	7184	369	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)	3-yr St.Err.YIELD (lb/acre)	3-yr Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 YIELD (lb/acre)	2016 St.Err.YIELD (lb/acre)	2016 Rank	2015 YIELD (lb/acre)	2015 St.Err.YIELD (lb/acre)	2015 Rank	2014 YIELD (lb/acre)	2014 St.Err.YIELD (lb/acre)	2014 Rank
SY VOLANTE	1431	DUR	5815	611	34	-152	233	4919	395	17	6029	364	14	6528	369	25
UC 14215 42	1799	DUR	5763	710	35	-204	425	-	-	-	5488	364	21	-	-	-
UC 15210 12	1825	DUR	5677	679	36	-290	371	4869	395	18	-	-	-	-	-	-
APB 11907	1783	DUR	5670	711	37	-298	425	-	-	-	-	-	-	6753	369	23
APB 335	1813	DUR	5647	631	38	-320	280	4751	395	21	5490	364	20	-	-	-
WB ORITA	1215	DUR	5640	611	39	-327	233	5077	395	15	5114	364	25	6647	369	24
UC 15210 11	1824	DUR	5620	679	40	-347	371	4812	395	19	-	-	-	-	-	-
UC DESERT KING HP	1627	DUR	5577	611	41	-390	233	4334	395	25	5043	364	29	7497	369	16
WWW D3085	1801	DUR	5385	710	42	-582	425	-	-	-	5110	364	26	-	-	-
WWW TOPPER	1211	DUR	5340	641	43	-627	300	-	-	-	5077	364	27	6411	369	29
UC 1758	1758	DUR	5333	711	44	-635	425	-	-	-	-	-	-	6416	369	28
SY FORTISSIMO	1429	DUR	5243	611	45	-724	233	4473	395	23	5427	364	23	5818	369	30
AS SARAGOLLA	1583	DUR	4900	611	46	-1067	233	4437	395	24	5752	364	18	4397	369	33
WWW Q MAX	1473	DUR	4891	641	47	-1077	300	-	-	-	4920	364	31	5669	369	31
LCS 12E4006	1832	DUR	4757	679	48	-1210	371	3949	395	26	-	-	-	-	-	-
LCS 13SD0056	1833	DUR	4701	679	49	-1266	371	3893	395	27	-	-	-	-	-	-
AS COLOMBO	1800	DUR	4676	710	50	-1292	425	-	-	-	4401	364	33	-	-	-
WB MEAD	1607	DUR	4662	611	51	-1305	233	3677	395	28	4909	364	32	5459	369	32
KAMUT	1786	DUR	213	711	52	-5754	425	-	-	-	-	-	-	1297	369	34

Table 28: Southern San Joaquin Valley region, durum wheat protein 3-year (2014 to 2016) and single year (2016) means.

Name	UC Number	Column1	3-yr PROTEIN (lb/acre)		3-yr St.Err.PROTEIN (lb/acre)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 PROTEIN (lb/acre)	2016 St.Err.PROTEIN (lb/acre)	2016 PROTEIN Rank
SX908	1777	SWS	15.11	1.15	1	1.48	0.68	-	-	-	-
APB 430429	1808	HRS	14.92	1.15	2	1.28	0.68	-	-	-	-
UC-PATWIN 515HP	1743	HWS	14.91	0.96	3	1.27	0.29	16.18	0.68	1	
WWW-MIKA	1340	HRS	14.81	1.03	4	1.18	0.48	-	-	-	-
UC 1744	1744	HWS	14.58	1.15	5	0.95	0.68	-	-	-	-
UC-PATWIN	1419	HWS	14.57	1.03	6	0.94	0.48	-	-	-	-
UC-PATWIN 515	1680	HWS	14.5	0.95	7	0.86	0.25	15.95	0.68	3	
SY-DAYN	1795	HWS	14.48	1.15	8	0.84	0.68	-	-	-	-
LCS-STAR	1688	HWS	14.45	0.95	9	0.82	0.25	16.03	0.68	2	
UC 14010/22	1791	HWS	14.37	1.15	10	0.73	0.68	-	-	-	-
LCS 12SB0197	1830	HRS	14.36	0.96	11	0.73	0.29	15.63	0.68	6	
UC 15014-35	1818	HRS	14.33	0.96	12	0.69	0.29	15.59	0.68	7	
SY-ULTRA	1590	HRS	14.31	0.95	13	0.67	0.25	15.54	0.68	8	
SY-BLANCA ROYALE	1522	HWS	14.3	0.95	14	0.66	0.25	15.65	0.68	5	
LCS 08SB0738	1726	HWS	14.29	1.15	15	0.66	0.68	-	-	-	-
WB-ROCKLAND	1650	HRS	14.18	0.95	16	0.55	0.26	15.43	0.68	9	
BAG NEW DIRKWIN HP	1779	SWS	14.18	1.03	17	0.55	0.48	-	-	-	-
WB DA907-005	1803	HRS	14.16	1.15	18	0.52	0.68	-	-	-	-
UC-CLEAR WHITE	1361	HWS	14.13	1.15	19	0.49	0.68	-	-	-	-
ASSL-TAM 204	1778	SRS	14.11	0.95	20	0.47	0.25	15.76	0.68	4	
WB-7618	1749	HWS	14.04	0.95	21	0.41	0.25	15.3	0.68	10	
UC 13010-34	1769	HWS	13.98	1.15	22	0.35	0.68	-	-	-	-
LCS 10SB0087-B	1804	HRS	13.94	1.15	23	0.3	0.68	-	-	-	-
SY-REDWING	1521	HRS	13.9	0.95	24	0.26	0.25	15.11	0.68	13	
UC 15010-5	1814	HRS	13.9	0.96	25	0.26	0.29	15.16	0.68	11	
WB-JOAQUIN ORO	1728	HRS	13.89	0.95	26	0.26	0.25	14.93	0.68	18	
UC 14010/17	1789	HRS	13.82	1.15	27	0.18	0.68	-	-	-	-
WB-7566	1802	HWS	13.8	0.95	28	0.17	0.26	15.09	0.68	14	
BAG-NEW DIRKWIN	1667	SWS	13.76	0.95	29	0.13	0.25	15.06	0.68	15	
LCS 12SB0224	1831	HWS	13.75	0.96	30	0.12	0.29	15.02	0.68	16	
SY-VACA	1766	SRS	13.72	0.95	31	0.09	0.25	15.12	0.68	12	
WB-JOAQUIN	1424	HRS	13.7	1.03	32	0.07	0.48	-	-	-	-
WB-9229	1730	HRS	13.69	0.95	33	0.05	0.25	14.83	0.68	19	

Name	UC Number	Column1	3-yr PROTEIN (lb/acre)	3-yr St.Err.PROTEIN (lb/acre)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Diff. from overall mean	2016 PROTEIN (lb/acre)	2016 St.Err.PROTEIN (lb/acre)	2016 PROTEIN Rank
APB 770229	1746	HWS	13.65	1.15	34	0.02	0.68	-	-	-
WB-PATRON	1731	HRS	13.63	0.95	35	0	0.25	14.77	0.68	20
SY-CAL ROJO	1478	HRS	13.61	0.95	36	-0.03	0.25	14.76	0.68	21
LCS-ATOMO	1723	HWS	13.58	0.95	37	-0.06	0.25	15	0.68	17
SY 034	1794	HRS	13.56	1.15	38	-0.08	0.68	-	-	-
WB-PERLA	1729	HWS	13.53	1.03	39	-0.1	0.48	-	-	-
UC 14010/20	1790	HRS	13.53	1.15	40	-0.11	0.68	-	-	-
LCS 11SB0097	1773	HRS	13.52	1.03	41	-0.11	0.48	-	-	-
APB 717	1809	HWS	13.51	1.15	42	-0.13	0.68	-	-	-
WB-PR 1404	1526	HRS	13.5	1.03	43	-0.13	0.48	-	-	-
WWW BR0202W	1498	HWS	13.46	1.15	44	-0.17	0.68	-	-	-
WWW AUBR6122W	1775	HWS	13.45	1.15	45	-0.18	0.68	-	-	-
APB 8238	1821		13.43	0.96	46	-0.2	0.29	14.7	0.68	22
APB 500553	1806		13.43	1.15	47	-0.21	0.68	-	-	-
APB 430701	1747		13.41	1.15	48	-0.22	0.68	-	-	-
APB 8155	1829		13.4	0.96	49	-0.23	0.29	14.67	0.68	23
WWW COI565W	1774		13.4	1.15	50	-0.23	0.68	-	-	-
UC 15010-27	1815		13.4	0.96	51	-0.24	0.29	14.66	0.68	24
SY-314	1660		13.35	0.95	52	-0.28	0.25	14.57	0.68	26
UC 15014-4	1817		13.35	0.96	53	-0.28	0.29	14.62	0.68	25
APB 501129	1820		13.3	0.96	54	-0.34	0.29	14.56	0.68	27
UC-YUROK	1745		13.26	0.95	55	-0.38	0.25	14.46	0.68	28
WB-9112	1748		13.24	0.95	56	-0.39	0.25	14.39	0.68	33
APB 11512	1781		13.24	1.15	57	-0.39	0.68	-	-	-
APB 500709	1819		13.19	0.96	58	-0.44	0.29	14.46	0.68	29
UC 13010-31	1768		13.16	1.15	59	-0.47	0.68	-	-	-
APB 501089	1828		13.16	0.96	60	-0.47	0.29	14.43	0.68	31
UC 15013-15	1816		13.15	0.96	61	-0.48	0.29	14.42	0.68	32
SY-BLANCA GRANDE 515	1657		13.13	0.95	62	-0.51	0.25	14.46	0.68	30
WB-9904	1751		13.11	0.95	63	-0.53	0.25	14.34	0.68	34
UC 14014/42	1793		13.06	1.15	64	-0.58	0.68	-	-	-
SY-SUMMIT 515	1658		13.05	0.95	65	-0.58	0.25	14.27	0.68	35
UC 13010-23	1767		13.03	1.03	66	-0.6	0.48	-	-	-
WB-7390	1750		12.95	0.95	67	-0.69	0.25	14.24	0.68	36

Name	UC Number	Column1	3-yr PROTEIN (lb/acre)	3-yr St.Err.PROTEIN (lb/acre)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Diff. from overall mean	2016 PROTEIN (lb/acre)	2016 St.Err.PROTEIN (lb/acre)	2016 PROTEIN Rank
UC-LASSIK	1495	12.95	0.95	68	-0.69	0.25	14.08	0.68	38	
LCS 11SB0096	1772	12.86	1.03	69	-0.77	0.48	-	-	-	
WB-TRIPLE IV	1550	12.8	0.95	70	-0.84	0.25	13.97	0.68	40	
UC-ANZA	20	12.76	0.95	71	-0.87	0.26	14.12	0.68	37	
APB 501189	1807	12.76	0.95	72	-0.87	0.26	13.97	0.68	39	
UC 14010/29	1792	12.67	1.15	73	-0.97	0.68	-	-	-	
APB 12104	1780	12.5	1.15	74	-1.13	0.68	-	-	-	
LCS UI-PLATINUM	1805	12.22	1.15	75	-1.42	0.68	-	-	-	
WWW-FV 2808	1608	12.01	0.95	76	-1.63	0.25	13.16	0.68	41	

Table 29: Imperial Valley region, durum wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 Yield Rank	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
UC 13210 21	1771	DUR	7671	283	1	991	195	-	-	-	7576	292	1	7423	250	1
UC TIPAI	1585	DUR	7560	346	2	879	276	-	-	-	-	-	-	7209	250	3
LCS 12E4006	1832	DUR	7455	346	3	775	278	7799	286	2	-	-	-	-	-	-
WWW D3085	1801	DUR	7431	345	4	750	275	-	-	-	7438	292	2	-	-	-
UC 13210 5	1770	DUR	7401	283	5	720	195	-	-	-	7176	292	4	7281	250	2
UC 1796	1796	DUR	7190	283	6	509	196	7890	286	1	6841	292	15	-	-	-
WWW DURAKING	878	DUR	7130	283	7	449	195	-	-	-	7195	292	3	6720	250	7
UC MIWOK	1690	DUR	7122	258	8	442	159	7773	286	3	6988	292	12	6607	250	13
APB 571189	1811	DUR	7109	345	9	428	275	-	-	-	7116	292	7	-	-	-
UC 14215 14	1798	DUR	7022	345	10	341	275	-	-	-	7029	292	11	-	-	-
WWW D2517	1733	DUR	6995	346	11	314	276	-	-	-	-	-	-	6644	250	10
WB YU807 115	1655	DUR	6985	346	12	304	276	-	-	-	-	-	-	6634	250	12
APB 571217	1810	DUR	6952	283	13	271	196	7553	286	5	6703	292	18	-	-	-
WWW CROWN	1166	DUR	6946	283	14	265	195	-	-	-	7166	292	5	6382	250	17
WWW TOPPER	1211	DUR	6893	283	15	212	195	-	-	-	6665	292	20	6777	250	6
APB TIBURON	1640	DUR	6890	258	16	209	159	7239	286	7	6626	292	21	6804	250	5
UC 14215 42	1799	DUR	6885	345	17	204	275	-	-	-	6892	292	13	-	-	-
APB 11705	1782	DUR	6867	346	18	186	276	-	-	-	-	-	-	6516	250	14
WB ORITA	1215	DUR	6860	258	19	179	159	7705	286	4	7106	292	9	5769	250	31
LCS 13SD0056	1833	DUR	6831	346	20	150	278	7175	286	11	-	-	-	-	-	-
UC 15210 24	1826	DUR	6829	346	21	148	278	7173	286	12	-	-	-	-	-	-
SY VOLANTE	1431	DUR	6821	258	22	140	159	6716	286	22	7107	292	8	6639	250	11
LCS ALIRON	1721	DUR	6805	283	23	124	195	-	-	-	6431	292	29	6835	250	4
APB 11907	1783	DUR	6797	346	24	117	276	-	-	-	-	-	-	6446	250	15
APB 11710	1785	DUR	6795	346	25	114	276	-	-	-	-	-	-	6444	250	16
APB 571353	1812	DUR	6792	283	26	111	196	6885	286	18	7051	292	10	-	-	-
APB 335	1813	DUR	6778	283	27	97	196	7221	286	9	6685	292	19	-	-	-
SY FORTISSIMO	1429	DUR	6776	258	28	95	159	6760	286	21	6873	292	14	6694	250	8
UC DESERT KING	1375	DUR	6768	258	29	87	159	7376	286	6	6615	292	22	6314	250	19
UC 14215 11	1797	DUR	6740	345	30	59	275	-	-	-	6747	292	17	-	-	-
UC 1756	1756	DUR	6679	346	31	-2	276	-	-	-	-	-	-	6328	250	18
LCS KIKO	1697	DUR	6678	258	32	-3	159	7205	286	10	6530	292	25	6297	250	20

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
APB 540505	1822	DUR	6676	346	33	-5	278	7019	286	13	-	-	-	-	-	-
APB 540165	1827	DUR	6668	346	34	-13	278	7012	286	14	-	-	-	-	-	-
WB MEAD	1607	DUR	6649	258	35	-31	159	6921	286	17	7146	292	6	5882	250	30
WB MOHAVE	1654	DUR	6628	258	36	-53	159	7239	286	8	6388	292	30	6257	250	22
APB KRONOS	951	DUR	6585	258	37	-96	159	6925	286	16	6539	292	24	6291	250	21
WWW Q MAX	1473	DUR	6573	283	38	-107	195	-	-	-	6610	292	23	6193	250	24
UC 15210 11	1824	DUR	6536	346	39	-145	278	6880	286	19	-	-	-	-	-	-
AS COLOMBO	1800	DUR	6504	345	40	-177	275	-	-	-	6511	292	26	-	-	-
WWW PLATINUM	1210	DUR	6499	283	41	-181	195	-	-	-	5974	292	35	6681	250	9
LCS ATHORIS	1698	DUR	6490	346	42	-191	276	-	-	-	-	-	-	6139	250	25
UC 15210 12	1825	DUR	6484	346	43	-197	278	6828	286	20	-	-	-	-	-	-
APB 11908	1784	DUR	6468	346	44	-213	276	-	-	-	-	-	-	6117	250	27
AS SARAGOLLA	1583	DUR	6386	258	45	-295	159	6214	286	27	6824	292	16	6119	250	26
UC 1758	1758	DUR	6370	346	46	-311	276	-	-	-	-	-	-	6019	250	28
APB HELIOS	1440	DUR	6300	283	47	-381	196	6938	286	15	6013	292	34	-	-	-
APB 410077	1823	DUR	6271	346	48	-410	278	6615	286	23	-	-	-	-	-	-
WWW D2517BELL025	1776	DUR	6257	283	49	-424	195	-	-	-	6479	292	27	5690	250	32
APB WESTMORE HP	1484	DUR	6230	258	50	-451	159	6334	286	26	6156	292	31	6200	250	23
UC DESERT KING HP	1627	DUR	6164	258	51	-517	159	6411	286	24	6117	292	33	5964	250	29
WB HAVASU	1479	DUR	6030	258	52	-651	159	6390	286	25	6151	292	32	5548	250	33
AS MAESTRALE	1582	DUR	5609	275	53	-1072	183	4708	521	28	6442	292	28	4781	250	34
KAMUT	1786	DUR	2938	283	54	-3743	195	-	-	-	3360	292	36	2172	250	35

Table 30: Imperial Valley region, durum wheat protein 3-year (2014 to 2016) and single year (2016) means.

Name	UC Number	Crop Type	3-yr PROTEIN (%)	3-yr St.Err.PROTEIN (%)	3-yr PROTEIN Rank	Diff. from overall mean	St.Err.Diff. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
KAMUT	1786	DUR	16.21	1.1	1	2.64	0.23	-	-	-
UC DESERT KING HP	1627	DUR	15.05	1.09	2	1.48	0.15	12.67	0.09	1
UC 1758	1758	DUR	14.74	1.13	3	1.17	0.32	-	-	-
APB WESTMORE HP	1484	DUR	14.62	1.09	4	1.05	0.15	12.41	0.09	2
WB MEAD	1607	DUR	14.42	1.09	5	0.84	0.15	12.38	0.09	3
WB MOHAVE	1654	DUR	14.37	1.09	6	0.8	0.15	12.21	0.09	5
WB HAVASU	1479	DUR	14.32	1.09	7	0.75	0.15	12.02	0.09	7
WB ORITA	1215	DUR	14.24	1.09	8	0.67	0.15	11.8	0.09	15.5
WWW D2517BELL025	1776	DUR	14.23	1.1	9	0.66	0.23	-	-	-
UC 15210 12	1825	DUR	14.18	1.1	10	0.61	0.19	12.07	0.09	6
WWW CROWN	1166	DUR	14.09	1.1	11	0.52	0.23	-	-	-
APB KRONOS	951	DUR	14.08	1.09	12	0.51	0.15	11.92	0.09	9
APB HELIOS	1440	DUR	14.06	1.09	13	0.49	0.17	11.92	0.09	10.5
UC DESERT KING	1375	DUR	14.05	1.09	14	0.48	0.15	11.8	0.09	14
APB 410077	1823	DUR	14.04	1.1	15	0.46	0.19	11.92	0.09	10.5
UC 15210 11	1824	DUR	14.01	1.1	16	0.44	0.19	11.9	0.09	12
APB 335	1813	DUR	13.94	1.09	17	0.37	0.17	11.95	0.09	8
UC 1756	1756	DUR	13.92	1.13	18	0.35	0.32	-	-	-
APB 540505	1822	DUR	13.91	1.1	19	0.34	0.19	11.8	0.09	15.5
UC 1796	1796	DUR	13.91	1.09	20	0.34	0.17	11.83	0.09	13
APB TIBURON	1640	DUR	13.88	1.09	21	0.31	0.15	11.71	0.09	17
WWW Q MAX	1473	DUR	13.85	1.1	22	0.28	0.23	-	-	-
UC MIWOK	1690	DUR	13.84	1.09	23	0.27	0.15	11.58	0.09	22
UC 14215 11	1797	DUR	13.84	1.13	24	0.26	0.32	-	-	-
APB 571217	1810	DUR	13.79	1.09	25	0.22	0.17	11.61	0.09	19
SY FORTISSIMO	1429	DUR	13.75	1.09	26	0.18	0.15	11.61	0.09	19
APB 540165	1827	DUR	13.72	1.1	27	0.15	0.19	11.61	0.09	19
UC 15210 24	1826	DUR	13.7	1.1	28	0.12	0.19	11.58	0.09	21
APB 11710	1785	DUR	13.69	1.13	29	0.12	0.32	-	-	-
UC 14215 42	1799	DUR	13.6	1.13	30	0.02	0.32	-	-	-
WB YU807 115	1655	DUR	13.51	1.13	31	-0.06	0.32	-	-	-
AS MAESTRALE	1582	DUR	13.47	1.1	32	-0.1	0.19	12.34	0.15	4

Name	UC Number	Crop Type	3-yr PROTEIN (%)		3-yr St.Err.PROTEIN (%)		3-yr PROTEIN Rank		Diff. from overall mean		St.Err.Dif. from overall mean	2016 PROTEIN (%)	2016 St.Err.PROTEIN (%)	2016 PROTEIN Rank
APB 571353	1812	DUR	13.38	1.09	33	-0.19	0.17	11.39	0.09	23	-	-	-	-
AS COLOMBO	1800	DUR	13.31	1.13	34	-0.27	0.32	-	-	-	-	-	-	-
UC 14215 14	1798	DUR	13.28	1.13	35	-0.3	0.32	-	-	-	-	-	-	-
WWW PLATINUM	1210	DUR	13.22	1.1	36	-0.35	0.23	-	-	-	-	-	-	-
UC 13210 21	1771	DUR	13.19	1.1	37	-0.38	0.23	-	-	-	-	-	-	-
WWW DURAKING	878	DUR	13.1	1.1	38	-0.47	0.23	-	-	-	-	-	-	-
APB 11907	1783	DUR	13.06	1.13	39	-0.51	0.32	-	-	-	-	-	-	-
AS SARAGOLLA	1583	DUR	13.03	1.09	40	-0.54	0.15	-	11.29	0.09	24	-	-	-
UC 13210 5	1770	DUR	13.01	1.1	41	-0.56	0.23	-	-	-	-	-	-	-
LCS KIKO	1697	DUR	12.99	1.09	42	-0.59	0.15	11.05	0.09	25	-	-	-	-
UC TIPAI	1585	DUR	12.97	1.13	43	-0.6	0.32	-	-	-	-	-	-	-
LCS 12E4006	1832	DUR	12.9	1.1	44	-0.67	0.19	10.79	0.09	27	-	-	-	-
WWW TOPPER	1211	DUR	12.89	1.1	45	-0.68	0.23	-	-	-	-	-	-	-
SY VOLANTE	1431	DUR	12.88	1.09	46	-0.69	0.15	10.96	0.09	26	-	-	-	-
LCS 13SD0056	1833	DUR	12.8	1.1	47	-0.77	0.19	10.69	0.09	28	-	-	-	-
LCS ATHORIS	1698	DUR	12.57	1.13	48	-1	0.32	-	-	-	-	-	-	-
WWW D3085	1801	DUR	12.47	1.13	49	-1.11	0.32	-	-	-	-	-	-	-
LCS ALIRON	1721	DUR	12.41	1.1	50	-1.16	0.23	-	-	-	-	-	-	-
APB 571189	1811	DUR	12.41	1.13	51	-1.17	0.32	-	-	-	-	-	-	-
APB 11705	1782	DUR	12.12	1.13	52	-1.45	0.32	-	-	-	-	-	-	-
WWW D2517	1733	DUR	11.96	1.13	53	-1.61	0.32	-	-	-	-	-	-	-
APB 11908	1784	DUR	11.93	1.13	54	-1.64	0.32	-	-	-	-	-	-	-

Table 31: Agronomic traits of durum wheat 2014 to 2016.

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
APB 11705	1782	64	45	33.5	1	2.2	1	2	1	56	98
APB 11710	1785	62.9	43	34	1	3.8	1	6	2	56	98
APB 11907	1783	63	44.3	30.7	1	1	1	4.4	1	57.5	99.5
APB 11908	1784	63.1	46.5	35	1	1	1	1.4	1.3	56	99.5
APB 335	1813	61.6	53.7	28.5	1	1	1	1.2	1	54	102
APB 410077	1823	63	60.4	34	1	2	2	4	1	38.5	89
APB 540165	1827	61	59.6	31	1	1	1	2	1	38	90
APB 540505	1822	64	54.3	31.5	1	2	1.5	3.1	2.4	41.5	88
APB 571189	1811	64	50.7	33	1	1	2	5.8	1	67.5	112
APB 571217	1810	64	51	33	1	1	1	2.2	3.7	56	104
APB 571353	1812	63.6	47.4	30.5	1	2.1	1.5	4	1	55.5	99.5
APB HELIOS	1440	62.9	50.5	35	1	2	2	3	1	51	96
APB KRONOS	951	62	62.7	33	2.5	6	3	7	2	37.5	87.5
APB TIBURON	1640	62	60	33.5	1	1	1	3	1	55	102
APB WESTMORE HP	1484	62	43.2	34.5	1	6.1	2	7	3	52	95
AS COLOMBO	1800	62.4	50.5	36.5	1	1	1	2	1	84	122
AS MAESTRALE	1582	63.9	52.4	38.5	1	2.9	2	4.7	1	33	75
AS SARAGOLLA	1583	63	56.2	32.5	1	5	1	3.3	1	45.5	89
DESERT KING	1375	62	49.2	35.5	1	1	1	1	1.5	73	114
FORTISSIMO	1429	61.8	45.5	33	1	1	1	1	1	71	113
HAVASU	1479	63.5	52.4	36	1	1	2	3	2	64	111
KRONOS	951	62	55.6	35	1	6.8	2	7.3	1	62.5	109
LCS 12E4006	1832	64.8	53.1	32.5	1	6.8	1	6.1	1.7	52.5	93
LCS 13SD0056	1833	64	48.4	32	1	7	3	7	1	58	105
LCS ALIRON	1721	63	57.4	35	1	1	1	7	1	71	112
LCS ATHORIS	1698	62.9	51.9	36	1	1	1	3	2	59	100
LCS KIKO	1697	62.2	55.6	35.5	1	3	1	4.3	2	56	104
MAESTRALE	1582	63.7	48.3	38	1	1	2	6	3	67	109

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
ORITA	1215	61	52.9	34.5	1	1	1	2.3	1.5	73	114
SARAGOLLA	1583	63.1	48.8	34	1	1	1.5	4.3	1	67	111
SY FORTISSIMO	1429	62	48.1	33.5	1	1	1	2.1	1	45	90.5
SY VOLANTE	1431	62	63.6	31.5	1	1	1	3.1	1	47.5	89
UC 13210 21	1771	63.1	48.9	34	1	1	1	4	1	70	112
UC 13210 5	1770	62.8	56.6	33	1	1	1	2	1	67	113
UC 14215 11	1797	63	50	31	1	1	2	4	1	69	112
UC 14215 14	1798	62.9	53.9	36.5	1	3.6	3	7	2.3	69	112
UC 14215 42	1799	62.7	53	33.5	1	2.2	4	7	1	73	114
UC 15210 11	1824	60	50.7	36.5	1	4	1	7	1.7	50	92.5
UC 15210 12	1825	63	55.2	33.5	1	6.9	2.5	7	1	43	89
UC 15210 24	1826	63.7	59.1	37.5	1	3	1	4	1.7	44.5	91.5
UC 1756	1756	62.6	48.8	36	1	1	1	1	1	63	103
UC 1758	1758	60.8	51.1	37	4	5.4	1	7.2	2	58	99
UC 1796	1796	64	55.5	32.5	1	1	1	2	1.9	55	105
UC DESERT KING	1375	62	56	34.5	1	1	1	3	2	48	97.5
UC DESERT KING HP	1627	61.1	43.5	34	1	1	1	2	1	59	105
UC MIWOK	1690	63	56.8	35	1	2	1	4	1	57	104
UC TIPAI	1585	63.1	52.9	37	1	1	1	2.2	1.3	59	102
VOLANTE	1431	63	54.9	32	1	1	1	2	1	66	112
WB HAVASU	1479	63	56.4	35.5	1	2.9	1	4.1	1	39.5	86.5
WB MEAD	1607	61.4	45.4	36	1	1	1	3	2	56.5	107
WB MOHAVE	1654	62	49	35	1	1	1	2	1	55	103
WB ORITA	1215	61.8	53.9	33	1	1	1	3.1	1	48.5	91.5
WB YU807 115	1655	62	54.9	28.9	-	-	2	2	1	69	121
WWW CROWN	1166	61	50.5	37	1	1	1	2	1	70	116
WWW D2517	1733	63.1	48.4	33	1	1.4	1	3	1	54.5	101.5
WWW D2517BELL025	1776	63	50.1	36	1	2.8	1	4.6	2	67	112
WWW D3085	1801	63	43.5	35	1	1	2	4.2	1	71	112
WWW DURAKING	878	63	45.1	33	1	1	1	2	1	66	112

Name	UC.Number	Test.Weight.lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
WWW PLATINUM	1210	62.8	44.6	30	1	1	1	2.3	1	70	113
WWW Q MAX	1473	60.5	49.1	38	1	1	1	3.3	1	74	114
WWW TOPPER	1211	62.3	43	36	1	1	1	2.3	1	74	115
KAMUT	1786	57.4	61.6	50.7	5	7	5	8	2	83	123

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%

Table 32: Disease ratings of durum wheat 2014 to 2016.

Name	UC.Number	Stripe,rust..early..50th.percentile.	Stripe,rust..early..90th.percentile.	Stripe,rust..late..50th.percentile.	Stripe,rust..late..90th.percentile.	Leaf,rust..50th.percentile.	Leaf,rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
APB 11705	1782	1	1	-	-	-	-	1	3
APB 11710	1785	1	1	-	-	-	-	2	3
APB 11907	1783	1	1	-	-	-	-	1	2
APB 11908	1784	1	1	-	-	-	-	1	2.6
APB 335	1813	1	1	1	1	1	1	1	2
APB 410077	1823	1	1	-	-	1	1	1	1.7
APB 540165	1827	1	1	-	-	1	1	1	1
APB 540505	1822	1.5	3	-	-	1	1	1	1.7
APB 571189	1811	-	-	3	4	-	-	1	2
APB 571217	1810	2	2	2	3	1	1	1	2
APB 571353	1812	2	2.5	3.5	4	1	1	1	1.9
APB HELIOS	1440	1.5	2.5	2	4	1	1	1	2
APB KRONOS	951	2	4	-	-	1	1	1.5	2
APB TIBURON	1640	1	1	1	1	1	1	1	2
APB WESTMORE HP	1484	1	1	1	1	1	1	1	2
AS COLOMBO	1800	-	-	2	4	-	-	1	1.6
AS MAESTRALE	1582	1	2	-	-	1	1	1	1
AS SARAGOLLA	1583	2	2	-	-	1	1	1	1
DESERT KING	1375	1	1	1	1	-	-	1	2
FORTISSIMO	1429	1	1	1	2	-	-	1	2
HAVASU	1479	1	1.9	4	5	-	-	1	3
KRONOS	951	1	1	4	4.6	-	-	1	3.1
LCS 12E4006	1832	1	1.5	-	-	1	1	1	1
LCS 13SD0056	1833	2	2	-	-	1	1	1	1
LCS ALIRON	1721	1	1	1	2	-	-	1	2
LCS ATHORIS	1698	1	1	-	-	-	-	2	2.6
LCS KIKO	1697	1	1.3	1	1	1	1	1	2
MAESTRALE	1582	1	1	1	2	-	-	1	3.1
ORITA	1215	1	1	4	5	-	-	1	2.1
SARAGOLLA	1583	1	1	2	3.6	-	-	1	4
SY FORTISSIMO	1429	1	1	-	-	1	1	1	1
SY VOLANTE	1431	1	1	-	-	1	1	1	1

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
UC 13210 21	1771	1	1	1	1	-	-	1	2
UC 13210 5	1770	1	1	1	2	-	-	1	2.2
UC 14215 11	1797	-	-	1	2	-	-	1	3
UC 14215 14	1798	-	-	1	2	-	-	1	1.6
UC 14215 42	1799	-	-	3	4	-	-	1	2
UC 15210 11	1824	1	1	-	-	1	1	1	1
UC 15210 12	1825	1	1	-	-	1	1	1	1
UC 15210 24	1826	2	3	-	-	1	1	1	1
UC 1756	1756	1	1	-	-	-	-	1	2
UC 1758	1758	1	1	-	-	-	-	2	3
UC 1796	1796	1	2	1	2	1	1	1	2.2
UC DESERT KING	1375	1	1	-	-	1	1	1	1
UC DESERT KING HP	1627	1	1	1	1	1	1	1	2
UC MIWOK	1690	1	3	2	3	1	1	1.5	3
UC TIPAI	1585	1	1	-	-	-	-	1	3
VOLANTE	1431	1	1	1	1	-	-	1	2
WB HAVASU	1479	2	3.5	-	-	1	1	1	1
WB MEAD	1607	1	2	2	3	1	1	1	3
WB MOHAVE	1654	2	4	5	7	1	1.7	1	2
WB ORITA	1215	2.5	3.5	-	-	1	1	1	1
WB YU807 115	1655	-	-	-	-	-	-	-	-
WWW CROWN	1166	1	1	1	1.6	-	-	1	2
WWW D2517	1733	1	1	-	-	-	-	1	1.6
WWW D2517BELL025	1776	1	1	1	2.6	-	-	1	2
WWW D3085	1801	-	-	3	4	-	-	1	1.6
WWW DURAKING	878	1	1	1	2.6	-	-	1	3
WWW PLATINUM	1210	1	1	1	1	-	-	1	3
WWW Q MAX	1473	1	1	1	1	-	-	1	3.1
WWW TOPPER	1211	1	1	2	3	-	-	1	3.1
KAMUT	1786	1	1	4	4.9	-	-	3	4

Rating scale for diseases (area of flag-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%

## 2.3. Barley

Table 33: Sacramento Valley region, barley yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr St.Err.Yield (lb/acre)			3-yr Yield Rank			Diff. from overall mean			St.Err.Dif. from overall mean			2016 Yield (lb/acre)			2016 St.Err. Yield (lb/acre)			2016 Yield Rank			2015 Yield (lb/acre)			2015 St.Err. Yield (lb/acre)			2015 Yield Rank			2014 Yield (lb/acre)			2014 St.Err. Yield (lb/acre)			2014 Yield Rank		
UCD UYP 210	1351	6RSF	4938	589	1	974	189	4346	976	1	5145	1205	2	5390	1099	1																												
UCD UOP 102	1405		4787	591	2	822	195	4244	976	2	4912	1205	10	-	-	-																												
UCD 08YP 111 1231 LATE	1385		4735	586	3	770	178	4040	976	5	4957	1205	8	5377	939	2																												
UCD UOP 96	1400		4734	593	4	770	201	4159	979	4	4847	1205	13	-	-	-																												
UCD UYP210	1383		4704	586	5	740	178	4171	976	3	5137	1205	4	4423	939	11																												
UCD B372	1260	6RSF	4701	717	6	736	443	-	-	-	-	-	-	-	-	-																												
UCD B398	1256	6RSF	4634	591	7	669	193	3974	976	7	5496	1289	1	4810	939	4																												
UCD UOP 97	1401		4584	593	8	619	201	3927	979	8	4970	1205	7	-	-	-																												
UCD UOP 98	1402		4573	591	9	609	195	3979	976	6	4855	1205	12	-	-	-																												
ISHI	1047	6RSF	4499	586	10	535	178	3847	976	11	4935	1205	9	4690	939	5																												
UCD UPY275	1382		4491	717	11	526	443	-	-	-	-	-	-	-	-	-																												
UCD UOP 95	1399		4484	591	12	520	195	3878	976	10	4802	1205	14	-	-	-																												
UCD 08YP 111 1231 EARLY	1384		4464	717	13	499	443	-	-	-	-	-	-	-	-	-																												
UCD UYP3	1379		4445	586	14	481	178	3909	976	9	4560	1205	18	4600	939	9																												
UCD A237	1261	6RSF	4313	587	15	349	182	3637	979	15	4902	1205	11	4373	939	12																												
UCD B369	1255	6RSF	4311	593	16	346	200	3603	976	18	5143	1233	3	4630	1099	7																												
UCD UOP 99	1403		4309	596	17	344	208	3618	982	17	4650	1205	16	-	-	-																												
UCD UOP 100	1404		4288	591	18	323	195	3555	976	19	4985	1205	6	-	-	-																												
UCD 1266	1266	6RSN	4285	593	19	320	201	3733	979	13	4335	1205	20	-	-	-																												
UCD 1280	1280	6RSF	4251	587	20	286	182	3747	976	12	4290	1214	22	4277	939	14																												
UC 933	933	6RSF	4251	586	21	286	178	3624	976	16	4597	1205	17	4457	939	10																												
UCD UYP306	1381		4184	717	22	219	443	-	-	-	-	-	-	-	-	-																												
UC 969	969	6RSF	4130	586	23	165	178	3640	976	14	4262	1205	23	4070	939	17																												
UCD UOP 111	1408		4125	593	24	160	201	3438	979	21	4665	1205	15	-	-	-																												
UCD UOP 105	1406		4123	591	25	159	195	3288	976	25	5127	1205	5	-	-	-																												
TAMALPAIS	1134	6RS(N)	4076	587	26	111	182	3524	979	20	4407	1205	19	4080	939	16																												
UCD 1263	1263	6RSN	3974	593	27	9	201	3412	979	22	4050	1205	25	-	-	-																												
UCD K3 4H	1357		3931	717	28	-34	443	-	-	-	-	-	-	-	-	-																												



Table 34: Northern San Joaquin Valley region, barley yield 3-year (2014 to 2016) and single year (2016) means.

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)			3-yr St.Err.YIELD (lb/acre)			St.Err.Dif. from overall mean		
			3-yr YIELD Rank	3-yr St.Err. YIELD Rank	Diff. from overall mean	2016 YIELD	2016 St.Err. YIELD (lb/acre)	2016 YIELD Rank	2016 St.Err. YIELD (lb/acre)	2016 YIELD Rank	
UCD B369	1255	6RSF	6873	562	1	1689	372	7902	497	1	
UCD B372	1260	6RSF	6680	930	2	1496	818	-	-	-	
UCD 08YP 111 1231 LATE	1385		6665	538	3	1482	337	7834	497	2	
UCD 08YP 111 1231 EARLY	1384		6460	930	4	1276	818	-	-	-	
ISHI	1047	6RSF	6413	538	5	1229	337	7415	497	3	
UCD UOP 102	1405		6303	562	6	1120	372	7293	497	4	
UCD A237	1261	6RSF	6262	538	7	1078	337	7216	497	5	
UCD B398	1256	6RSF	6174	560	8	991	369	7020	497	6	
UCD UYP 210	1351	6RSF	6086	538	9	902	337	6895	497	7	
UCD UOP 98	1402		5976	562	10	793	372	6814	497	8	
UCD UPY275	1382		5810	930	11	626	818	-	-	-	
UCD UYP2	1380		5740	930	12	556	818	-	-	-	
UCD UYP210	1383		5726	538	13	543	337	6448	497	10	
UCD UOP 105	1406		5628	562	14	444	372	6303	497	12	
UCD UOP 100	1404		5621	562	15	438	372	6320	497	11	
UCD 1263	1263	6RSN	5593	562	16	410	372	6552	497	9	
UC 933	933	6RSF	5572	538	17	389	337	6264	497	13	
UCD UOP 97	1401		5531	562	18	347	372	6187	497	15	
UCD MP179	1410	2RSM	5442	562	19	259	372	6216	497	14	
TAMALPAIS	1134	6RS(N)	5408	538	20	225	337	6151	497	16	
MAX	816	6RSF	5403	538	21	220	337	6144	497	17	
UCD 1280	1280	6RSF	5384	538	22	200	337	6024	497	18	
UCD UYP3	1379		5266	538	23	83	337	5698	497	26	
UCD UOP 111	1408		5255	562	24	71	372	5892	497	23	
UCD UOP 96	1400		5221	562	25	38	372	5962	497	20	
UC 603	603	6RSF	5153	538	26	-31	337	5930	497	22	
UCD UOP 99	1403		5146	562	27	-38	372	5788	497	25	
UCD 1318	1318	6RSN	5141	538	28	-42	337	5999	497	19	
UCD 1321	1321	6RSN	5093	716	29	-91	576	-	-	-	
UCD 1319	1319	6RSN	5073	716	30	-111	576	-	-	-	
UCD UYP306	1381		5070	930	31	-114	818	-	-	-	
UCD 1317	1317	6RSN	5034	538	32	-149	337	5950	497	21	
UCD UOP 95	1399		4942	562	33	-242	372	5501	497	29	

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)	3-yr St.Err.YIELD (lb/acre)	3-yr YIELD Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 YIELD (lb/acre)	2016 St.Err.YIELD (lb/acre)	2016 YIELD Rank
UCD 1266	1266	6RSN	4938	562	34	-245	372	5597	497	27
OSU FULL PINT	1411	2RSM	4842	562	35	-341	372	5819	497	24
UC 969	969	6RSF	4798	538	36	-385	337	5549	497	28
UCD MP103	1409	2RSM	4796	562	37	-388	372	5418	497	30
UCD UOP 110	1407		4726	926	38	-458	816	-	-	-
UCD BUTTA 12 96	1360		4636	562	39	-547	372	5357	497	31
UCD K2 A	1356		4540	930	40	-644	818	-	-	-
UCD 11 MQ 31	1378		4220	930	41	-964	818	-	-	-
UCD K3 4H	1357		4060	930	42	-1124	818	-	-	-
UCD K1 11C	1355		3950	930	43	-1234	818	-	-	-
UCD K11 B	1358		3880	930	44	-1304	818	-	-	-
SCHALLER	1413	6RSF-H	3749	594	45	-1434	415	4514	497	32
UC71 183 1	162	6RSF	3586	926	46	-1598	816	-	-	-
UCD 1390	1390	2RSM	2971	635	47	-2212	473	3155	670	33
UC71 186 5	161	6RSF	1970	930	48	-3214	818	-	-	-

Table 35: Southern San Joaquin Valley region, barley yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)	3-yr St.Err.YIELD (lb/acre)	3-yr YIELD Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 YIELD (lb/acre)	2016 St.Err.YIELD (lb/acre)	2016 YIELD Rank
UCD UOP 98	1402		3849	752	1	1151	455	3849	670	1
UCD UOP 100	1404		3480	752	2	782	455	3480	670	2
UCD B398	1256	6RSF	3408	752	3	710	455	3408	670	3
UCD 1280	1280	6RSF	3284	752	4	586	455	3284	670	5
UCD UOP 105	1406		3247	752	5	550	455	3247	670	6
UC 969	969	6RSF	3062	772	6	364	485	3308	682	4
UCD A237	1261	6RSF	2971	752	7	273	455	2971	670	8
UCD 1318	1318	6RSN	2960	752	8	262	455	2960	670	9
UCD UYP210	1383		2953	752	9	255	455	2953	670	10
UCD UYP3	1379		2942	752	10	244	455	2942	670	11
UCD 1390	1390	2RSM	2914	752	11	216	455	2914	670	12
UC 603	603	6RSF	2876	752	12	178	455	2876	670	13
UCD 08YP 111 1231 LATE	1385		2810	752	13	112	455	2810	670	15
UCD MP179	1410	2RSM	2732	772	14	34	485	2978	682	7
UCD UOP 111	1408		2725	752	15	27	455	2725	670	16
TAMALPAIS	1134	6RS(N)	2688	752	16	-10	455	2688	670	17
UCD UOP 95	1399		2656	752	17	-42	455	2656	670	18
UCD UOP 99	1403		2610	752	18	-88	455	2610	670	19
UC 933	933	6RSF	2591	772	19	-107	485	2837	682	14
UCD 1263	1263	6RSN	2571	752	20	-126	455	2571	670	21
UCD 1266	1266	6RSN	2527	752	21	-171	455	2527	670	22
UCD UOP 96	1400		2525	752	22	-173	455	2525	670	23
UCD B369	1255	6RSF	2450	752	23	-248	455	2450	670	24
UCD BUTTA 12 96	1360		2415	752	24	-283	455	2415	670	25
OSU FULL PINT	1411	2RSM	2367	752	25	-331	455	2367	670	26
ISHI	1047	6RSF	2359	772	26	-339	485	2605	682	20
UCD UOP 102	1405		2350	752	27	-348	455	2350	670	27
UCD 1317	1317	6RSN	2224	752	28	-474	455	2224	670	28
UCD UOP 97	1401		2214	752	29	-484	455	2214	670	29
UCD MP103	1409	2RSM	2206	752	30	-491	455	2206	670	30
SCHALLER	1413	6RSF-H	2205	752	31	-493	455	2205	670	31
MAX	816	6RSF	2025	772	32	-673	485	1859	682	32
UCD UYP 210	1351	6RSF	1833	752	33	-865	455	1833	670	33

Table 36: Rainfed locations, barley yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)		3-yr St.Err.YIELD (lb/acre)		3-yr YIELD Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 YIELD (lb/acre)		2016 St.Err.YIELD (lb/acre)		2016 YIELD Rank	2015 YIELD (lb/acre)		2015 St.Err.YIELD (lb/acre)		2015 YIELD Rank	2014 YIELD (lb/acre)		2014 St.Err.YIELD (lb/acre)		2014 YIELD Rank	
			3-yr YIELD (lb/acre)	3-yr St.Err.YIELD (lb/acre)	3-yr YIELD Rank	Diff. from overall mean				2016 YIELD (lb/acre)	2016 St.Err.YIELD (lb/acre)	2016 YIELD Rank	2015 YIELD (lb/acre)	2015 St.Err.YIELD (lb/acre)	2015 YIELD Rank	2014 YIELD (lb/acre)	2014 St.Err.YIELD (lb/acre)	2014 YIELD Rank							
UCD UOP 98	1402		4088	646	1	922	244	3727	700	1	4275	2478	10	-	-	-	-	-	-	-	-	-	-	-	
UCD UYP210	1383		3822	641	2	657	230	3414	700	4	4815	2478	3	3640	889	12									
UCD UOP 100	1404		3815	646	3	650	244	3429	700	3	4205	2478	11	-	-	-	-	-	-	-	-	-	-	-	
UCD B398	1256	6RSF	3734	643	4	569	235	3329	700	6	4928	2514	2	3640	889	12									
UCD 1280	1280	6RSF	3733	641	5	568	230	3439	700	2	3730	2478	22	3635	889	14									
UCD 08YP 111 1231 EARLY	1384		3703	937	6	538	707	-	-	-	-	-	-	3950	889	4									
UCD B372	1260	6RSF	3623	937	7	458	707	-	-	-	-	-	-	3870	889	6									
UCD UOP 105	1406		3610	646	8	445	244	3189	700	9	4280	2478	9	-	-	-	-	-	-	-	-	-	-	-	
UC 969	969	6RSF	3608	643	9	443	235	3380	703	5	3680	2478	24	3850	889	8									
UCD UYP3	1379		3579	641	10	414	230	3194	700	8	3970	2478	16	3810	889	9									
UCD 08YP 111 1231 LATE	1385		3575	641	11	409	230	3114	700	10	4305	2478	7	4070	889	3									
UCD 1266	1266	6RSN	3500	649	12	335	251	3064	703	13	3965	2478	17	-	-	-	-	-	-	-	-	-	-	-	
UCD UOP 95	1399		3478	646	13	312	244	3074	700	12	4005	2478	15	-	-	-	-	-	-	-	-	-	-	-	
UCD UOP 96	1400		3473	649	14	308	251	3011	703	16	4130	2478	14	-	-	-	-	-	-	-	-	-	-	-	
UCD UOP 102	1405		3472	646	15	307	244	3027	700	14	4330	2478	6	-	-	-	-	-	-	-	-	-	-	-	
UCD A237	1261	6RSF	3436	643	16	271	235	3090	703	11	3755	2478	21	3470	889	15									
TAMALPAIS	1134	6RS(N)	3403	641	17	238	230	2981	700	19	3880	2478	18	3850	889	7									
UCD UOP 99	1403		3399	649	18	234	251	3010	703	17	3510	2478	29	-	-	-	-	-	-	-	-	-	-	-	
ISHI	1047	6RSF	3398	643	19	233	235	2992	703	18	4290	2478	8	4150	889	2									
UCD 1390	1390	2RSM	3393	649	20	228	251	3195	703	7	2390	2478	35	-	-	-	-	-	-	-	-	-	-	-	
UCD UPY275	1382		3388	937	21	223	707	-	-	-	-	-	-	3635	889	14									
UC 933	933	6RSF	3354	643	22	189	235	3017	703	15	4130	2478	13	3710	889	10									
UCD B369	1255	6RSF	3329	646	23	164	243	2821	700	23	5168	2514	1	3917	976	5									
UCD UOP 97	1401		3310	646	24	145	244	2837	700	22	4400	2478	5	-	-	-	-	-	-	-	-	-	-	-	
UCD UOP 111	1408		3299	649	25	134	251	2853	703	21	4155	2478	12	-	-	-	-	-	-	-	-	-	-	-	
UCD 1263	1263	6RSN	3230	649	26	65	251	2799	703	24	3655	2478	25	-	-	-	-	-	-	-	-	-	-	-	
UCD MP179	1410	2RSM	3192	649	27	27	251	2914	703	20	3630	2478	26	-	-	-	-	-	-	-	-	-	-	-	
UCD UYP 210	1351	6RSF	3172	644	28	7	237	2601	700	27	4425	2478	4	4677	976	1									
UCD 1318	1318	6RSN	3128	641	29	-38	230	2720	700	25	3835	2478	19	3230	889	20									
UC 603	603		3117	641	30	-49	230	2696	700	26	3730	2478	23	3415	889	16									
UCD UYP2	1380		3113	937	31	-52	707	-	-	-	-	-	-	3360	889	17									
UCD K3 4H	1357		3108	937	32	-57	707	-	-	-	-	-	-	3355	889	18									
UCD 1317	1317	6RSN	2994	643	33	-171	235	2536	703	28	3595	2478	27	3270	889	19									

Name	UC Number	Crop Type	3-yr YIELD (lb/acre)	3-yr St.Err.YIELD (lb/acre)	3-yr YIELD Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 YIELD (lb/acre)	2016 St.Err.YIELD (lb/acre)	2016 YIELD Rank	2015 YIELD (lb/acre)	2015 St.Err.YIELD (lb/acre)	2015 YIELD Rank	2014 YIELD (lb/acre)	2014 St.Err.YIELD (lb/acre)	2014 YIELD Rank
UCD K11 B	1358		2943	937	34	-222	707	-	-	-	-	-	-	3190	889	21
UCD 1321	1321	6RSN	2853	783	35	-312	497	-	-	-	3770	2478	20	2755	889	26
SCHALLER	1413	6RSF-H	2808	652	36	-357	259	2399	700	29	-	-	-	-	-	-
UCD BUTTA 12 96	1360		2772	646	37	-393	244	2344	700	30	3495	2478	30	-	-	-
UCD MP103	1409	2RSM	2735	646	38	-430	244	2333	700	31	3245	2478	31	-	-	-
UCD UYP306	1381		2713	937	39	-452	707	-	-	-	-	-	-	2960	889	22
UCD 1319	1319	6RSN	2696	783	40	-469	497	-	-	-	3515	2478	28	2695	889	27
UCD K2 A	1356		2643	937	41	-522	707	-	-	-	-	-	-	2890	889	24
UCD UOP 110	1407		2599	932	42	-566	704	-	-	-	3170	2478	32	-	-	-
OSU FULL PINT	1411	2RSM	2576	652	43	-589	258	2138	705	32	3045	2478	33	-	-	-
UCD 11 MQ 31	1378		2523	937	44	-642	707	-	-	-	-	-	-	2770	889	25
MAX	816	6RSF	2406	645	45	-759	241	1875	705	33	3010	2478	34	2910	889	23
UCD K1 11C	1355		2233	937	46	-932	707	-	-	-	-	-	-	2480	889	28
UC71 186 5	161	6RSF	2168	937	47	-997	707	-	-	-	-	-	-	2415	889	29
UC71 183 1	162	6RSF	1689	932	48	-1476	704	-	-	-	2260	2478	36	-	-	-

Table 37: Agronomic traits of barley 2014 to 2016.

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
ISHI	1047	49.6	44.8	33	2	5.5	3	7	2	28	72.5
MAX	816	50.1	37.8	30	1	4	1.8	8	3	35.5	73.5
OSU FULL PINT	1411	51.7	40.4	30	1	3	1.3	6	1.1	31	69
SCHALLER	1413	47.6	38.1	37	1	2.4	2	6.1	2	34.5	71.5
TAMALPAIS	1134	56	42.9	30	1	3.5	1.2	5	3.1	23	73.5
UC 603	603	50.5	40.1	33	1	2	1.8	5	6	28.5	67
UC 933	933	50.1	44.7	33	2	4.5	4	7	6	24	66.5
UC 969	969	52.7	41.8	35	1	5.2	2	5.8	5	20	68.5
UC71 183 1	162	44.7	35.7	42	1	1.7	1.5	4.5	1.4	37	69
UC71 186 5	161	42.9	29.8	49	1	2.1	2.5	4.9	2.1	48	74
UCD 08YP 111 1231 EARLY	1384	50.1	45	37	1.3	3.5	2.5	4.9	1.6	39	75
UCD 08YP 111 1231 LATE	1385	49.7	51.9	35	1	3	1	6	2	30.5	69.5
UCD 11 MQ 31	1378	54.3	48	39.5	4	4.2	4.2	6.7	2.9	42	72
UCD 1263	1263	56.4	45.9	34	1	2.7	1	5.8	1	30	74
UCD 1266	1266	57.1	43.9	34	1	2.8	3	7	1	30	72
UCD 1280	1280	51.1	45.5	35.5	4.5	7.2	4.5	7	2	23	71
UCD 1317	1317	55.9	41.2	34	1	4	2	7	1	33	69
UCD 1318	1318	53.2	46.7	34	1.6	6.2	2	7.2	1.3	29	71.5
UCD 1319	1319	55.8	46.2	33	2.1	4.3	3.5	5.4	1	44	75.5
UCD 1321	1321	57.8	46.3	36	2.2	6.8	3.3	5.9	1.1	43.5	75
UCD 1390	1390	54.5	53.5	37	3.5	6	4.8	7	2.8	18	66
UCD A237	1261	49.5	47.1	35	1.8	4.8	3	7	2	30.5	69.5
UCD B369	1255	49.3	47.8	32.5	2	5.2	1.1	7	2	27.5	68
UCD B372	1260	48.7	42.5	37.5	1.5	5.6	2	5.3	1.2	42	75
UCD B398	1256	48.6	46.2	33.5	1	5	2	6.9	2	31.5	70
UCD BUTTA 12 96	1360	53.3	49	34	3.4	7	6	7	2	35	66
UCD K1 11C	1355	45.7	41.6	39.5	1.5	4.7	3.1	6.3	3	39	71
UCD K11 B	1358	47.8	37.1	42.5	1.5	4.2	2	5	2.8	40	72

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
UCD K2 A	1356	47.3	39.8	41	2.3	6.3	3.9	6.9	3.3	46	74
UCD K3 4H	1357	47.8	40.8	41.5	1.3	4.8	3.2	6.5	2.8	41	73
UCD MP103	1409	53.7	43.5	33	2	5.4	5	7.4	1	35	69
UCD MP179	1410	52	43.2	31	1.5	6	4	7	2	39	67
UCD UOP 100	1404	48.9	45.2	33	1	4.2	3	7	1	33	75
UCD UOP 102	1405	50.4	45.2	35	1.5	3.9	1	6	1	30	68
UCD UOP 105	1406	51.1	50.1	33	3	5.7	2	7	2	28	73
UCD UOP 110	1407	51.4	47.7	37	4	4.2	3.3	5.9	1	36	78
UCD UOP 111	1408	58.8	47	32	1	4.5	2	6.6	1	32	72
UCD UOP 95	1399	49.6	48.4	34	2	6	1.8	7	1	28	67
UCD UOP 96	1400	51.8	51.4	33	1	5.3	2	6	1	27	72
UCD UOP 97	1401	51.2	48	34	1.1	4.5	2	5.9	1	29	72
UCD UOP 98	1402	50.2	44.6	34	2	5.8	4	7.1	2	25	71
UCD UOP 99	1403	50.7	46.5	34	3	6.7	3	7	1	27	74
UCD UPY275	1382	48.7	42.1	38	1.3	5.5	3.3	6.4	1	41	74
UCD UYP 210	1351	47.5	40.3	33.5	1	3	1	5	1	30.5	70.5
UCD UYP2	1380	55.8	36.2	37	3.3	4.8	4.2	7.2	1.7	38	73
UCD UYP210	1383	50.1	44.5	31	1.6	5.2	1	6	1	27	75.5
UCD UYP3	1379	50.3	48.1	32	2.2	6.9	4	7	2	26	74
UCD UYP306	1381	59.5	39	32.5	1	1.6	2.5	4	1	49	77

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%

Table 38: Disease ratings of barley 2014 to 2016.

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
ISHI	1047	1	2	1	1	1	1.5	1	1	1.3	4
MAX	816	2	4	1	1	2	6	1	2.4	1.3	2.8
OSU FULL PINT	1411	1	1	1	2	1	1	1	1	3	5
SCHALLER	1413	1	2	1	1	1	2	1	3	1	2
TAMALPAIS	1134	1	3	1	1	1	3	1	1	1	1.9
UC 603	603	1	6	1	1	1	5.3	2.3	5	2	4
UC 933	933	1	6	1	1	1	6	2.3	4	1	3.4
UC 969	969	1	5	1	1	1	4.5	1.5	2.1	1.3	3.4
UC71 183 1	162	-	-	-	-	1	1	1	1	2	2.8
UC71 186 5	161	-	-	-	-	1	1	-	-	1.4	3
UCD 08YP 111 1231 EARLY	1384	-	-	-	-	1	1	-	-	1	1.2
UCD 08YP 111 1231 LATE	1385	1	2	1	1	1	2	1	1.3	1	2.4
UCD 11 MQ 31	1378	-	-	-	-	1	1	-	-	1	1
UCD 1263	1263	1	2	1	1	1	1.7	1	2	2	2
UCD 1266	1266	1	1	1	1	1	1	1	1	2	2.8
UCD 1280	1280	1	2	1	1	1	1.3	1	2	1	1.7
UCD 1317	1317	1	1	1	1	1	1	1	1	2	3.8
UCD 1318	1318	1	2	1	1	1	1.5	1	2	1	2.2
UCD 1319	1319	-	-	-	-	1	1	1	1	1	3.8
UCD 1321	1321	-	-	-	-	1	1	1	1	1	1.5
UCD 1390	1390	1	1	1	1	1	1	1	1	1	3.3
UCD A237	1261	1	2	1	1	1	2	1	2	1.3	2.4
UCD B369	1255	1	2	1	1	1	2	1	1.3	1.3	2
UCD B372	1260	-	-	-	-	1	1	-	-	1	1.2
UCD B398	1256	1	2	1	1	1	2	1	1	1	3.4
UCD BUTTA 12 96	1360	1	2	1	1	1	1.7	1	1	3	3.9
UCD K1 11C	1355	-	-	-	-	1	1	-	-	1	1
UCD K11 B	1358	-	-	-	-	1	1.2	-	-	1	1.4
UCD K2 A	1356	-	-	-	-	1	1	-	-	1	1
UCD K3 4H	1357	-	-	-	-	1	1.2	-	-	1	1.2

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
UCD MP103	1409	1	1	1	1	1	1	1	2	1	2
UCD MP179	1410	1	2	1	1	1	1.9	1	1	1.5	2.4
UCD UOP 100	1404	1	2	1	1	1	1.8	1	1	2	2.9
UCD UOP 102	1405	1	1	1	5	1	1	1	1	1	2
UCD UOP 105	1406	1	2	1	1	1	1.7	1	3	1	3
UCD UOP 110	1407	-	-	-	-	1	1	1	1	1	1.8
UCD UOP 111	1408	1	1	1	1	1	1	1	1	2	3.8
UCD UOP 95	1399	1	1	1	1	1	1.3	1	1	1.3	2.8
UCD UOP 96	1400	1	1	1	1	1	1	1	1	1	2.8
UCD UOP 97	1401	1	1	1	1	1	1	1	1	1	1.4
UCD UOP 98	1402	1	2	1	1	1	1.7	1.3	3	2	2.8
UCD UOP 99	1403	1	1	1	1	1	1	1	1	1	1.2
UCD UPY275	1382	-	-	-	-	1	2.3	-	-	1	1
UCD UYP 210	1351	1	1	1	2	1	1	1	1	1	2
UCD UYP2	1380	-	-	-	-	1	1	-	-	1	1.2
UCD UYP210	1383	1	1	1	1	1	1	1	1	1	1.9
UCD UYP3	1379	1	2	1	1	1	1.3	1	1	1	2.7
UCD UYP306	1381	-	-	-	-	1	1.4	-	-	1	1.4

Rating scale for diseases (area of flag-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%

### 3. Variety performance summaries - Intermountain region

#### 3.1. Spring wheat

Table 39: Intermountain region, hard common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
DAYN	19022	HWS	5792	729	1	880	226	-	-	-	4970	576	2	5835	1762	1
LCS IRON 11 SB 0096	19045	HRS	5651	742	2	739	253	8031	246	2	-	-	-	-	-	-
WB 9518	19096	HRS	5598	721	3	686	189	7891	246	7	5093	576	1	-	-	-
SY BASALT	19062	HRS	5570	742	4	658	253	7950	246	5	-	-	-	-	-	-
LCS ATOMO	19044	HWS	5491	714	5	580	166	8045	246	1	4787	576	3	5010	1762	6
WB HARTLINE	19100	HWS	5489	742	6	577	253	7869	246	8	-	-	-	-	-	-
WB 9200	19094	HRS	5487	742	7	575	253	7867	246	9	-	-	-	-	-	-
IDO1203S A	19033	HWS	5485	742	8	573	253	7865	246	10	-	-	-	-	-	-
05SB84	9139	HRS	5454	781	9	542	357	-	-	-	-	-	-	5195	1762	4
12SB0146	19005	HWS	5384	752	10	473	290	-	-	-	4763	576	4	-	-	-
WB 9229	19081	HRS	5241	724	11	329	204	7961	274	3	4347	576	17	-	-	-
UI PLATINUM	19077	HWS	5224	714	12	313	166	7935	246	6	4453	576	10	4530	1762	16
SY BASALT	19061	HRS	5209	781	13	297	357	-	-	-	-	-	-	4950	1762	7
WB9518	19104	HRS	5204	781	14	292	357	-	-	-	-	-	-	4945	1762	8
LCS STAR	19046	HWS	5197	714	15	285	166	7955	246	4	4210	576	18	4730	1762	13
UC 1743	19074	HWS	5164	781	16	252	357	-	-	-	-	-	-	4905	1762	9
SY SELWAY	19065	HRS	5137	742	17	225	253	7517	246	12	-	-	-	-	-	-
SY 04W40292R	19058	HRS	5104	729	18	192	226	-	-	-	4597	576	7	4675	1762	15
WB 9668	19082	HRS	5083	714	19	172	166	7768	246	11	4440	576	11	4250	1762	24
11SB0096	19003	HRS	5082	729	20	170	226	-	-	-	4427	576	14	4875	1762	10
SY 04PN3051 9	19057	HRS	5082	742	21	170	253	7462	246	13	-	-	-	-	-	-
IDO862E	19038	HRS	5052	729	22	140	226	-	-	-	4730	576	5	4345	1762	22
UC 12013 22	19071	HWS	5050	729	23	138	226	-	-	-	4720	576	6	4355	1762	21
12SB0199	19007	HRS	5050	742	24	138	253	7430	246	14	-	-	-	-	-	-
WB 7417	19093	HWS	5039	742	25	127	253	7419	246	15	-	-	-	-	-	-
YS 601	19107	HWS	5024	752	26	113	290	-	-	-	4403	576	15	-	-	-

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)			2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)			2014 St.Err.Yield (lb/acre)	2014 Yield Rank
			3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean				2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank					2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank		
HRS 3504	19030	HRS	5024	724	27	113	204	7368	274	18	4437	576	12	4680	1762	-	-	-	-	
UC 1744	19075	HWS	5010	729	28	98	226	-	-	-	4437	576	12	4680	1762	14	-	-	-	
SY 06PN3015 08	19059	HRS	4990	742	29	79	253	7371	246	17	-	-	-	-	-	-	-	-	-	
IDO862T	19039	HRS	4978	729	30	66	226	-	-	-	4513	576	8	4485	1762	17	-	-	-	
BULLSEYE	19019	HRS	4975	714	31	63	166	7075	246	22	4477	576	9	5090	1762	5	-	-	-	
YS 802	19110	HRS	4974	752	32	63	290	-	-	-	4353	576	16	-	-	-	-	-	-	
IDO1202S	19032	HWS	4957	714	33	45	166	7391	246	16	3833	576	30	5345	1762	2	-	-	-	
UC 1745	19076	HRS	4926	729	34	14	226	-	-	-	3943	576	28	5210	1762	3	-	-	-	
YECORA ROJO	19106	HRS	4885	742	35	-27	253	7265	246	19	-	-	-	-	-	-	-	-	-	
SY COHO	19064	HRS	4876	742	36	-35	253	7257	246	20	-	-	-	-	-	-	-	-	-	
JEFFERSON	19041	HRS	4848	729	37	-64	226	-	-	-	4080	576	22	4810	1762	11	-	-	-	
12SB0131	19004	HWS	4801	752	38	-111	290	-	-	-	4180	576	19	-	-	-	-	-	-	
12SB0197	19006	HRS	4759	756	39	-153	290	7137	274	21	-	-	-	-	-	-	-	-	-	
GLEE	19025	HRS	4714	781	40	-198	357	-	-	-	-	-	-	4455	1762	19	-	-	-	
WA 8217	19084	HRS	4708	752	41	-204	290	-	-	-	4087	576	21	-	-	-	-	-	-	
SY STEELHEAD	19066	HRS	4691	714	42	-221	166	6915	246	24	4040	576	25	4790	1762	12	-	-	-	
SY 3001 2	19060	HRS	4668	752	43	-244	290	-	-	-	4047	576	24	-	-	-	-	-	-	
WB 9879 CLP	19099	HRS	4659	742	44	-252	253	7040	246	23	-	-	-	-	-	-	-	-	-	
CLEAR WHITE 515	19021	HWS	4626	729	45	-286	226	-	-	-	3943	576	28	4460	1762	18	-	-	-	
HRS 3530	19031	HRS	4578	752	46	-334	290	-	-	-	3957	576	27	-	-	-	-	-	-	
UI WINCHESTER	19079	HRS	4572	729	47	-340	226	-	-	-	3970	576	26	4285	1762	23	-	-	-	
12SB0224	19008	HRS	4451	756	48	-461	290	6898	274	25	-	-	-	-	-	-	-	-	-	
10SB0087 B	19002	HRS	4436	714	49	-476	166	6466	246	28	4133	576	20	4400	1762	20	-	-	-	
YS 802 1	19111	HRS	4369	742	50	-543	253	6749	246	26	-	-	-	-	-	-	-	-	-	
BUCK PRONTO	19018	HRS	4364	781	51	-548	357	-	-	-	-	-	-	4105	1762	25	-	-	-	
HRS 3419	19029	HRS	4314	721	52	-598	189	6423	246	29	4053	576	23	-	-	-	-	-	-	
ALUM	19016	HRS	4193	742	53	-719	253	6573	246	27	-	-	-	-	-	-	-	-	-	
HRS 3361	19028	HRS	4091	724	54	-821	204	6110	274	31	3770	576	31	-	-	-	-	-	-	
HRS 3100	19027	HRS	3927	742	55	-985	253	6307	246	30	-	-	-	-	-	-	-	-	-	
YS 801	19109	HRS	3751	752	56	-1161	290	-	-	-	3130	576	32	-	-	-	-	-	-	-
ANZA	19052	HRS	3509	756	57	-1403	290	5886	274	32	-	-	-	-	-	-	-	-	-	

Table 40: Intermountain region, hard common wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr Protein (%)		3-yr St.Err.Protein (%)		3-yr Protein Rank		Diff. from overall mean		St.Err.Dif. from overall mean		2016 Protein (%)		2016 St.Err.Protein (%)		2016 Protein Rank		2015 Protein (%)		2015 St.Err.Protein (%)		2015 Protein Rank		2014 Protein (%)		2014 St.Err.Protein (%)		2014 Protein Rank	
WB 9668	19082	HRS	14.19	0.94	1	1.14	0.21	13.75	0.25	2	14.56	1.46	6	13.77	2.04	1	-	-	-	-	-	-	-	-	-	-	-	-		
YECORA ROJO	19106	HRS	14.15	0.98	2	1.1	0.32	13.65	0.25	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SY 04PN3051 9	19057	HRS	14.13	0.98	3	1.07	0.32	13.62	0.25	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
YS 802 1	19111	HRS	14.08	0.98	4	1.02	0.32	13.57	0.25	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 9518	19096	HRS	13.77	0.95	5	0.72	0.24	13.75	0.25	1	14.06	1.46	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SY STEELHEAD	19066	HRS	13.72	0.94	6	0.66	0.21	13.3	0.25	7	14.72	1.46	3	12.31	2.04	5	-	-	-	-	-	-	-	-	-	-	-	-		
YS 802	19110	HRS	13.67	0.99	7	0.62	0.37	-	-	-	14.6	1.46	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WB 9200	19094	HRS	13.63	0.98	8	0.57	0.32	13.12	0.25	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 7417	19093	HWS	13.6	0.98	9	0.55	0.32	13.1	0.25	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SY COHO	19064	HRS	13.53	0.98	10	0.47	0.32	13.02	0.25	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 9879 CLP	19099	HRS	13.45	0.98	11	0.4	0.32	12.95	0.25	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
IDO862E	19038	HRS	13.44	0.96	12	0.38	0.29	-	-	-	14.04	1.46	19	12.78	2.04	3	-	-	-	-	-	-	-	-	-	-	-	-		
BULLSEYE	19019	HRS	13.43	0.94	13	0.37	0.21	13.22	0.25	8	14.51	1.46	7	11.44	2.04	20	-	-	-	-	-	-	-	-	-	-	-	-		
UI WINCHESTER	19079	HRS	13.42	0.96	14	0.36	0.29	-	-	-	14.42	1.46	9	12.18	2.04	9	-	-	-	-	-	-	-	-	-	-	-	-		
WB 9229	19081	HRS	13.41	0.95	15	0.36	0.26	13.32	0.29	6	13.95	1.46	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WA 8217	19084	HRS	13.41	0.99	16	0.35	0.37	-	-	-	14.33	1.46	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
BUCK PRONTO	19018	HRS	13.4	1.02	17	0.35	0.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ALUM	19016	HRS	13.38	0.98	18	0.32	0.32	12.87	0.25	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
UC 1744	19075	HWS	13.35	0.96	19	0.29	0.29	-	-	-	14.77	1.46	2	11.47	2.04	19	-	-	-	-	-	-	-	-	-	-	-	-		
YS 801	19109	HRS	13.33	0.99	20	0.28	0.37	-	-	-	14.26	1.46	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
IDO862T	19039	HRS	13.33	0.96	21	0.27	0.29	-	-	-	14.13	1.46	16	12.37	2.04	4	-	-	-	-	-	-	-	-	-	-	-	-		
WB9518	19104	HRS	13.32	1.02	22	0.27	0.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SY SELWAY	19065	HRS	13.3	0.98	23	0.25	0.32	12.8	0.25	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SY 04W40292R	19058	HRS	13.3	0.96	24	0.24	0.29	-	-	-	14.45	1.46	8	11.82	2.04	13	-	-	-	-	-	-	-	-	-	-	-	-	-	
UC 12013 22	19071	HWS	13.29	0.96	25	0.24	0.29	-	-	-	13.38	1.46	27	13.42	2.04	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
IDO1202S	19032	HWS	13.27	0.94	26	0.21	0.21	12.5	0.25	19	14.89	1.46	1	11.62	2.04	14	-	-	-	-	-	-	-	-	-	-	-	-	-	
JEFFERSON	19041	HRS	13.2	0.96	27	0.14	0.29	-	-	-	14.23	1.46	12	11.89	2.04	10	-	-	-	-	-	-	-	-	-	-	-	-	-	
HRS 3361	19028	HRS	13.19	0.95	28	0.13	0.26	12.64	0.29	17	14.17	1.46	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HRS 3530	19031	HRS	13.19	0.99	29	0.13	0.37	-	-	-	14.11	1.46	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HRS 3100	19027	HRS	13.15	0.98	30	0.1	0.32	12.65	0.25	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HRS 3504	19030	HRS	13.13	0.95	31	0.07	0.26	12.8	0.29	14	13.88	1.46	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SY 3001 2	19060	HRS	13.04	0.99	32	-0.01	0.37	-	-	-	13.97	1.46	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WB HARTLINE	19100	HWS	13.03	0.98	33	-0.03	0.32	12.52	0.25	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Name	UC Number	Crop Type	3-yr Protein (%)			3-yr St.Err.Protein (%)			Diff. from overall mean			St.Err.Dif. from overall mean			2016 Protein (%)			2016 St.Err.Protein (%)			2016 Protein Rank			2015 Protein (%)			2015 St.Err.Protein (%)			2015 Protein Rank			2014 Protein (%)			2014 St.Err.Protein (%)			2014 Protein Rank		
10SB0087 B	19002	HRS	13.03	0.94	34	-0.03	0.21	12.32	0.25	21	14.22	1.46	13	11.88	2.04	11																									
CLEAR WHITE 515	19021	HWS	13.01	0.96	35	-0.05	0.29	-	-	14.19	1.46	14	11.48	2.04	18																										
LCS STAR	19046	HWS	13	0.94	36	-0.06	0.21	11.75	0.25	27	14.69	1.46	4	12.19	2.04	7																									
LCS IRON 11 SB 0096	19045	HRS	12.88	0.98	37	-0.18	0.32	12.37	0.25	20	-	-	-	-	-	-																									
HRS 3419	19029	HRS	12.79	0.95	38	-0.27	0.24	12.27	0.25	22	13.73	1.46	23	-	-	-																									
IDO1203S A	19033	HWS	12.75	0.98	39	-0.3	0.32	12.25	0.25	23	-	-	-	-	-	-																									
YS 601	19107	HWS	12.75	0.99	40	-0.31	0.37	-	-	13.68	1.46	24	-	-	-																										
UC 1743	19074	HWS	12.72	1.02	41	-0.34	0.45	-	-	-	-	-	-	-	-	-																									
UC 1745	19076	HRS	12.71	0.96	42	-0.35	0.29	-	-	13.44	1.46	26	11.87	2.04	12																										
GLEE	19025	HRS	12.71	1.02	43	-0.35	0.45	-	-	-	-	-	-	-	-	-																									
SY 06PN3015 08	19059	HRS	12.68	0.98	44	-0.38	0.32	12.17	0.25	24	-	-	-	-	-	-																									
SY BASALT	19062	HRS	12.65	0.98	45	-0.4	0.32	12.15	0.25	25	-	-	-	-	-	-																									
11SB0096	19003	HRS	12.52	0.96	46	-0.54	0.29	-	-	13.55	1.46	25	11.22	2.04	23																										
SY BASALT	19061	HRS	12.41	1.02	47	-0.65	0.45	-	-	-	-	-	-	-	-	-																									
12SB0131	19004	HWS	12.39	0.99	48	-0.67	0.37	-	-	13.32	1.46	28	-	-	-	-																									
12SB0224	19008	HRS	12.37	0.99	49	-0.69	0.37	11.88	0.29	26	-	-	-	-	-	-																									
LCS ATOMO	19044	HWS	12.28	0.94	50	-0.78	0.21	11.72	0.25	29	13.01	1.46	30	11.53	2.04	17																									
12SB0197	19006	HRS	12.27	0.99	51	-0.79	0.37	11.74	0.29	28	-	-	-	-	-	-																									
12SB0199	19007	HRS	12.18	0.98	52	-0.88	0.32	11.67	0.25	30	-	-	-	-	-	-																									
UI PLATINUM	19077	HWS	12.09	0.94	53	-0.96	0.21	11.55	0.25	31	12.89	1.46	32	11.23	2.04	22																									
12SB0146	19005	HWS	12.03	0.99	54	-1.03	0.37	-	-	12.96	1.46	31	-	-	-	-																									
ANZA	19052	HRS	12	0.99	55	-1.05	0.37	11.5	0.29	32	-	-	-	-	-	-																									
DAYN	19022	HWS	11.97	0.96	56	-1.08	0.29	-	-	13.26	1.46	29	10.29	2.04	25																										
05SB84	9139	HRS	11.83	1.02	57	-1.23	0.45	-	-	-	-	-	-	-	-	-																									

Table 41: Intermountain region, soft common wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Dif. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
WB 6430	19092	SWS	6362	814	1	1429	294	8763	414	2	5300	589	2	-	-	-
WB 6341	19091	SWS	6167	801	2	1233	256	8897	414	1	5303	589	1	5370	2106	6
YS 602	19108	SWS	6155	858	3	1222	385	8401	414	4	-	-	-	-	-	-
WA 8189	19082	SWS	5721	801	4	787	256	8666	414	3	4150	589	12	5555	2106	2
UI STONE	19078	SWS	5661	801	5	728	256	8004	414	7	4697	589	3	5790	2106	1
ALTURAS	19015	SWS	5566	805	6	632	270	8216	462	5	4427	589	7	5545	2106	3
WB 6121	19090	SWS	5443	834	7	510	345	7540	546	9	4687	589	4	-	-	-
12SW052	19009	SWS	5420	814	8	486	294	8014	414	6	4100	589	13	-	-	-
12SW079	19011	SWS	5382	881	9	449	449	-	-	-	4527	589	6	-	-	-
IDO851	19035	SWS	5381	831	10	448	344	-	-	-	4640	589	5	5370	2106	6
12SW068	19010	SWS	5288	814	11	354	294	7560	414	8	4397	589	8	-	-	-
IDO852	19036	SWS	5230	940	12	297	542	-	-	-	-	-	-	5390	2106	4
MELBA	19050	SWS	5229	858	13	295	385	7475	414	10	-	-	-	-	-	-
M 12001	19049	SWS	5229	881	14	295	449	-	-	-	4373	589	9	-	-	-
WA8195	19088	SWS	5110	940	15	177	542	-	-	-	-	-	-	5270	2106	7
WHIT	19105	SWS	5066	801	16	133	256	7323	414	11	4207	589	11	5210	2106	8
WA8162	19080	SWS	5030	940	17	97	542	-	-	-	-	-	-	5190	2106	9
WB1035CL	19101	SWS	4985	940	18	52	542	-	-	-	-	-	-	5145	2106	10
SY 04PN3024 2	19056	SWS	4896	858	19	-38	385	7141	414	12	-	-	-	-	-	-
MERRILL 2	19051	SWS	4895	940	20	-38	542	-	-	-	-	-	-	5055	2106	11
SX908	19055	SWS	4800	940	21	-133	542	-	-	-	-	-	-	4960	2106	13
SEAHAWK	19054	SWS	4776	858	22	-158	385	7021	414	13	-	-	-	-	-	-
WA 8214	19083	SWS	4734	822	23	-199	316	6522	462	16	4337	589	10	-	-	-
WB 1035 CL	19089	SWS	4547	858	24	-387	385	6792	414	14	-	-	-	-	-	-
14SWW1030	19012	SWS	4524	858	25	-410	385	6769	414	15	-	-	-	-	-	-
WB6121	19102	SWS	4365	940	26	-568	542	-	-	-	-	-	-	4525	2106	15
ALPOWA	19014	SWS	4247	824	27	-687	310	6188	414	19	-	-	-	5015	2106	12
LOUISE	19048	SWS	4187	824	28	-747	310	6459	414	17	-	-	-	4295	2106	16
14SWW1059	19013	SWS	3976	858	29	-957	385	6222	414	18	-	-	-	-	-	-
TX06V7266	19068	SRS	3575	940	30	-1358	542	-	-	-	-	-	-	3735	2106	17
DIVA	19023	SWS	3488	801	31	-1446	256	4397	414	21	3647	589	14	4800	2106	14
WA 8236	19085	SWS	2439	858	32	-2495	385	4685	414	20	-	-	-	-	-	-

Table 42: Intermountain region, soft common wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Diff. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
WA 8236	19085	SWS	13.45	1.01	1	1.53	0.36	12.87	0.22	1	-	-	-	-	-	-
MERRILL 2	19051	SWS	13.23	1.08	2	1.31	0.51	-	-	-	-	-	-	12.08	2.38	1
SX908	19055	SWS	13.22	1.08	3	1.3	0.51	-	-	-	-	-	-	12.07	2.38	2
TX06V7266	19068	SRS	13.15	1.08	4	1.23	0.51	-	-	-	-	-	-	12	2.38	3
12SW079	19011	SWS	12.93	1.03	5	1	0.43	-	-	-	13.89	1.41	1	-	-	-
M 12001	19049	SWS	12.59	1.03	6	0.67	0.43	-	-	-	13.55	1.41	3	-	-	-
WB1035CL	19101	SWS	12.47	1.08	7	0.55	0.51	-	-	-	-	-	-	11.31	2.38	4
LOUISE	19048	SWS	12.44	0.99	8	0.51	0.29	12.25	0.22	3	-	-	-	10.5	2.38	11
WB 1035 CL	19089	SWS	12.25	1.01	9	0.33	0.36	11.67	0.22	4	-	-	-	-	-	-
WB6121	19102	SWS	12.21	1.08	10	0.29	0.51	-	-	-	-	-	-	11.05	2.38	5
DIVA	19023	SWS	12.17	0.97	11	0.25	0.24	12.45	0.22	2	12.34	1.41	10	10.51	2.38	10
WB 6121	19090	SWS	12.17	0.99	12	0.25	0.33	11.5	0.29	7	13.19	1.41	4	-	-	-
WA8162	19080	SWS	12.12	1.08	13	0.2	0.51	-	-	-	-	-	-	10.96	2.38	6
14SWW1030	19012	SWS	12.1	1.01	14	0.18	0.36	11.52	0.22	6	-	-	-	-	-	-
12SW052	19009	SWS	12.07	0.98	15	0.15	0.28	11.02	0.22	12	13.66	1.41	2	-	-	-
14SWW1059	19013	SWS	11.95	1.01	16	0.03	0.36	11.37	0.22	8	-	-	-	-	-	-
WA 8214	19083	SWS	11.93	0.99	17	0	0.3	11.6	0.24	5	12.64	1.41	7	-	-	-
SEAHAWK	19054	SWS	11.83	1.01	18	-0.1	0.36	11.25	0.22	9	-	-	-	-	-	-
SY 04PN3024 2	19056	SWS	11.7	1.01	19	-0.22	0.36	11.12	0.22	11	-	-	-	-	-	-
WHIT	19105	SWS	11.66	0.97	20	-0.26	0.24	11.17	0.22	10	12.41	1.41	9	10.63	2.38	9
12SW068	19010	SWS	11.58	0.98	21	-0.35	0.28	10.77	0.22	15	12.84	1.41	6	-	-	-
ALTURAS	19015	SWS	11.52	0.97	22	-0.4	0.26	10.33	0.24	19	12.9	1.41	5	10.66	2.38	8
WA 8189	19082	SWS	11.47	0.97	23	-0.45	0.24	10.85	0.22	14	12.57	1.41	8	10.2	2.38	14
ALPOWA	19014	SWS	11.47	0.99	24	-0.46	0.29	10.92	0.22	13	-	-	-	10.24	2.38	13
IDO852	19036	SWS	11.46	1.08	25	-0.46	0.51	-	-	-	-	-	-	10.31	2.38	12
UI STONE	19078	SWS	11.18	0.97	26	-0.75	0.24	10.35	0.22	18	12.02	1.41	11	10.71	2.38	7
YS 602	19108	SWS	11.15	1.01	27	-0.77	0.36	10.57	0.22	16	-	-	-	-	-	-
WA8195	19088	SWS	11.13	1.08	28	-0.79	0.51	-	-	-	-	-	-	9.97	2.38	15
IDO851	19035	SWS	11.06	0.99	29	-0.87	0.33	-	-	-	11.98	1.41	12	9.95	2.38	16
WB 6430	19092	SWS	10.82	0.98	30	-1.1	0.28	10.45	0.22	17	11.51	1.41	14	-	-	-
MELBA	19050	SWS	10.58	1.01	31	-1.35	0.36	10	0.22	20	-	-	-	-	-	-
WB 6341	19091	SWS	10.46	0.97	32	-1.46	0.24	9.6	0.22	21	11.67	1.41	13	9.51	2.38	17

Table 43: Agronomic traits Common spring wheat 2014 to 2016.

Name	UC. Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
05SB84	9139	55.6	36.3	27	-	-	1	1	-	-	-
10SB0087 B	19002	58.9	32.8	33	-	-	5.8	7	-	69.5	121.5
11SB0096	19003	50.8	31.8	31	-	-	1.6	2	-	-	-
12SB0131	19004	55	33.4	34	-	-	4.7	4.7	-	-	-
12SB0146	19005	54.3	32.8	34	-	-	4	4	-	-	-
12SB0197	19006	58.9	-	37	-	-	1	1	-	72	123
12SB0199	19007	60.5	-	35	-	-	1	2	-	70.5	120.5
12SB0224	19008	60.2	-	33	-	-	2	3	-	74	123
12SW052	19009	58.9	39.3	39	-	-	7	7	-	73	123
12SW068	19010	60.8	39.1	37	-	-	6	6	-	70	119
12SW079	19011	54	40	35	-	-	6.3	6.3	-	-	-
14SWW1030	19012	58.9	-	40	-	-	7	7	-	77	125
14SWW1059	19013	58.9	-	41	-	-	7	7	-	78	126
ALPOWA	19014	59.8	34	39	-	-	7	7	-	74.5	124
ALTURAS	19015	58.8	35.7	37	-	-	6	7	-	72	121
ALUM	19016	60.5	-	40	-	-	4	6	-	71.5	122.5
ANZA	19052	60.2	-	41	-	-	7	7	-	71	123
BUCK PRONTO	19018	57.1	37.3	29.5	-	-	2.3	2.3	-	-	-
BULLSEYE	19019	63.4	33.7	35	-	-	7	7	-	68	122
CLEAR WHITE 515	19021	53.8	31.8	33	-	-	2.6	4	-	-	-
DAYN	19022	55.2	37.1	35	-	-	1.8	2.3	-	-	-
DIVA	19023	57.6	36.1	37	-	-	6.8	7.9	-	72	127.5
GLEE	19025	61.5	40.8	31.5	-	-	4	4	-	-	-
HRS 3100	19027	60.8	-	41	-	-	1.5	2	-	70.5	119
HRS 3361	19028	60.2	32.5	39	-	-	1	4	-	70	119
HRS 3419	19029	60.8	28.1	37	-	-	2	5	-	76	121.5
HRS 3504	19030	58.9	32.3	35.5	-	-	2.5	4	-	70	123
HRS 3530	19031	56.4	34.7	38	-	-	5.7	5.7	-	-	-
IDO1202S	19032	62.1	34.4	38	-	-	5.7	7	-	71	123
IDO1203S A	19033	62.7	-	35.5	-	-	6.5	7	-	67	123

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
IDO851	19035	54.2	33.4	35	-	-	4	5.7	-	-	-
IDO852	19036	57.3	32.9	31.5	-	-	2	2	-	-	-
IDO862E	19038	57.2	37.8	32	-	-	2.5	4	-	-	-
IDO862T	19039	58.1	38.1	33	-	-	2.1	3.3	-	-	-
JEFFERSON	19041	55.8	34.5	35	-	-	5.7	7.3	-	-	-
LCS ATOMO	19044	61.2	35.6	30	-	-	1	2.6	-	66	117
LCS IRON 11 SB 0096	19045	62.1	-	36.5	-	-	1	1	-	71.5	121
LCS STAR	19046	60.8	26.3	34	-	-	5	7	-	69.5	123
LOUISE	19048	60.2	37.9	38	-	-	7	7.7	-	71.5	125
M 12001	19049	52.5	36.1	37	-	-	4.3	4.3	-	-	-
MELBA	19050	60.2	-	35	-	-	7	7	-	73.5	126
MERRILL 2	19051	54.3	31.1	29	-	-	2	2	-	-	-
SEAHAWK	19054	60.5	-	41	-	-	7	7	-	74.5	126
SX908	19055	51.6	33	30	-	-	1	1	-	-	-
SY 04PN3024 2	19056	61.4	-	39	-	-	7	7	-	68	123
SY 04PN3051 9	19057	64	-	41	-	-	3	4	-	71	119
SY 04W40292R	19058	56	38	32	-	-	3.6	6	-	-	-
SY 06PN3015 08	19059	62.1	-	35	-	-	5.5	7	-	67	117
SY 3001 2	19060	54.6	37.8	37	-	-	6	6	-	-	-
SY BASALT	19061	58.1	30.2	28.5	-	-	1	1	-	-	-
SY BASALT 04W40240R	19062	61.1	-	33	-	-	1	3	-	72.5	120
SY BULLSEYE	19019	62	33.5	26.5	-	-	2	2	-	-	-
SY COHO 04W40292R	19064	59.8	-	35	-	-	7	7	-	73	122
SY SELWAY 04PN3001 2	19065	61.1	-	40	-	-	6	7	-	70.5	120.5
SY STEELHEAD	19066	62.9	28.8	39	-	-	4.3	5.9	-	71.5	121.5
TX06V7266	19068	54	27.4	28.5	-	-	1	1	-	-	-
UC 12013 22	19071	52.5	29.7	31	-	-	2.6	4.3	-	-	-
UC 1743	19074	56.7	32.2	30	-	-	3.3	3.3	-	-	-
UC 1744	19075	54.2	34.2	34	-	-	4.2	6.7	-	-	-
UC 1745	19076	55.2	31.5	31	-	-	1.8	2.7	-	-	-
UI PLATINUM	19077	61.7	37.1	31	-	-	1	4.9	-	65	117
UI STONE	19078	60.2	33.3	37	-	-	6.3	7	-	70	120

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
UI WINCHESTER	19079	55.9	35	34	-	-	6.7	7.7	-	-	-
WA 8189	19082	61.4	36.9	39	-	-	7	7	-	71.5	122.5
WA 8214	19083	54.8	34.9	37.5	-	-	7	8	-	67	122
WA 8217	19084	56.8	33.1	35	-	-	6	6	-	-	-
WA 8236	19085	60.8	-	39	-	-	7	7	-	71	120.5
WA8162	19080	56.4	33.9	30	-	-	3.7	3.7	-	-	-
WA8189	19082	57.5	33.2	31.5	-	-	2.7	2.7	-	-	-
WA8195	19088	57	35.1	35	-	-	5.7	5.7	-	-	-
WB 1035 CL	19089	60.2	-	40	-	-	1	2	-	67.5	117
WB 6121	19090	59.8	35.5	35	-	-	5	6	-	67	117
WB 6341	19091	62.1	34.4	38	-	-	2	5	-	67	118.5
WB 6430	19092	62.1	33.1	33	-	-	4	7	-	68	121.5
WB 7417	19093	63	-	39.5	-	-	1	5	-	67	119
WB 9200	19094	64	-	37.5	-	-	1	1	-	67	118
WB 9229	19081	60.8	31.7	32.5	-	-	1	2	-	73	122
WB 9518	19096	62.1	35.9	35	-	-	1	1.3	-	71	119
WB 9668	19082	62.7	30.6	33	-	-	1	4.4	-	67	117.5
WB 9879 CLP	19099	61.8	-	36	-	-	1	5	-	70	121.5
WB HARTLINE	19100	61.1	-	39	-	-	6	7	-	67	120
WB1035CL	19101	56.9	33.8	29.5	-	-	1.7	1.7	-	-	-
WB6121	19102	57.3	33.4	29	-	-	1	1	-	-	-
WB6341	19091	56.5	31	30	-	-	1.3	1.3	-	-	-
WB9518	19104	57.4	33.9	27.5	-	-	1.3	1.3	-	-	-
WHIT	19105	60.8	36.3	36	-	-	6.5	7.3	-	67	122.5
YECORA ROJO	19106	63.4	-	30.5	-	-	1	1	-	67	117
YS 601	19107	54	32.4	34	-	-	1	1	-	-	-
YS 602	19108	61.8	-	38	-	-	6	7	-	68.5	119.5
YS 801	19109	55.5	28.6	36	-	-	5	5	-	-	-
YS 802	19110	55.8	36.9	41	-	-	4.3	4.3	-	-	-
YS 802 1	19111	63.7	-	41	-	-	1	1	-	67	117

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%

Table 44: Disease ratings common spring wheat 2014 to 2016.

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
05SB84	9139	-	-	-	-	-	-	-	-	-	-
10SB0087 B	19002	-	-	-	-	1	1	-	-	-	-
11SB0096	19003	-	-	-	-	-	-	-	-	-	-
12SB0131	19004	-	-	-	-	-	-	-	-	-	-
12SB0146	19005	-	-	-	-	-	-	-	-	-	-
12SB0197	19006	-	-	-	-	1	1	-	-	-	-
12SB0199	19007	-	-	-	-	1	1	-	-	-	-
12SB0224	19008	-	-	-	-	1	1	-	-	-	-
12SW052	19009	-	-	-	-	1	2	-	-	-	-
12SW068	19010	-	-	-	-	1	2	-	-	-	-
12SW079	19011	-	-	-	-	-	-	-	-	-	-
14SWW1030	19012	-	-	-	-	1	1	-	-	-	-
14SWW1059	19013	-	-	-	-	1	1	-	-	-	-
ALPOWA	19014	-	-	-	-	6.2	6.5	-	-	-	-
ALTURAS	19015	-	-	-	-	2	2	-	-	-	-
ALUM	19016	-	-	-	-	1	1	-	-	-	-
ANZA	19052	-	-	-	-	1	1	-	-	-	-
BUCK PRONTO	19018	-	-	-	-	-	-	-	-	-	-
BULLSEYE	19019	-	-	-	-	1	2	-	-	-	-
CLEAR WHITE 515	19021	-	-	-	-	-	-	-	-	-	-
DAYN	19022	-	-	-	-	-	-	-	-	-	-
DIVA	19023	-	-	-	-	1	1	-	-	-	-
GLEE	19025	-	-	-	-	-	-	-	-	-	-
HRS 3100	19027	-	-	-	-	3	5	-	-	-	-
HRS 3361	19028	-	-	-	-	3	5	-	-	-	-
HRS 3419	19029	-	-	-	-	1	3	-	-	-	-
HRS 3504	19030	-	-	-	-	3.5	5.5	-	-	-	-
HRS 3530	19031	-	-	-	-	-	-	-	-	-	-
IDO1202S	19032	-	-	-	-	1.5	3	-	-	-	-
IDO1203S A	19033	-	-	-	-	1.5	2	-	-	-	-

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
IDO851	19035	-	-	-	-	-	-	-	-	-	-
IDO852	19036	-	-	-	-	-	-	-	-	-	-
IDO862E	19038	-	-	-	-	-	-	-	-	-	-
IDO862T	19039	-	-	-	-	-	-	-	-	-	-
JEFFERSON	19041	-	-	-	-	-	-	-	-	-	-
LCS ATOMO	19044	-	-	-	-	1	2	-	-	-	-
LCS IRON 11 SB 0096	19045	-	-	-	-	1	1	-	-	-	-
LCS STAR	19046	-	-	-	-	1	1	-	-	-	-
LOUISE	19048	-	-	-	-	1	3	-	-	-	-
M 12001	19049	-	-	-	-	-	-	-	-	-	-
MELBA	19050	-	-	-	-	1	1	-	-	-	-
MERRILL 2	19051	-	-	-	-	-	-	-	-	-	-
SEAHAWK	19054	-	-	-	-	1	1	-	-	-	-
SX908	19055	-	-	-	-	-	-	-	-	-	-
SY 04PN3024 2	19056	-	-	-	-	1	1	-	-	-	-
SY 04PN3051 9	19057	-	-	-	-	1	1	-	-	-	-
SY 04W40292R	19058	-	-	-	-	-	-	-	-	-	-
SY 06PN3015 08	19059	-	-	-	-	1	1	-	-	-	-
SY 3001 2	19060	-	-	-	-	-	-	-	-	-	-
SY BASALT	19061	-	-	-	-	-	-	-	-	-	-
SY BASALT 04W40240R	19062	-	-	-	-	1	1	-	-	-	-
SY BULLSEYE	19019	-	-	-	-	-	-	-	-	-	-
SY COHO 04W40292R	19064	-	-	-	-	1	1	-	-	-	-
SY SELWAY 04PN3001 2	19065	-	-	-	-	1	1	-	-	-	-
SY STEELHEAD	19066	-	-	-	-	1	1	-	-	-	-
TX06V7266	19068	-	-	-	-	-	-	-	-	-	-
UC 12013 22	19071	-	-	-	-	-	-	-	-	-	-
UC 1743	19074	-	-	-	-	-	-	-	-	-	-
UC 1744	19075	-	-	-	-	-	-	-	-	-	-
UC 1745	19076	-	-	-	-	-	-	-	-	-	-
UI PLATINUM	19077	-	-	-	-	1	2	-	-	-	-
UI STONE	19078	-	-	-	-	1	1	-	-	-	-

Name	UC. Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
UI WINCHESTER	19079	-	-	-	-	-	-	-	-	-	-
WA 8189	19082	-	-	-	-	1	1	-	-	-	-
WA 8214	19083	-	-	-	-	1	2	-	-	-	-
WA 8217	19084	-	-	-	-	-	-	-	-	-	-
WA 8236	19085	-	-	-	-	1	1	-	-	-	-
WA8162	19080	-	-	-	-	-	-	-	-	-	-
WA8189	19082	-	-	-	-	-	-	-	-	-	-
WA8195	19088	-	-	-	-	-	-	-	-	-	-
WB 1035 CL	19089	-	-	-	-	6.5	7	-	-	-	-
WB 6121	19090	-	-	-	-	1	1	-	-	-	-
WB 6341	19091	-	-	-	-	1	2	-	-	-	-
WB 6430	19092	-	-	-	-	1	1	-	-	-	-
WB 7417	19093	-	-	-	-	1.5	2	-	-	-	-
WB 9200	19094	-	-	-	-	1	2	-	-	-	-
WB 9229	19081	-	-	-	-	1	1	-	-	-	-
WB 9518	19096	-	-	-	-	1	1	-	-	-	-
WB 9668	19082	-	-	-	-	1	1	-	-	-	-
WB 9879 CLP	19099	-	-	-	-	4.5	5	-	-	-	-
WB HARTLINE	19100	-	-	-	-	1.5	3	-	-	-	-
WB1035CL	19101	-	-	-	-	-	-	-	-	-	-
WB6121	19102	-	-	-	-	-	-	-	-	-	-
WB6341	19091	-	-	-	-	-	-	-	-	-	-
WB9518	19104	-	-	-	-	-	-	-	-	-	-
WHIT	19105	-	-	-	-	2.5	4	-	-	-	-
YECORA ROJO	19106	-	-	-	-	4	6	-	-	-	-
YS 601	19107	-	-	-	-	-	-	-	-	-	-
YS 602	19108	-	-	-	-	3	4	-	-	-	-
YS 801	19109	-	-	-	-	-	-	-	-	-	-
YS 802	19110	-	-	-	-	-	-	-	-	-	-
YS 802 1	19111	-	-	-	-	5	5	-	-	-	-

Rating scale for diseases (area of flag-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%

### 3.2. Winter wheat

Table 45: Intermountain region, winter wheat yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)		3-yr St.Err.Yield (lb/acre)		3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
LOR 092	29044	SWW	7664	1645	1	1868	632	-	-	-	6290	823	1	-	-	-	-	-
WB EXP 1030 CL	29119	SWW	6784	1645	2	988	632	-	-	-	5410	823	6	-	-	-	-	-
SY OVATION	29102	SWW	6753	1543	3	957	285	9954	540	1	5465	823	5	4490	2194	19	-	-
IDN 07 28017B	29035		6552	1563	4	756	373	9579	540	3	-	-	-	-	-	-	-	-
LOR 833	29046	SWW	6549	1645	5	753	632	-	-	-	5175	823	11	-	-	-	-	-
SY 04PN005 25	29094		6475	1563	6	679	373	9503	540	5	-	-	-	-	-	-	-	-
WB JUNCTION	29084	SWW	6453	1645	7	657	633	-	-	-	-	-	-	4800	2194	3	-	-
BOBTAIL	29011	SWW	6443	1543	8	647	285	9623	540	2	5340	823	8	4060	2194	42	-	-
OR2121086	29075		6438	1563	9	642	373	9465	540	7	-	-	-	-	-	-	-	-
WB EXP 1038 CL	29120	SWW	6398	1645	10	602	633	-	-	-	-	-	-	4745	2194	5	-	-
KELDIN	29039	SWW	6385	1543	11	589	285	9098	540	23	5640	823	2	5045	2194	1	-	-
ROSALYN	29090	SWW	6385	1543	12	589	285	9383	540	10	5335	823	9	4495	2194	18	-	-
OR2090473	29068	SWW	6381	1582	13	585	447	-	-	-	5505	823	3	4230	2194	31	-	-
ARS06134 57C	29009		6367	1563	14	571	373	9394	540	9	-	-	-	-	-	-	-	-
UI WSU HUFFMAN IDN 03 29902A	29002	SWW	6341	1582	15	545	447	-	-	-	5180	823	10	4475	2194	20	-	-
IDN 06 18102A	29034	SWW	6341	1551	16	545	321	9365	540	13	4975	823	13	-	-	-	-	-
LWW14 71195	29057		6340	1563	17	544	373	9368	540	12	-	-	-	-	-	-	-	-
JASPER	29037		6326	1563	18	530	373	9354	540	15	-	-	-	-	-	-	-	-
OR2100940	29072	SWW	6306	1582	19	510	447	-	-	-	5065	823	12	4520	2194	16	-	-
SY 96 2 EXP	29101	SWW	6284	1645	20	488	632	-	-	-	4910	823	17	-	-	-	-	-
WB 1529	29115	SWW	6282	1551	21	486	321	9113	540	22	5495	823	4	-	-	-	-	-
WB 1604	29116	SWW	6274	1551	22	478	321	9147	540	21	5365	823	7	-	-	-	-	-
IDN 04 00405B	29032	SWW	6263	1645	23	467	633	-	-	-	-	-	-	4610	2194	9	-	-
MARY	29059	SWW	6262	1543	24	466	285	9375	540	11	4835	823	21	4405	2194	22	-	-
TUBBS 06	29105	SWW	6255	1543	25	459	285	9540	540	4	4560	823	30	4150	2194	36	-	-
IDN 02 29001A	29030	SWW	6249	1543	26	453	285	9222	540	17	4810	823	22	4825	2194	2	-	-
IDN 02 08806A	29029	SWW	6248	1645	27	452	633	-	-	-	-	-	-	4595	2194	11	-	-
WB 1070 CL	29114	SWW	6233	1645	28	437	633	-	-	-	-	-	-	4580	2194	12	-	-

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
LOR 913	29047	SWW	6214	1645	29	418	632	-	-	-	4840	823	20	-	-	-
IDN 01 10704A	29028	SWW	6201	1582	30	405	447	-	-	-	4770	823	23	4605	2194	10
ORI2101840	29081	SWW	6186	1550	31	390	320	9476	540	6	-	-	3745	2194	51	
BRUNDAGE 96	29013	SWW	6178	1645	32	382	633	-	-	-	-	-	4525	2194	15	
OR2110526	29074	SWW	6169	1551	33	372	321	9434	540	8	4080	823	38	-	-	-
ORLD113092	29087		6165	1563	34	369	373	9192	540	18	-	-	-	-	-	-
LCS BIANCOR	29042	SWW	6159	1543	35	363	285	9361	540	14	4675	823	26	4090	2194	40
TUBBS	29104	SWW	6153	1543	36	357	285	9092	540	24	4925	823	15	4620	2194	8
HUFFMAN	29027		6130	1563	37	334	373	9158	540	19	-	-	-	-	-	-
PUMA WA 8134	29088	SWW	6129	1645	38	333	632	-	-	-	4755	823	24	-	-	-
SY 04PN096 2	29098		6128	1563	39	332	373	9156	540	20	-	-	-	-	-	-
LCS ARTDECO	29041	SWW	6114	1543	40	318	285	9233	540	16	4655	823	28	4275	2194	28
WESTBRED 528	29124	SWW	6108	1645	41	312	633	-	-	-	-	-	4455	2194	21	
YS 221	29129	SWW	6096	1582	42	300	447	-	-	-	4490	823	33	4675	2194	7
OR2080641	29065	SWW	6079	1582	43	283	447	-	-	-	4590	823	29	4540	2194	14
STEPHENS	29093	SWW	6063	1543	44	267	285	9033	540	26	4925	823	16	4345	2194	25
EXPBZ6W09 489	29023		6050	1563	45	254	373	9078	540	25	-	-	-	-	-	-
LWW 11 431	29051	SWW	6044	1645	46	248	632	-	-	-	4670	823	27	-	-	-
LADD	29040	SWW	6041	1582	47	245	447	-	-	-	4925	823	14	4130	2194	37
WB TRIFECTA	29123	SWW	5999	1582	48	203	447	-	-	-	4900	823	18	4070	2194	41
COLONIA	29016	SWW	5973	1645	49	177	633	-	-	-	-	-	4320	2194	26	
LWW 04 4009	29049	SWW	5973	1645	50	177	633	-	-	-	-	-	4320	2194	26	
IDN 06 033038	29033	SWW	5924	1645	51	128	632	-	-	-	4550	823	31	-	-	-
SY 04PN077 23	29082		5915	1563	52	119	373	8943	540	27	-	-	-	-	-	-
BRUNEAU	29014	SWW	5911	1582	53	115	447	-	-	-	4010	823	40	4785	2194	4
YS 343	29131	SWW	5903	1645	54	107	633	-	-	-	-	-	4250	2194	30	
SKILES	29092		5896	1582	55	100	447	-	-	-	4505	823	32	4260	2194	29
LWW 12 7105	29052	SWW	5884	1582	56	88	447	-	-	-	4845	823	19	3895	2194	48
DAS 004	29018	SWW	5859	1645	57	63	632	-	-	-	4485	823	34	-	-	-
LWW14 73163	29058		5835	1563	58	39	373	8863	540	28	-	-	-	-	-	-
LWW12 7105	29055		5834	1563	59	38	373	8862	540	29	-	-	-	-	-	-
ORCF 103	29080	SWW	5833	1645	60	37	633	-	-	-	-	-	4180	2194	32	
DAS 003	29017	SWW	5829	1645	61	33	632	-	-	-	4455	823	35	-	-	-
AP BADGER	29006	SWW	5828	1645	62	32	633	-	-	-	-	-	4175	2194	33	

Name	UC Number	Crop Type	3-yr Yield (lb/acre)		3-yr St.Err.Yield (lb/acre)		3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)		2016 St.Err.Yield (lb/acre)		2016 Yield Rank	2015 Yield (lb/acre)		2015 St.Err.Yield (lb/acre)		2015 Yield Rank	2014 Yield (lb/acre)		2014 St.Err.Yield (lb/acre)		2014 Yield Rank				
			3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean				2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank	2013 Yield (lb/acre)	2013 St.Err.Yield (lb/acre)	2013 Yield Rank	2012 Yield (lb/acre)	2012 St.Err.Yield (lb/acre)	2012 Yield Rank				
AP 700 CL	29005	SWW	5823	1645	63	27	633	-	-	-	-	-	-	-	4170	2194	34	-	-	-	-	-	-	-	-			
AZIMUT	29010	HRW	5778	1645	64	-18	633	-	-	-	-	-	-	-	4125	2194	38	-	-	-	-	-	-	-	-			
LWW 10 1073	29050	SWW	5759	1582	65	-37	447	-	-	-	-	3970	823	42	4520	2194	16	-	-	-	-	-	-	-	-			
OR2090533	29069	SWW	5753	1645	66	-43	633	-	-	-	-	-	-	-	4100	2194	39	-	-	-	-	-	-	-	-			
EXCEDE	29019	SWW	5703	1645	67	-93	633	-	-	-	-	-	-	-	4050	2194	43	-	-	-	-	-	-	-	-			
IDO1108	29036	SWW	5694	1543	68	-102	285	8411	540	35	4710	823	25	4580	2194	13	-	-	-	-	-	-	-	-	-			
ORI2101841	29083	SWW	5683	1645	69	-113	633	-	-	-	-	-	-	-	4030	2194	44	-	-	-	-	-	-	-	-			
OR2100937	29071	SWW	5663	1645	70	-133	633	-	-	-	-	-	-	-	4010	2194	45	-	-	-	-	-	-	-	-			
SIETTE CERROS	29091	SWW	5658	1645	71	-138	633	-	-	-	-	-	-	-	4005	2194	46	-	-	-	-	-	-	-	-			
LOR 978	29048	SWW	5654	1645	72	-142	632	-	-	-	4280	823	36	-	-	-	-	-	-	-	-	-	-	-	-			
LEGION	29043	SWW	5631	1582	73	-165	447	-	-	-	3550	823	50	4685	2194	6	-	-	-	-	-	-	-	-	-			
SY 107	29099	SWW	5600	1551	74	-196	321	8816	540	30	3660	823	48	-	-	-	-	-	-	-	-	-	-	-	-			
EXPBZ6W09 471	29022		5526	1563	75	-270	373	8553	540	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
GOETZE	29026	SWW	5499	1582	76	-297	447	-	-	-	3610	823	49	4360	2194	24	-	-	-	-	-	-	-	-	-			
WB EXP 458	29121	SWW	5488	1645	77	-308	633	-	-	-	-	-	-	-	3835	2194	49	-	-	-	-	-	-	-	-			
OR2121252	29076		5464	1563	78	-332	373	8492	540	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
YS 9568 A	29134	SWW	5454	1645	79	-342	632	-	-	-	4080	823	38	-	-	-	-	-	-	-	-	-	-	-	-			
ORCF 102	29079	SWW	5429	1582	80	-367	447	-	-	-	4020	823	39	3810	2194	50	-	-	-	-	-	-	-	-	-			
SY 04PN066 7	29096		5397	1563	81	-400	373	8424	540	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
LWW14 71032	29056		5396	1563	82	-400	373	8423	540	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
ORLD111833	29085		5373	1563	83	-423	373	8401	540	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
WB 436	29117	SWW	5358	1645	84	-438	633	-	-	-	-	-	-	-	3705	2194	52	-	-	-	-	-	-	-	-	-		
LOR 334	29045	SWW	5329	1645	85	-467	632	-	-	-	3955	823	43	-	-	-	-	-	-	-	-	-	-	-	-	-		
KASEBERG	29038	SWW	5328	1543	86	-468	285	8116	540	39	3985	823	41	4365	2194	23	-	-	-	-	-	-	-	-	-	-		
ORCF 101	29077	SWW	5319	1582	87	-477	447	-	-	-	3670	823	47	3940	2194	47	-	-	-	-	-	-	-	-	-	-		
YS 261	29130	SWW	5281	1582	88	-515	447	-	-	-	3380	823	51	4155	2194	35	-	-	-	-	-	-	-	-	-	-		
ORLD112334	29086		5252	1563	89	-544	373	8280	540	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
OR2100267	29070	SWW	5243	1645	90	-553	633	-	-	-	-	-	-	-	3590	2194	53	-	-	-	-	-	-	-	-	-	-	
NORWEST 554	29061	HRW	5233	1645	91	-563	633	-	-	-	-	-	-	-	3580	2194	54	-	-	-	-	-	-	-	-	-	-	
WA 8169	29111	SWW	5214	1645	92	-582	632	-	-	-	3840	823	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CARA	29015	Club	5168	1645	93	-628	633	-	-	-	-	-	-	-	3515	2194	55	-	-	-	-	-	-	-	-	-	-	-
WB EXP 1028 CL	29118	SWW	5164	1645	94	-632	632	-	-	-	3790	823	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SY 71 4 EXP	29100	SWW	5154	1645	95	-642	632	-	-	-	3780	823	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WINCAL 09196	29126	HRW	5088	1550	96	-708	320	8121	540	38	-	-	-	-	3420	2194	56	-	-	-	-	-	-	-	-	-	-	-

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
WA 8206	29112		5018	1563	97	-778	373	8045	540	40	-	-	-	-	-	-
WA 8232	29113		4877	1563	98	-919	373	7905	540	41	-	-	-	-	-	-
OR2101043	29073	SWW	4735	1551	99	-1061	321	7796	540	42	3260	823	53	-	-	-
OR2080637	29064	SWW	4719	1645	100	-1077	632	-	-	-	3345	823	52	-	-	-
YAMHILL	29128	SWW	3602	1551	101	-2194	321	6474	540	44	2695	823	54	-	-	-
20060126 35C	29003		3480	1563	102	-2316	373	6508	540	43	-	-	-	-	-	-
WINCORA	29127		3110	1563	103	-2686	373	6137	540	45	-	-	-	-	-	-
VERDANT	29107		2846	1571	104	-2950	407	5863	571	46	-	-	-	-	-	-

Table 46: Intermountain region, winter wheat protein 2014 to 2016.

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
WINCORA	29127		14.29	1.25	1	2.32	0.33	12.62	0.57	1	-	-	-	-	-
VERDANT	29107		14.18	1.26	2	2.22	0.36	12.51	0.58	2	-	-	-	-	-
WB EXP 1028 CL	29118	SWW	13.66	1.33	3	1.69	0.57	-	-	-	14.93	0.75	1	-	-
WB EXP 1030 CL	29119	SWW	13.09	1.33	4	1.12	0.57	-	-	-	14.36	0.75	7	-	-
ORCF 101	29077	SWW	13.04	1.27	5	1.07	0.4	-	-	-	14.44	0.75	6	13.3	4.15
WB EXP 458	29121	SWW	12.98	1.33	6	1.01	0.57	-	-	-	-	-	13.38	4.15	1
OR2100267	29070	SWW	12.79	1.33	7	0.82	0.57	-	-	-	-	-	13.19	4.15	4
LOR 978	29048	SWW	12.77	1.33	8	0.8	0.57	-	-	-	14.04	0.75	10	-	-
DAS 003	29017	SWW	12.74	1.33	9	0.77	0.57	-	-	-	14.01	0.75	11	-	-
YAMHILL	29128	SWW	12.68	1.24	10	0.71	0.29	10.8	0.57	4	14.59	0.75	2	-	-
WA 8169	29111	SWW	12.66	1.33	11	0.69	0.57	-	-	-	13.93	0.75	13	-	-
IDN 06 033038	29033	SWW	12.66	1.33	12	0.69	0.57	-	-	-	13.93	0.75	12	-	-
OR2090533	29069	SWW	12.63	1.33	13	0.66	0.57	-	-	-	-	-	13.03	4.15	5
ORCF 102	29079	SWW	12.61	1.27	14	0.64	0.4	-	-	-	13.6	0.75	18	13.28	4.15
EXCEDE	29019	SWW	12.6	1.33	15	0.63	0.57	-	-	-	-	-	13	4.15	6
YS 261	29130	SWW	12.53	1.27	16	0.57	0.4	-	-	-	14.48	0.75	5	12.25	4.15
WINCAL 09196	29126	HRW	12.49	1.24	17	0.52	0.29	11.09	0.57	3	-	-	-	12.08	4.15
BRUNDAGE 96	29013	SWW	12.49	1.33	18	0.52	0.57	-	-	-	-	-	12.89	4.15	7
20060126 35C	29003		12.43	1.25	19	0.46	0.33	10.76	0.57	5	-	-	-	-	-
OR2101043	29073	SWW	12.41	1.24	20	0.44	0.29	10.44	0.57	14	14.57	0.75	3	-	-
LEGION	29043	SWW	12.37	1.27	21	0.4	0.4	-	-	-	14.04	0.75	9	12.37	4.15
OR2100937	29071	SWW	12.36	1.33	22	0.39	0.57	-	-	-	-	-	12.76	4.15	11
EXPBZ6W09 471	29022		12.33	1.25	23	0.36	0.33	10.66	0.57	7	-	-	-	-	-
SY 04PN096 2	29098		12.29	1.25	24	0.32	0.33	10.62	0.57	8	-	-	-	-	-
LOR 334	29045	SWW	12.29	1.33	25	0.32	0.57	-	-	-	13.56	0.75	20	-	-
SY 04PN066 7	29096		12.26	1.25	26	0.29	0.33	10.59	0.57	10	-	-	-	-	-
LWW14 71032	29056		12.26	1.25	27	0.29	0.33	10.59	0.57	11	-	-	-	-	-
AZIMUT	29010	HRW	12.26	1.33	28	0.29	0.57	-	-	-	-	-	-	12.66	4.15
WA 8232	29113		12.25	1.25	29	0.28	0.33	10.58	0.57	12	-	-	-	-	-
NORWEST 554	29061	HRW	12.24	1.33	30	0.27	0.57	-	-	-	-	-	-	12.64	4.15
LWW 10 1073	29050	SWW	12.23	1.27	31	0.26	0.4	-	-	-	14.05	0.75	8	12.07	4.15
OR2080637	29064	SWW	12.23	1.33	32	0.26	0.57	-	-	-	13.49	0.75	21	-	-
WA 8206	29112		12.19	1.25	33	0.22	0.33	10.52	0.57	13	-	-	-	-	-

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
STEPHENS	29093	SWW	12.17	1.23	34	0.2	0.25	10.31	0.57	20	13.78	0.75	15	12.8	4.15	9
ORCF 103	29080	SWW	12.17	1.33	35	0.2	0.57	-	-	-	-	-	-	12.57	4.15	16
AP 700 CL	29005	SWW	12.12	1.33	36	0.15	0.57	-	-	-	-	-	-	12.52	4.15	18
IDN 02 08806A	29029	SWW	12.1	1.33	37	0.13	0.57	-	-	-	-	-	-	12.5	4.15	19
DAS 004	29018	SWW	12.1	1.33	38	0.13	0.57	-	-	-	13.36	0.75	22	-	-	-
IDN 06 18102A	29034	SWW	12.09	1.24	39	0.12	0.29	10.3	0.57	22	13.72	0.75	16	-	-	-
IDN 02 29001A	29030	SWW	12.08	1.23	40	0.12	0.25	10.33	0.57	18	13.65	0.75	17	12.45	4.15	23
IDN 04 00405B	29032	SWW	12.08	1.33	41	0.11	0.57	-	-	-	-	-	-	12.48	4.15	20
COLONIA	29016	SWW	12.08	1.33	42	0.11	0.57	-	-	-	-	-	-	12.48	4.15	21
IDO1108	29036	SWW	12.07	1.23	43	0.11	0.25	10.61	0.57	9	13.24	0.75	25	11.98	4.15	45
CARA	29015	Club	12.05	1.33	44	0.08	0.57	-	-	-	-	-	-	12.45	4.15	22
JASPER	29037		12.03	1.25	45	0.06	0.33	10.36	0.57	15	-	-	-	-	-	-
SY 04PN077 23	29082		12.02	1.25	46	0.06	0.33	10.35	0.57	16	-	-	-	-	-	-
MARY	29059	SWW	12.02	1.23	47	0.05	0.25	10.09	0.57	33	13.88	0.75	14	12.59	4.15	15
ORLD112334	29086		12.01	1.25	48	0.04	0.33	10.34	0.57	17	-	-	-	-	-	-
ORI2101841	29083	SWW	12	1.33	49	0.03	0.57	-	-	-	-	-	-	12.4	4.15	25
ORLD111833	29085		11.98	1.25	50	0.01	0.33	10.31	0.57	21	-	-	-	-	-	-
EXPBZ6W09 489	29023		11.92	1.25	51	-0.05	0.33	10.25	0.57	23	-	-	-	-	-	-
IDN 07 28017B	29035		11.86	1.25	52	-0.1	0.33	10.2	0.57	25	-	-	-	-	-	-
WB 1070 CL	29114	SWW	11.86	1.33	53	-0.11	0.57	-	-	-	-	-	-	12.26	4.15	30
WB TRIFECTA	29123	SWW	11.86	1.27	54	-0.11	0.4	-	-	-	12.79	0.75	34	12.6	4.15	14
WB 1604	29116	SWW	11.86	1.24	55	-0.11	0.29	10.32	0.57	19	12.74	0.75	35	-	-	-
LWW14 71195	29057		11.83	1.25	56	-0.14	0.33	10.16	0.57	26	-	-	-	-	-	-
SY 107	29099	SWW	11.83	1.24	57	-0.14	0.29	9.69	0.57	45	14.51	0.75	4	-	-	-
OR2100940	29072	SWW	11.82	1.27	58	-0.14	0.4	-	-	-	13.33	0.75	23	11.98	4.15	44
ARS06134 57C	29009		11.81	1.25	59	-0.16	0.33	10.14	0.57	28	-	-	-	-	-	-
LWW14 73163	29058		11.8	1.25	60	-0.16	0.33	10.14	0.57	29	-	-	-	-	-	-
SY 04PN005 25	29094		11.8	1.25	61	-0.16	0.33	10.14	0.57	30	-	-	-	-	-	-
ORLD113092	29087		11.79	1.25	62	-0.17	0.33	10.13	0.57	31	-	-	-	-	-	-
OR2110526	29074	SWW	11.79	1.24	63	-0.17	0.29	9.95	0.57	39	13.58	0.75	19	-	-	-
BOBTAIL	29011	SWW	11.78	1.23	64	-0.19	0.25	10.21	0.57	24	12.71	0.75	36	12.24	4.15	32
WB EXP 1038 CL	29120	SWW	11.78	1.33	65	-0.19	0.57	-	-	-	-	-	-	12.18	4.15	33
HUFFMAN	29027		11.76	1.25	66	-0.2	0.33	10.1	0.57	32	-	-	-	-	-	-
OR2121252	29076		11.75	1.25	67	-0.21	0.33	10.09	0.57	34	-	-	-	-	-	-

Name	UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
KELDIN	29039	SWW	11.75	1.23	68	-0.22	0.25	10.68	0.57	6	12.29	0.75	46	11.05	4.15	54
LWW12 7105	29055	SWW	11.73	1.25	69	-0.24	0.33	10.06	0.57	36	-	-	-	-	-	-
YS 9568 A	29134	SWW	11.73	1.33	70	-0.24	0.57	-	-	-	12.99	0.75	29	-	-	-
WESTBRED 528	29124	SWW	11.72	1.33	71	-0.25	0.57	-	-	-	-	-	-	12.12	4.15	34
GOETZE	29026	SWW	11.71	1.27	72	-0.25	0.4	-	-	-	13.09	0.75	26	12.01	4.15	41
WB 436	29117	SWW	11.71	1.33	73	-0.26	0.57	-	-	-	-	-	-	12.11	4.15	35
ORI2101840	29081	SWW	11.71	1.24	74	-0.26	0.29	9.9	0.57	40	-	-	-	12.53	4.15	17
AP BADGER	29006	SWW	11.7	1.33	75	-0.27	0.57	-	-	-	-	-	-	12.1	4.15	36
TUBBS 06	29105	SWW	11.66	1.23	76	-0.31	0.25	10.07	0.57	35	11.97	0.75	51	12.78	4.15	10
TUBBS	29104	SWW	11.65	1.23	77	-0.31	0.25	9.87	0.57	41	12.93	0.75	30	12.39	4.15	26
OR2080641	29065	SWW	11.65	1.27	78	-0.32	0.4	-	-	-	13.05	0.75	27	11.91	4.15	47
WB 1529	29115	SWW	11.65	1.24	79	-0.32	0.29	10.15	0.57	27	12.41	0.75	44	-	-	-
KASEBERG	29038	SWW	11.6	1.23	80	-0.36	0.25	9.8	0.57	42	13.26	0.75	24	12.01	4.15	40
SY OVATION	29102	SWW	11.6	1.23	81	-0.37	0.25	9.78	0.57	43	12.51	0.75	39	12.81	4.15	8
LOR 913	29047	SWW	11.6	1.33	82	-0.37	0.57	-	-	-	12.87	0.75	31	-	-	-
LWW 11 431	29051	SWW	11.6	1.33	83	-0.37	0.57	-	-	-	12.86	0.75	32	-	-	-
YS 343	29131	SWW	11.59	1.33	84	-0.38	0.57	-	-	-	-	-	-	11.99	4.15	43
SKILES	29092	SWW	11.56	1.27	85	-0.41	0.4	-	-	-	12.36	0.75	45	12.43	4.15	24
SY 71 4 EXP	29100	SWW	11.54	1.33	86	-0.43	0.57	-	-	-	12.81	0.75	33	-	-	-
YS 221	29129	SWW	11.47	1.27	87	-0.5	0.4	-	-	-	12.66	0.75	37	11.95	4.15	46
OR2090473	29068	SWW	11.43	1.27	88	-0.54	0.4	-	-	-	12.5	0.75	40.5	12.02	4.15	39
ROSALYN	29090	SWW	11.39	1.23	89	-0.57	0.25	9.98	0.57	38	11.8	0.75	52	11.9	4.15	48
LADD	29040	SWW	11.36	1.27	90	-0.61	0.4	-	-	-	12.02	0.75	49	12.37	4.15	28
LOR 833	29046	SWW	11.29	1.33	91	-0.68	0.57	-	-	-	12.55	0.75	38	-	-	-
LCS ARTDECO	29041	SWW	11.28	1.23	92	-0.69	0.25	9.99	0.57	37	12.46	0.75	43	10.62	4.15	56
LCS BIANCOR	29042	SWW	11.25	1.23	93	-0.72	0.25	9.73	0.57	44	12.12	0.75	47	11.61	4.15	51
LWW 04 4009	29049	SWW	11.24	1.33	94	-0.73	0.57	-	-	-	-	-	-	11.64	4.15	50
SY 96 2 EXP	29101	SWW	11.23	1.33	95	-0.74	0.57	-	-	-	12.5	0.75	40.5	-	-	-
BRUNEAU	29014	SWW	11.22	1.27	96	-0.74	0.4	-	-	-	13	0.75	28	11.11	4.15	53
PUMA WA 8134	29088	SWW	11.21	1.33	97	-0.76	0.57	-	-	-	12.47	0.75	42	-	-	-
UI WSU HUFFMAN IDN 03 29902A	29002	SWW	11.18	1.27	98	-0.79	0.4	-	-	-	11.71	0.75	53	12.31	4.15	29
IDN 01 10704A	29028	SWW	11.17	1.27	99	-0.8	0.4	-	-	-	12	0.75	50	12	4.15	42
LWW 12 7105	29052	SWW	11.14	1.27	100	-0.83	0.4	-	-	-	12.06	0.75	48	11.89	4.15	49
WB JUNCTION	29084	SWW	10.92	1.33	101	-1.05	0.57	-	-	-	-	-	-	11.32	4.15	52

Name		UC Number	Crop Type	3-yr Protein (%)	3-yr St.Err.Protein (%)	3-yr Protein Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Protein (%)	2016 St.Err.Protein (%)	2016 Protein Rank	2015 Protein (%)	2015 St.Err.Protein (%)	2015 Protein Rank	2014 Protein (%)	2014 St.Err.Protein (%)	2014 Protein Rank
OR2121086		29075		10.88	1.25	102	-1.08	0.33	9.21	0.57	46	-	-	-	-	-	-
SIETTE CERROS		29091	SWW	10.39	1.33	103	-1.58	0.57	-	-	-	-	-	-	10.79	4.15	55
LOR 092		29044	SWW	9.75	1.33	104	-2.22	0.57	-	-	-	11.02	0.75	54	-	-	-

Table 47: Agronomic traits of winter wheat 2014 to 2016.

Name	UC. Number	Test.Weight..lb.bu.	X1000.KernelWeight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from..3.1..Davis.	Days.to.maturity..from..3.1..Davis.
20060126 35C	29003	59.8	-	44	-	-	5	6.5	-	-	-
AP 700 CL	29005	53.4	33.5	32	-	-	-	-	-	167	208
AP BADGER	29006	52.2	30.8	30	-	-	-	-	-	167	208
ARS06134 57C	29009	58.9	-	38.9	-	-	2.5	6.5	-	-	-
AZIMUT	29010	49.2	23	27	-	-	-	-	-	161	203
BOBTAIL	29011	58.6	26.2	38.2	1	1	2	2.4	-	132	171.5
BRUNDAGE 96	29013	53.3	28.8	31	-	-	-	-	-	167	208
BRUNEAU	29014	53.1	26.6	37.5	2.7	2.7	5.7	5.7	-	134	170.5
CARA	29015	51.2	23.4	29.5	-	-	-	-	-	170	211
COLONIA	29016	52.3	28.8	29.5	-	-	-	-	-	169	207
DAS 003	29017	48.7	25.8	36	1	1	1	1	-	103	140
DAS 004	29018	50	27.8	37	1	1	1.7	1.7	-	102	137
EXCEDE	29019	50.5	27.3	25.5	-	-	-	-	-	167	207
EXPBZ6W09 471	29022	59.8	-	40.9	-	-	3	4	-	-	-
EXPBZ6W09 489	29023	60.8	-	38.2	-	-	1	1	-	-	-
GOETZE	29026	49.5	24.9	33.5	1	1	1	1	-	128.5	167
HUFFMAN	29027	59.4	-	41.7	-	-	3.5	6.5	-	-	-
IDN 01 10704A	29028	50.4	28.9	38.5	2	2	3.7	3.7	-	131	170
IDN 02 08806A	29029	53.8	28	32	-	-	-	-	-	165	208
IDN 02 29001A	29030	59.2	29.1	38.7	1.7	1.7	5	5.4	-	132	169.5
IDN 03 29902A	29002	54	28.7	33.5	-	-	-	-	-	169	212
IDN 04 00405B	29032	52.6	26	30.5	-	-	-	-	-	161	206
IDN 06 033038	29033	48.8	27.5	37.5	1	1	1	1	-	99	132
IDN 06 18102A	29034	57.9	25.2	39.4	2	2	3	5.4	-	100	135
IDN 07 28017B	29035	59.8	-	38	-	-	1	1.5	-	-	-
IDO1108	29036	57	27.6	42.7	2.3	2.3	5	6.4	-	135	175.5
JASPER	29037	58.9	-	41.3	-	-	3.5	4	-	-	-
KASEBERG	29038	56.6	23	36	1	1	5	6	-	133	172
KELDIN	29039	61.1	35.4	38.5	4.7	4.7	2	3.9	-	129	167.5
LADD	29040	52.4	33.5	34.5	1	1	1	1	-	134	173

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
LCS ARTDECO	29041	57.6	27.7	35.2	1.7	1.7	1	1	-	131	165
LCS BIANCOR	29042	57.3	27.8	32.9	1	1	1	1.3	-	133	169
LEGION	29043	49.8	28.6	38	1.7	1.7	2.7	2.7	-	132.5	169
LOR 092	29044	54.8	34.7	43.5	1	1	1.3	1.3	-	102	135
LOR 334	29045	47	25.4	33	1	1	1.3	1.3	-	98	130
LOR 833	29046	50.7	28.7	35.5	1	1	1.3	1.3	-	96	131
LOR 913	29047	50.6	29.9	37.5	1.7	1.7	3	3	-	97	131
LOR 978	29048	49.9	29.9	36.5	1	1	1.7	1.7	-	99	132
LWW 04 4009	29049	56.5	34.2	30.5	-	-	-	-	-	171	209
LWW 10 1073	29050	51.9	28.7	39.5	1	1	1.3	1.3	-	136	171.5
LWW 11 431	29051	51.6	27.1	40.5	1	1	2.3	2.3	-	99	131
LWW 12 7105	29052	48.6	27.6	29.5	1	1	1	1	-	128.5	165.5
LWW12 7105	29055	57.6	-	31.5	-	-	1	1	-	-	-
LWW14 71032	29056	60.2	-	42.8	-	-	2.5	5.5	-	-	-
LWW14 71195	29057	57.9	-	37.7	-	-	1	1	-	-	-
LWW14 73163	29058	61.4	-	40.7	-	-	1	1	-	-	-
MARY	29059	59.5	26	36.5	1	1	1	4.4	-	132	166.5
NORWEST 554	29061	56.1	26.1	29	-	-	-	-	-	162	212
OR2080637	29064	48.5	27.1	33.5	1	1	1.7	1.7	-	103	135
OR2080641	29065	50	28	36.5	1	1	1	1	-	132	171.5
OR2090473	29068	51	28.4	33.5	1	1	1.7	1.7	-	130.5	168.5
OR2090533	29069	50.5	25.6	31.5	-	-	-	-	-	170	211
OR2100267	29070	52.1	26.1	33	-	-	-	-	-	168	212
OR2100937	29071	51.2	28.6	28.5	-	-	-	-	-	166	208
OR2100940	29072	50.2	28.9	35	1	1	1.7	1.7	-	129.5	168.5
OR2101043	29073	57	25.7	40.4	1	1	4	6	-	101	127
OR2110526	29074	59.5	27.6	38.1	1	1	2.3	4.4	-	99	132
OR2121086	29075	60.2	-	41.3	-	-	1	1	-	-	-
OR2121252	29076	58.6	-	39.3	-	-	1	1	-	-	-
ORCF 101	29077	50.6	27.7	34.5	1	1	1	1	-	133	171
ORCF 102	29079	52.9	29.2	37.5	1	1	1	1	-	133	171
ORCF 103	29080	54.2	31.5	33.5	-	-	-	-	-	168	213

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
ORI2101840	29081	53.5	29.3	32	-	-	-	-	-	166	209
ORI2101841	29083	53.1	30.1	32.5	-	-	-	-	-	165	207
ORLD111833	29085	59.5	-	36.9	-	-	1	2	-	-	-
ORLD112334	29086	58.9	-	41	-	-	1	1	-	-	-
ORLD113092	29087	59.5	-	45.1	-	-	3	5.5	-	-	-
PUMA WA 8134	29088	50.5	28.4	38	4.3	4.3	7.3	7.3	-	99	131
ROSYLYN	29090	59.2	28.8	38.5	1	1	1	1.4	-	132.5	172
SIETTE CERROS	29091	55.8	27.5	35	-	-	-	-	-	160	204
SKILES	29092	51.5	31.9	35	1	1	1	1	-	133.5	173
STEPHENS	29093	58.2	33.1	38.1	1.3	1.3	1.7	6.4	-	130.5	172
SY 04PN005 25	29094	58.6	-	40.5	-	-	3	5.5	-	-	-
SY 04PN062 18	29081	59.8	-	37	-	-	1	3	-	-	-
SY 04PN066 7	29096	57.3	-	39.4	-	-	2.5	4	-	-	-
SY 04PN077 23	29082	58.9	-	40.2	-	-	1	1	-	-	-
SY 04PN096 2	29098	60.5	-	36.8	-	-	1	1	-	-	-
SY 107	29099	59.5	25.8	39.7	2.7	2.7	4	7	-	101	129
SY 71 4 EXP	29100	49	27	35.5	1.3	1.3	2.3	2.3	-	102	135
SY 96 2 EXP	29101	51.7	30	37	3.7	3.7	6.7	6.7	-	96	133
SY OVATION	29102	59.2	37	39	1	1	1	1	-	133.5	170.5
TUBBS	29104	56.7	31.9	41.2	1	1	1	6	-	132.5	171.5
TUBBS 06	29105	57.9	31.6	43.6	1	1	1	5	-	133.5	172.5
UI WSU HUFFMAN IDN 03 29902A	29002	53.1	29.4	38.5	1	1	1.3	1.3	-	101	135
VERDANT	29107	47.4	-	47.2	-	-	5	5.6	-	-	-
WA 8169	29111	47.4	28.3	38.5	1	1	2.3	2.3	-	100	131
WA 8206	29112	59.8	-	41.7	-	-	3.5	5.5	-	-	-
WA 8232	29113	59.5	-	41.7	-	-	6	7	-	-	-
WB 1070 CL	29114	56.5	33.9	31	-	-	-	-	-	156	204
WB 1529	29115	61.1	34	36.3	1.3	1.3	2.7	4.4	-	99	135
WB 1604	29116	60.8	29.2	39.4	1	1	1	2.4	-	98	135
WB 436	29117	54.9	32	28.5	-	-	-	-	-	159	203
WB EXP 1028 CL	29118	50.4	24	34	1	1	1	1	-	99	129
WB EXP 1030 CL	29119	53.9	28	39	1	1	1.7	1.7	-	99	134

Name	UC.Number	Test.Weight..lb.bu.	X1000.Kernel.Weight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
WB EXP 1038 CL	29120	53.2	29.2	35.5	-	-	-	-	-	162	206
WB EXP 458	29121	53.1	31	31	-	-	-	-	-	161	203
WB JUNCTION	29084	55	31.4	32	-	-	-	-	-	159	202
WB TRIFECTA	29123	52	32.3	36	1	1	1	1	-	130	172
WESTBRED 528	29124	54.8	31.8	33.5	-	-	-	-	-	158	208
WINCAL 09196	29126	62.1	25.9	30.9	-	-	1	1	-	160	206
WINCORA	29127	61.8	-	31	-	-	1	1	-	-	-
YAMHILL	29128	57.6	28.2	43.2	4.3	4.3	6	6.4	-	105	135
YS 221	29129	52.5	26.4	37.5	1	1	2	2	-	132.5	172
YS 261	29130	51.1	27.9	34.5	1.3	1.3	1.7	1.7	-	135	171
YS 343	29131	55.2	25.8	30	-	-	-	-	-	170	213
YS 9568 A	29134	49.8	26.2	35	1	1	1.3	1.3	-	99	129

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%

Table 48: Disease ratings of winter wheat 2014 to 2016.

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
20060126 35C	29003	-	-	-	-	-	-	-	-
AP 700 CL	29005	-	-	-	-	-	-	-	-
AP BADGER	29006	-	-	-	-	-	-	-	-
ARS06134 57C	29009	-	-	-	-	-	-	-	-
AZIMUT	29010	-	-	-	-	-	-	-	-
BOBTAIL	29011	-	-	-	-	-	-	1.3	1.3
BRUNDAGE 96	29013	-	-	-	-	-	-	-	-
BRUNEAU	29014	-	-	-	-	-	-	2.3	2.3
CARA	29015	-	-	-	-	-	-	-	-
COLONIA	29016	-	-	-	-	-	-	-	-
DAS 003	29017	-	-	-	-	-	-	1.7	1.7
DAS 004	29018	-	-	-	-	-	-	2	2
EXCEDE	29019	-	-	-	-	-	-	-	-
EXPBZ6W09 471	29022	-	-	-	-	-	-	-	-
EXPBZ6W09 489	29023	-	-	-	-	-	-	-	-
GOETZE	29026	-	-	-	-	-	-	2	2
HUFFMAN	29027	-	-	-	-	-	-	-	-
IDN 01 10704A	29028	-	-	-	-	-	-	1.7	1.7
IDN 02 08806A	29029	-	-	-	-	-	-	-	-
IDN 02 29001A	29030	-	-	-	-	-	-	2.3	2.3
IDN 03 29902A	29002	-	-	-	-	-	-	-	-
IDN 04 00405B	29032	-	-	-	-	-	-	-	-
IDN 06 033038	29033	-	-	-	-	-	-	1.3	1.3
IDN 06 18102A	29034	-	-	-	-	-	-	1	1
IDN 07 28017B	29035	-	-	-	-	-	-	-	-
IDO1108	29036	-	-	-	-	-	-	1.3	1.3
JASPER	29037	-	-	-	-	-	-	-	-
KASEBERG	29038	-	-	-	-	-	-	1.3	1.3
KELDIN	29039	-	-	-	-	-	-	1.3	1.3
LADD	29040	-	-	-	-	-	-	1.3	1.3
LCS ARTDECO	29041	-	-	-	-	-	-	1.3	1.3

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
LCS BIANCOR	29042	-	-	-	-	-	-	1.3	1.3
LEGION	29043	-	-	-	-	-	-	3	3
LOR 092	29044	-	-	-	-	-	-	1.3	1.3
LOR 334	29045	-	-	-	-	-	-	2	2
LOR 833	29046	-	-	-	-	-	-	1.7	1.7
LOR 913	29047	-	-	-	-	-	-	2	2
LOR 978	29048	-	-	-	-	-	-	3.7	3.7
LWW 04 4009	29049	-	-	-	-	-	-	-	-
LWW 10 1073	29050	-	-	-	-	-	-	2	2
LWW 11 431	29051	-	-	-	-	-	-	1.7	1.7
LWW 12 7105	29052	-	-	-	-	-	-	1	1
LWW12 7105	29055	-	-	-	-	-	-	-	-
LWW14 71032	29056	-	-	-	-	-	-	-	-
LWW14 71195	29057	-	-	-	-	-	-	-	-
LWW14 73163	29058	-	-	-	-	-	-	-	-
MARY	29059	-	-	-	-	-	-	2	2
NORWEST 554	29061	-	-	-	-	-	-	-	-
OR2080637	29064	-	-	-	-	-	-	3.3	3.3
OR2080641	29065	-	-	-	-	-	-	1.3	1.3
OR2090473	29068	-	-	-	-	-	-	1	1
OR2090533	29069	-	-	-	-	-	-	-	-
OR2100267	29070	-	-	-	-	-	-	-	-
OR2100937	29071	-	-	-	-	-	-	-	-
OR2100940	29072	-	-	-	-	-	-	2	2
OR2101043	29073	-	-	-	-	-	-	1.7	1.7
OR2110526	29074	-	-	-	-	-	-	1.7	1.7
OR2121086	29075	-	-	-	-	-	-	-	-
OR2121252	29076	-	-	-	-	-	-	-	-
ORCF 101	29077	-	-	-	-	-	-	2.7	2.7
ORCF 102	29079	-	-	-	-	-	-	2	2
ORCF 103	29080	-	-	-	-	-	-	-	-
ORI2101840	29081	-	-	-	-	-	-	-	-

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
ORI2101841	29083	-	-	-	-	-	-	-	-
ORLD111833	29085	-	-	-	-	-	-	-	-
ORLD112334	29086	-	-	-	-	-	-	-	-
ORLD113092	29087	-	-	-	-	-	-	-	-
PUMA WA 8134	29088	-	-	-	-	-	-	1.7	1.7
ROSLYN	29090	-	-	-	-	-	-	1.3	1.3
SIETTE CERROS	29091	-	-	-	-	-	-	-	-
SKILES	29092	-	-	-	-	-	-	3	3
STEPHENS	29093	-	-	-	-	-	-	2.7	2.7
SY 04PN005 25	29094	-	-	-	-	-	-	-	-
SY 04PN062 18	29081	-	-	-	-	-	-	-	-
SY 04PN066 7	29096	-	-	-	-	-	-	-	-
SY 04PN077 23	29082	-	-	-	-	-	-	-	-
SY 04PN096 2	29098	-	-	-	-	-	-	-	-
SY 107	29099	-	-	-	-	-	-	2	2
SY 71 4 EXP	29100	-	-	-	-	-	-	3	3
SY 96 2 EXP	29101	-	-	-	-	-	-	2	2
SY OVATION	29102	-	-	-	-	-	-	1	1
TUBBS	29104	-	-	-	-	-	-	2	2
TUBBS 06	29105	-	-	-	-	-	-	1.3	1.3
UI WSU HUFFMAN IDN 03 29902A	29002	-	-	-	-	-	-	1.7	1.7
VERDANT	29107	-	-	-	-	-	-	-	-
WA 8169	29111	-	-	-	-	-	-	2.3	2.3
WA 8206	29112	-	-	-	-	-	-	-	-
WA 8232	29113	-	-	-	-	-	-	-	-
WB 1070 CL	29114	-	-	-	-	-	-	-	-
WB 1529	29115	-	-	-	-	-	-	2	2
WB 1604	29116	-	-	-	-	-	-	1	1
WB 436	29117	-	-	-	-	-	-	-	-
WB EXP 1028 CL	29118	-	-	-	-	-	-	1	1
WB EXP 1030 CL	29119	-	-	-	-	-	-	2	2
WB EXP 1038 CL	29120	-	-	-	-	-	-	-	-

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
WB EXP 458	29121	-	-	-	-	-	-	-	-
WB JUNCTION	29084	-	-	-	-	-	-	-	-
WB TRIFECTA	29123	-	-	-	-	-	-	2	2
WESTBRED 528	29124	-	-	-	-	-	-	-	-
WINCAL 09196	29126	-	-	-	-	-	-	-	-
WINCORA	29127	-	-	-	-	-	-	-	-
YAMHILL	29128	-	-	-	-	-	-	1.7	1.7
YS 221	29129	-	-	-	-	-	-	1.3	1.3
YS 261	29130	-	-	-	-	-	-	3.3	3.3
YS 343	29131	-	-	-	-	-	-	-	-
YS 9568 A	29134	-	-	-	-	-	-	1	1

Rating scale for diseases (area of flag-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%

### 3.3. Barley

Table 49: Intermountain region, barley yield 2014 to 2016.

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr St.Err.Yield (lb/acre)			Diff. from overall mean			2016 Yield (lb/acre)			2016 St.Err.Yield (lb/acre)			2016 Yield Rank			2015 Yield (lb/acre)			2015 St.Err.Yield (lb/acre)			2015 Yield Rank			2014 Yield (lb/acre)			2014 St.Err.Yield (lb/acre)			2014 Yield Rank		
UC 1278	9080		5517	453	1	1758	319	6404	335	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
UCD 1341	9082	6RSF	5465	377	2	1707	210	7532	335	1	4443	507	3	4195	609	9																						
UCD 1337	9081	6RSF	5402	377	3	1643	210	7477	335	2	4590	507	2	3800	609	27																						
BZ509 216	9051	2RSF	5067	700	4	1309	618	-	-	-	-	-	-	4901	664	1																						
UC 1365	9083		5014	453	5	1256	319	5902	335	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
UTSB10905 72	9136		4839	453	6	1081	319	5727	335	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
BUTTA 12	9049		4790	453	7	1031	319	5677	335	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
2AB08 X05M010 82	9029	2RSM	4707	700	8	949	618	-	-	-	-	-	-	-	4541	664	2																					
10WA 106 19	9014	2RSF	4647	700	9	889	618	-	-	-	-	-	-	-	4481	664	4																					
FULL PINT	9059		4475	453	10	716	319	5363	335	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
10WA 113 16	9015	2RSF	4427	700	11	669	618	-	-	-	-	-	-	-	4261	664	6																					
MILLENNIUM	9063	6RSF	4425	419	12	667	284	-	-	-	-	4643	507	1	3655	609	35																					
11WA 107 20	9020		4402	453	13	643	319	5290	335	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
2AB07 X031098 31	9025	2RSM	4367	700	14	609	618	-	-	-	-	-	-	-	4201	664	8																					
09WA 203 24	9005	2RSF	4367	700	15	609	618	-	-	-	-	-	-	-	4201	664	7																					
2AB07 X04M219 46	9026	2RSM	4327	700	16	569	618	-	-	-	-	-	-	-	4161	664	12																					
UCD 1365	9102	6RSF	4311	419	17	553	284	-	-	-	-	4340	507	5	3825	609	26																					
2ND28065	9044	2RSM	4250	427	18	491	283	5260	335	9	-	-	-	-	3591	664	39																					
10WA 105 33	9012	2RSF	4237	700	19	479	618	-	-	-	-	-	-	-	4071	664	14																					
2B09 3425	9033	2RSM	4237	700	20	479	618	-	-	-	-	-	-	-	4071	664	13																					
UCD 10B	9088	6RSF	4231	419	21	473	284	-	-	-	-	4347	507	4	3615	609	38																					
MERIT 57	9062	2RSM	4217	419	22	459	284	-	-	-	-	4127	507	7	3910	609	23																					
BARONESSE	9048	2RSF	4159	371	23	400	199	4856	335	12	3853	507	10	4367	591	5																						
STEPTOE	9077	6RSF	4137	371	24	379	199	4989	335	10	4037	507	8	3934	591	20																						
2AB04 X01084 27	9024	2RSM	4087	700	25	329	618	-	-	-	-	-	-	-	3921	664	21																					
09WA 228 13	9007	2RSF	4027	700	26	269	618	-	-	-	-	-	-	-	3861	664	25																					
08ARS116 91	9003		4001	453	27	243	319	4889	335	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
UCD TL20	9129	6RSF	3937	419	28	179	284	-	-	-	-	3603	507	17	3995	609	18																					
2ND27705	9043	2RSM	3927	700	29	169	618	-	-	-	-	-	-	-	3761	664	28																					
BZ509 601	9053		3924	453	30	165	319	4812	335	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

Name	UC Number	Crop Type	3-yr Yield (lb/acre)			3-yr St.Err.Yield (lb/acre)			Diff. from overall mean			St.Err.Dif. from overall mean			2016 Yield (lb/acre)			2016 St.Err.Yield (lb/acre)			2016 Yield Rank			2015 Yield (lb/acre)			2015 St.Err.Yield (lb/acre)			2015 Yield Rank			2014 Yield (lb/acre)			2014 St.Err.Yield (lb/acre)			2014 Yield Rank		
UTSB10902 91	9135		3912	453	31	154	319	4800	335	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
CONRAD	9057	2RSM	3897	419	32	139	284	-	-	-	3860	507	9	3510	609	40																									
11MQ71	9018		3895	453	33	137	319	4783	335	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UCD 1395	9124	6RSF	3887	419	34	129	284	-	-	-	3557	507	19	3940	609	19																									
MT124555	9070		3884	453	35	125	319	4771	335	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UCD 1393	9084	6RSF	3880	377	36	122	210	4414	335	26	4160	507	6	3725	609	29																									
UCD 4B	9128	6RSF	3879	543	37	121	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
BZ509 448	9052	2RSF	3877	700	38	119	618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
MT090180	9064	2RSF	3867	700	39	109	618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
MT100120	9067	2RSF	3842	427	40	83	283	4718	335	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
MT090182	9065		3840	453	41	81	319	4727	335	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
09WA 231 5	9008	2RSF	3787	700	42	29	618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
MT090190	9066	2RSF	3770	427	43	11	283	4581	335	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
MT100126	9068	2RSF	3765	427	44	6	283	4582	335	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
PINNACLE	9073	2RSM	3753	419	45	-5	284	-	-	-	3510	507	20	3675	609	33																									
08ARS112 75	9002		3744	453	46	-14	319	4632	335	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
LEGACY	9061	6RSM	3733	478	47	-26	369	-	-	-	3597	507	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
RASMUSSON	9075	6RSM	3724	543	48	-34	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UCD 1339	9096	6RSF	3699	419	49	-59	284	-	-	-	3627	507	16	3365	609	48																									
2B10 4378	9035	2RSM	3698	427	50	-61	283	4452	335	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
TLB 148	9078	6RSF	3674	543	51	-84	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
AC METCALFE	9047	2RSM	3649	371	52	-110	199	4568	335	22	3450	507	21	3454	591	42																									
UC 960	9087	6RSF	3643	419	53	-115	284	-	-	-	3667	507	13	3165	609	57																									
CDC COPELAND	9054	2RSM	3641	419	54	-117	284	-	-	-	3680	507	12	3140	609	59																									
UCD 1377	9114		3639	543	55	-119	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
STELLAR ND	9076	6RSM	3623	419	56	-135	284	-	-	-	3637	507	15	3160	609	58																									
UCD 1396	9125	6RSF-H	3614	543	57	-144	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
08ARS028 20	9001		3613	453	58	-146	319	4500	335	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
UCD 1387	9116	6RSF-H	3589	543	59	-169	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
CELEBRATION	9055	6RSM	3589	442	60	-170	315	-	-	-	3817	539	11	2985	609	64																									
HARRINGTON	9060	2RSM	3581	385	61	-178	223	4244	335	27	3657	507	14	3671	664	34																									
UCD 1372	9109		3579	543	62	-179	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
2ND30724	9045	2RSM	3577	700	63	-181	618	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
UCD 1390	9119	2RSM	3569	543	64	-189	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
2B11 4949	9038	2RSM	3547	427	65	-211	283	4160	335	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									

Name	UC Number	Crop Type	3-yr Yield (lb/acre)	3-yr St.Err.Yield (lb/acre)	3-yr Yield Rank	Diff. from overall mean	St.Err.Dif. from overall mean	2016 Yield (lb/acre)	2016 St.Err.Yield (lb/acre)	2016 Yield Rank	2015 Yield (lb/acre)	2015 St.Err.Yield (lb/acre)	2015 Yield Rank	2014 Yield (lb/acre)	2014 St.Err.Yield (lb/acre)	2014 Yield Rank
11WA 107 58	9022		3546	453	66	-212	319	4434	335	25	-	-	-	-	-	-
TRADITION	9079	6RSM	3540	478	67	-219	369	-	-	-	3403	507	22	-	-	-
UCD 1335	9094	2RSM	3534	543	68	-224	440	-	-	-	-	-	-	3295	609	53
UCD 1389	9118	2RSM	3514	543	69	-244	440	-	-	-	-	-	-	3275	609	54
UT2136 96	9131	6RSF	3497	700	70	-261	618	-	-	-	-	-	-	3331	664	51
2B11 5166	9039	2RSM	3481	427	71	-278	283	4152	335	30	-	-	-	4181	664	11
UCD 1332	9093	6RSF-H	3479	419	72	-279	284	-	-	-	3223	507	23	3420	609	44
UCD 1386	9115	6RSF-H	3469	543	73	-289	440	-	-	-	-	-	-	3230	609	55
2B10 4162	9034	2RSM	3450	427	74	-309	283	4148	335	31	-	-	-	4041	664	17
UCD 1292	9089	6RSF	3429	543	75	-329	440	-	-	-	-	-	-	3190	609	56
10WA 106 18	9013	2RSF	3372	427	76	-387	283	4013	335	33	-	-	-	4191	664	10
OSU FULL PINT	9072	2RSM	3344	544	77	-415	448	-	-	-	3207	539	24	-	-	-
BZ502 265	9050	2RSF	3314	543	78	-444	440	-	-	-	-	-	-	3075	609	61
2AB09 X06F084 51	9032	2RSF-H	3308	427	79	-451	283	3970	335	35	-	-	-	4041	664	16
UCD 1388	9117	6RSF-H	3284	543	80	-474	440	-	-	-	-	-	-	3045	609	62
UC 1410	9086		3276	453	81	-483	319	4163	335	28	-	-	-	-	-	-
UCD 1397	9126	6RSF-H	3274	543	82	-484	440	-	-	-	-	-	-	3035	609	63
QUEST	9074	6RSM	3269	419	83	-489	284	-	-	-	3090	507	25	3095	609	60
11WA 107 43	9021		3245	453	84	-514	319	4132	335	32	-	-	-	-	-	-
UT2183 85	9133	6RSF	3137	700	85	-621	618	-	-	-	-	-	-	2971	664	65
10WA 117 17	9016		3098	453	86	-660	319	3986	335	34	-	-	-	-	-	-
COPELAND	9058		3049	453	87	-710	319	3936	335	36	-	-	-	-	-	-
12WA 120 14	9023		3013	453	88	-745	319	3901	335	37	-	-	-	-	-	-
UCD 1392	9121	2RSM	2974	543	89	-784	440	-	-	-	-	-	-	2735	609	66
UCD 1398	9127	2RSM	2929	543	90	-829	440	-	-	-	-	-	-	2690	609	68
UCD 1391	9120	2RSM	2879	543	91	-879	440	-	-	-	-	-	-	2640	609	69
10WA 117 24	9017		2858	453	92	-901	319	3745	335	38	-	-	-	-	-	-
UCD 1394	9123	2RSM	2684	543	93	-1074	440	-	-	-	-	-	-	2445	609	70
UC 1409	9085		2674	453	94	-1084	319	3562	335	39	-	-	-	-	-	-
2B12 5582	9041		2637	453	95	-1122	319	3524	335	40	-	-	-	-	-	-
2ND30837	9046		2523	453	96	-1236	319	3410	335	41	-	-	-	-	-	-
CONLON	9056	2RSM	2514	544	97	-1245	448	-	-	-	2377	539	26	-	-	-
2AB09 X06F058HL 31	9031	2RSF-H	2344	427	98	-1415	283	3100	335	42	-	-	-	2701	664	67

Table 50: Agronomic traits of barley 2014 to 2016.

Name	UC.Number	Test.Weight.lb.bu.	X1000.KernelWeight.g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
08ARS028 20	9001	52.5	-	39	-	-	6	6.7	-	73	117
08ARS112 75	9002	51.2	-	41	-	-	7	7	-	69.5	118.5
08ARS116 91	9003	51.2	-	40.5	-	-	6.5	7	-	69.5	117
09WA 203 24	9005	52.9	43.4	27	-	-	1.7	1.7	1	118	145
09WA 228 13	9007	53.9	45.9	29	-	-	1.7	1.7	1.3	116	145
09WA 231 5	9008	58.6	39.9	28	-	-	1.7	1.7	1	115	145
10WA 105 33	9012	52.1	42.2	24	-	-	1.3	1.3	1	116	145
10WA 106 18	9013	51.2	43.1	41	-	-	7	7	1	72	117
10WA 106 19	9014	52.9	46.5	28	-	-	1.7	1.7	1	115	145
10WA 113 16	9015	52	42.9	22	-	-	3	3	1	120	145
10WA 117 17	9016	49.6	-	39	-	-	6.5	7	-	72	117
10WA 117 24	9017	49.9	-	39.5	-	-	7	7.7	-	72	117
11MQ71	9018	52.5	-	44	-	-	2	3.4	-	67	111.5
11WA 107 20	9020	51.2	-	40	-	-	7	7	-	68.5	117
11WA 107 43	9021	51.5	-	40	-	-	7	7	-	71	117
11WA 107 58	9022	51.8	-	43	-	-	7	7	-	71.5	115
12WA 120 14	9023	51.5	-	40	-	-	7	7	-	72	114
2AB04 X01084 27	9024	51.3	42.4	24	-	-	3	3	1	117	145
2AB07 X031098 31	9025	53.4	44.1	27	-	-	2.3	2.3	1	114	145
2AB07 X04M219 46	9026	52.2	40.7	29	-	-	2.3	2.3	1	119	149
2AB08 X05M010 82	9029	51.5	40.6	30	-	-	1.7	1.7	1	117	145
2AB09 X06F058HL 31	9031	54.4	38	41	-	-	7	7	1	72	120
2AB09 X06F084 51	9032	51.4	42.7	39	-	-	5	7	1.3	74	117
2B09 3425	9033	50.2	40.4	26	-	-	1.3	1.3	1	119	145
2B10 4162	9034	51.8	43.2	40	-	-	6	7	1	72	117
2B10 4378	9035	51.4	41.4	37	-	-	7	7	1	72	117
2B11 4949	9038	50.6	40	38	-	-	6	6.6	1	73	117
2B11 5166	9039	50.6	41.7	39	-	-	7	7	1	71	117
2B12 5582	9041	49	-	41	-	-	5.5	7	-	72	114

Name	UC.Number	Test.Weight..lb bu	X1000.KernelWeight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
2ND27705	9043	52.2	44.9	33	-	-	2.3	2.3	1.3	114	145
2ND28065	9044	53.1	43.5	41	-	-	4	6.6	1	73	117
2ND30724	9045	51.2	49.9	27	-	-	1.7	1.7	1	113	145
2ND30837	9046	48.3	-	41	-	-	7	7	-	72	114
AC METCALFE	9047	51.7	40.7	39.5	6	6	4	7	1.3	72	117
BARONESSE	9048	51.4	42	35	6	6	5	7.1	1.3	72	117
BUTTA 12	9049	53.1	-	39	-	-	5.5	6.7	-	62	118
BZ502 265	9050	50.2	40.3	26	-	-	1.3	1.3	1	123	145
BZ509 216	9051	52.8	42.7	31	-	-	1.3	1.3	1	121	145
BZ509 448	9052	51.6	44.7	23	-	-	1	1	1	125	148
BZ509 601	9053	52.8	-	40.5	-	-	7	7	-	71.5	118.5
CDC COPELAND	9054	49.7	44	31	4.7	4.7	1.5	4.6	1.2	121.5	143.5
CELEBRATION	9055	49.6	35.9	34	6	6	1	1	1.3	112	143
CONLON	9056	48.4	45.9	31	6.7	6.7	1.3	3.9	4.2	115	142
CONRAD	9057	49.5	42.2	30	6	6	1.4	5.9	1	120.5	143.5
COPELAND	9058	47	-	42	-	-	7	7	-	72	111
FULL PINT	9059	51.5	-	35	-	-	5	6.7	-	73	118
HARRINGTON	9060	50.6	42.6	37	6	6	6.5	8	1	73.5	118
LEGACY	9061	47.5	38.2	40	5.3	5.3	1.3	5.9	1	115	142
MERIT 57	9062	49.6	38.3	32	3	3	1.6	3.7	1	119.5	143.5
MILLENNIUM	9063	47.9	37	29	1.3	1.3	1.1	1.3	1	110	145.5
MT090180	9064	48.7	41.9	31	-	-	1	1	1	116	146
MT090182	9065	52.2	-	42.5	-	-	7	7	-	72	117
MT090190	9066	51.2	41.4	41	-	-	7	7	1.3	72	119
MT100120	9067	51.8	41.4	41	-	-	7	7	1	73	117
MT100126	9068	51.2	41.3	43	-	-	6	7	1	74	119
MT124555	9070	53.1	-	45	-	-	5.5	6	-	72	115
OSU FULL PINT	9072	49.7	48	24	-	-	1	1	1	124	145
PINNACLE	9073	51.3	48.2	34	2.3	2.3	1.4	4	1	113.5	145
QUEST	9074	49.6	35.5	34	6.3	6.3	1.8	5.9	2.6	111	143.5
RASMUSSEN	9075	50.9	39.2	28.5	-	-	2	2	1.7	110	145

Name	UC.Number	Test.Weight..lb bu	X1000.KernelWeight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
STELLAR ND	9076	49.4	38.5	35	4.3	4.3	1.4	4.7	1	110.5	143
STEPTOE	9077	47.4	44.5	38.5	5.3	5.3	2	5.1	1	71	120
TLB 148	9078	46.4	41.2	25.5	-	-	1.7	1.7	1	112	152
TRADITION	9079	48.7	39	40	4.7	4.7	1	6.2	1	112	143
UC 1278	9080	50.9	-	45	-	-	2.5	3.7	-	67.5	117
UC 1337	9081	51.8	-	43	-	-	4	5.7	-	62.5	114
UC 1341	9082	49.3	-	37.5	-	-	4	5.7	-	72	111
UC 1365	9083	50.2	-	43.5	-	-	6	6.7	-	70.5	117
UC 1393	9084	46.7	-	45	-	-	7	7	-	68	114
UC 1409	9085	50.2	-	37.5	-	-	7	7	-	74	114
UC 1410	9086	49.9	-	34.5	-	-	7	7	-	74	114
UC 960	9087	45.8	41.2	22	3.3	3.3	1	3.8	1.6	111	148
UCD 10B	9088	47.8	37.7	33	3.7	3.7	1.4	5.2	1	111	147
UCD 1292	9089	48.9	38.8	25	-	-	1.7	1.7	1	117	145
UCD 1332	9093	47.9	37.5	29	4.3	4.3	1	5.2	1	114.5	148.5
UCD 1335	9094	51.2	49.6	22.5	-	-	1.3	1.3	1	124	145
UCD 1337	9081	47.7	37.6	27	4.3	4.3	1.1	5.3	1	110	147
UCD 1339	9096	46.5	36.9	31	6.3	6.3	1.1	5.8	1	112	148
UCD 1341	9082	46.3	38.9	29	5.3	5.3	1	5.4	1	114	147
UCD 1365	9102	48.6	34.6	33	4.7	4.7	1	5.2	1	114	147
UCD 1372	9109	48.4	38.3	25.5	-	-	1.3	1.3	1	110	151
UCD 1377	9114	51.3	44.5	24.5	-	-	2	2	1	118	145
UCD 1386	9115	51	35.5	22.5	-	-	1	1	1	116	145
UCD 1387	9116	52	38	28	-	-	1.7	1.7	1	118	149
UCD 1388	9117	52.9	35.1	24.5	-	-	1.7	1.7	1	116	146
UCD 1389	9118	52.2	53.9	25.5	-	-	2.3	2.3	1.3	110	145
UCD 1390	9119	52.4	53.1	25.5	-	-	1.3	1.3	1	110	145
UCD 1391	9120	52.5	45.7	26.5	-	-	1	1	1.7	114	145
UCD 1392	9121	51	48.8	24.5	-	-	1.7	1.7	1	108	145
UCD 1393	9084	47.5	38.5	31	5.7	5.7	1	5.2	1	113.5	150.5
UCD 1394	9123	50	45.4	28	-	-	2	2	1	115	145

Name	UC.Number	Test.Weight..lb bu	X1000.KernelWeight..g.	Plant.Height..inches.	Lodging..soft.dough..50th.percentile.	Lodging..soft.dough..90th.percentile.	Lodging..harvest..50th.percentile.	Lodging..harvest..90th.percentile.	Shatter	Days.to.heading..from.3.1..Davis.	Days.to.maturity..from.3.1..Davis.
UCD 1395	9124	47.7	36.3	31	6.3	6.3	1	5.9	1	116	153.5
UCD 1396	9125	49.7	37	26.5	-	-	1.3	1.3	1	118	152
UCD 1397	9126	50	35.5	25	-	-	1.3	1.3	1	119	149
UCD 1398	9127	51.8	46.1	27.5	-	-	2.3	2.3	1	108	145
UCD 4B	9128	45.8	39.8	25	-	-	1.7	1.7	1	118	148
UCD TL20	9129	47.3	39.4	31	7.3	7.3	1.1	5.1	1	116.5	150.5
UT2136 96	9131	49.3	34.5	26	-	-	1	1	1	110	145
UT2183 85	9133	50.1	37.8	28	-	-	1	1	1	116	145
UTSB10902 91	9135	48.3	-	43	-	-	7	7	-	68	115
UTSB10905 72	9136	51.8	-	43.5	-	-	5	6.7	-	63.5	118

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%

Table 51: Disease ratings of barley 2014 to 2016.

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust...50th.percentile.	Leaf.rust...90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
08ARS028 20	9001	-	-	-	-	7	7	-	-	-	-
08ARS112 75	9002	-	-	-	-	6.5	7	-	-	-	-
08ARS116 91	9003	-	-	-	-	6.5	7	-	-	-	-
09WA 203 24	9005	-	-	-	-	-	-	-	-	-	-
09WA 228 13	9007	-	-	-	-	-	-	-	-	-	-
09WA 231 5	9008	-	-	-	-	-	-	-	-	-	-
10WA 105 33	9012	-	-	-	-	-	-	-	-	-	-
10WA 106 18	9013	-	-	-	-	7	7	-	-	-	-
10WA 106 19	9014	-	-	-	-	-	-	-	-	-	-
10WA 113 16	9015	-	-	-	-	-	-	-	-	-	-
10WA 117 17	9016	-	-	-	-	5.8	6.8	-	-	-	-
10WA 117 24	9017	-	-	-	-	6.5	7	-	-	-	-
11MQ71	9018	-	-	-	-	3	5.1	-	-	-	-
11WA 107 20	9020	-	-	-	-	7	7.7	-	-	-	-
11WA 107 43	9021	-	-	-	-	7	7	-	-	-	-
11WA 107 58	9022	-	-	-	-	7	7.7	-	-	-	-
12WA 120 14	9023	-	-	-	-	7	7	-	-	-	-
2AB04 X01084 27	9024	-	-	-	-	-	-	-	-	-	-
2AB07 X031098 31	9025	-	-	-	-	-	-	-	-	-	-
2AB07 X04M219 46	9026	-	-	-	-	-	-	-	-	-	-
2AB08 X05M010 82	9029	-	-	-	-	-	-	-	-	-	-
2AB09 X06F058HL 31	9031	-	-	-	-	7	7	-	-	-	-
2AB09 X06F084 51	9032	-	-	-	-	6	6.7	-	-	-	-
2B09 3425	9033	-	-	-	-	-	-	-	-	-	-
2B10 4162	9034	-	-	-	-	6.5	7	-	-	-	-
2B10 4378	9035	-	-	-	-	7	7	-	-	-	-
2B11 4949	9038	-	-	-	-	6.5	7	-	-	-	-
2B11 5166	9039	-	-	-	-	7	7.7	-	-	-	-
2B12 5582	9041	-	-	-	-	7.5	8	-	-	-	-
2ND27705	9043	-	-	-	-	-	-	-	-	-	-
2ND28065	9044	-	-	-	-	6	7	-	-	-	-

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Leaf.rust..90th.percentile.	Leaf.rust..50th.percentile.	BYDV..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
2ND30724	9045	-	-	-	-	-	-	-	-	-	-
2ND30837	9046	-	-	-	-	7	7	-	-	-	-
AC METCALFE	9047	-	-	-	-	7	7	-	-	-	-
BARONESSE	9048	-	-	-	-	6	7	-	-	-	-
BUTTA 12	9049	-	-	-	-	6.5	7	-	-	-	-
BZ502 265	9050	-	-	-	-	-	-	-	-	-	-
BZ509 216	9051	-	-	-	-	-	-	-	-	-	-
BZ509 448	9052	-	-	-	-	-	-	-	-	-	-
BZ509 601	9053	-	-	-	-	5.8	6.7	-	-	-	-
CDC COPELAND	9054	-	-	-	-	1	1	-	-	-	-
CELEBRATION	9055	-	-	-	-	1	1	-	-	-	-
CONLON	9056	-	-	-	-	1	1	-	-	-	-
CONRAD	9057	-	-	-	-	1	1	-	-	-	-
COPELAND	9058	-	-	-	-	7.5	8	-	-	-	-
FULL PINT	9059	-	-	-	-	5.8	6.8	-	-	-	-
HARRINGTON	9060	-	-	-	-	6	6.6	-	-	-	-
LEGACY	9061	-	-	-	-	2	2	-	-	-	-
MERIT 57	9062	-	-	-	-	1	1	-	-	-	-
MILLENNIUM	9063	-	-	-	-	1	1	-	-	-	-
MT090180	9064	-	-	-	-	-	-	-	-	-	-
MT090182	9065	-	-	-	-	6.5	7	-	-	-	-
MT090190	9066	-	-	-	-	6.8	7	-	-	-	-
MT100120	9067	-	-	-	-	6	7	-	-	-	-
MT100126	9068	-	-	-	-	6.5	7	-	-	-	-
MT124555	9070	-	-	-	-	6.2	6.8	-	-	-	-
OSU FULL PINT	9072	-	-	-	-	1	1	-	-	-	-
PINNACLE	9073	-	-	-	-	1	1	-	-	-	-
QUEST	9074	-	-	-	-	1	1	-	-	-	-
RASMUSSEN	9075	-	-	-	-	-	-	-	-	-	-
STELLAR ND	9076	-	-	-	-	1	1	-	-	-	-
STEPTOE	9077	-	-	-	-	7	7.6	-	-	-	-
TLB 148	9078	-	-	-	-	-	-	-	-	-	-
TRADITION	9079	-	-	-	-	3	3	-	-	-	-

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Leaf.rust..90th.percentile.	Leaf.rust..50th.percentile.	BYDV..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
UC 1278	9080	-	-	-	-	7	7.7	-	-	-	-
UC 1337	9081	-	-	-	-	6.5	7	-	-	-	-
UC 1341	9082	-	-	-	-	7	7	-	-	-	-
UC 1365	9083	-	-	-	-	3.5	4.7	-	-	-	-
UC 1393	9084	-	-	-	-	7	7	-	-	-	-
UC 1409	9085	-	-	-	-	2.5	5.1	-	-	-	-
UC 1410	9086	-	-	-	-	2	4.4	-	-	-	-
UC 960	9087	-	-	-	-	1	1	-	-	-	-
UCD 10B	9088	-	-	-	-	1	1	-	-	-	-
UCD 1292	9089	-	-	-	-	-	-	-	-	-	-
UCD 1332	9093	-	-	-	-	1	1	-	-	-	-
UCD 1335	9094	-	-	-	-	-	-	-	-	-	-
UCD 1337	9081	-	-	-	-	1	1	-	-	-	-
UCD 1339	9096	-	-	-	-	1	1	-	-	-	-
UCD 1341	9082	-	-	-	-	1	1	-	-	-	-
UCD 1365	9102	-	-	-	-	1	1	-	-	-	-
UCD 1372	9109	-	-	-	-	-	-	-	-	-	-
UCD 1377	9114	-	-	-	-	-	-	-	-	-	-
UCD 1386	9115	-	-	-	-	-	-	-	-	-	-
UCD 1387	9116	-	-	-	-	-	-	-	-	-	-
UCD 1388	9117	-	-	-	-	-	-	-	-	-	-
UCD 1389	9118	-	-	-	-	-	-	-	-	-	-
UCD 1390	9119	-	-	-	-	-	-	-	-	-	-
UCD 1391	9120	-	-	-	-	-	-	-	-	-	-
UCD 1392	9121	-	-	-	-	-	-	-	-	-	-
UCD 1393	9084	-	-	-	-	1.7	1.7	-	-	-	-
UCD 1394	9123	-	-	-	-	-	-	-	-	-	-
UCD 1395	9124	-	-	-	-	1.3	1.3	-	-	-	-
UCD 1396	9125	-	-	-	-	-	-	-	-	-	-
UCD 1397	9126	-	-	-	-	-	-	-	-	-	-
UCD 1398	9127	-	-	-	-	-	-	-	-	-	-
UCD 4B	9128	-	-	-	-	-	-	-	-	-	-
UCD TL20	9129	-	-	-	-	1.3	1.3	-	-	-	-

Name	UC.Number	Stripe.rust..early..50th.percentile.	Stripe.rust..early..90th.percentile.	Stripe.rust..late..50th.percentile.	Stripe.rust..late..90th.percentile.	Stripe.rust..50th.percentile.	Stripe.rust..90th.percentile.	Leaf.rust..50th.percentile.	Leaf.rust..90th.percentile.	BYDV..50th.percentile.	BYDV..90th.percentile.
UT2136 96	9131	-	-	-	-	-	-	-	-	-	-
UT2183 85	9133	-	-	-	-	-	-	-	-	-	-
UTSB10902 91	9135	-	-	-	-	7	7	-	-	-	-
UTSB10905 72	9136	-	-	-	-	7.5	8	-	-	-	-

Rating scale for diseases (area of flag-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%

## 4. Location details

Table 52: Details regarding test locations.

Site Name	Year	Tests	Latitude	Longitude	Soil Type	Previous Crop	Planting Date	Irrigation	Rainfall (inches)
Chico	2015	Barley			Chico loam	Barley	11/18/14	None	3.60"
Clarksburg	2016	Common & Triticale; Barley	38.4152	-121.5683	Omni silty clay		12/1/15		13.2
Clarksburg	2015	Wheat, Barley			Clay loam class 3-4	Fallow	1/14/15	Sprinkler 10 hours	14.88"
Clarksburg	2014	Wheat, Barley			Clay loam class 3-4	Safflower	11/24/13	Sprinkler 10 hours (2.5" total)	6.10"
Colusa	2016	Common & Triticale	39.0413	-121.8664	Scribner silt loam	vineseed	11/14/15	1 furrow irrigation, early April	11.74
Colusa	2014	Wheat			Scribner silt loam	Tomatoes	11/12/13	2X Flood, (12" total)	9.57"
Corning	2015	Barley			Maywood loam	Fallow	2/3/15	None	12.10"
Corning	2014	Barley			Maywood loam	Fallow	11/25/13	None	6.99"
Davis	2016	Common & Triticale; Durum	38.5366	-121.7815	Yolo loam	corn	11/12/15	2 flood irrigations, 12" total	14.83
Davis	2015	Wheat, Durum, RF barley, RF Wheat			Yolo loam	Corn	11/28/14	Wheat: Flood 2X	7.77"
Davis	2014	Wheat, Durum, Barley, RF Wheat			Yolo loam	Corn	12/9/13	Wheat: Flood 1X, Sprinkler 1X, (6" total) Barley: Sprinkler 1X (1" total)	7.42"
Davis RF	2016	Common & Triticale; Barley	38.5366	-121.7815	Yolo loam	corn	11/12/15	none	14.83
Delta	2016	Common & Triticale	37.9017	-121.5056	Egbert muck	tomato	11/23/15	2 furrow irrigations, early/late spring	13.2
Delta	2015	Wheat			Egbert muck	Tomatoes	1/7/15	Sprinkler 1X; Flood 2X	10.25"
Delta	2014	Wheat			Egbert muck	Tomatoes	12/6/13	Sprinkler 1X; Flood 2X (22" total)	4.75"
Etna	2015	Spring Barley, Spring wheat			Settemeyer loam	Fallow	3/30/15	Sprinkler 3X (6-10" total)	3.47"
Fresno	2016	Common & Triticale; Durum; Barley	36.3398	-120.1192	Panoche Clay loam	cotton	11/16/15	Sprinklers early season (3.33"); wheat: 4 flood irrigations (13.4"); barley: 1 flood irrigation (4.3")	7.53
Fresno	2015	Wheat, Durum, Barley			Panoche Clay loam	Cotton	12/8/14	Barley: Sprinkler 3X; Flood 2X (13" total)	3.83"
Fresno	2014	Wheat, Durum, Barley			Panoche Clay loam	Cotton	12/5/13	Barley: Sprinkler 3X; Flood 2X (13" total) Wheat: Sprinkler 3X; Flood 3X (18" total)	1.9"

Site Name	Year	Tests	Latitude	Longitude	Soil Type	Previous Crop	Planting Date	Irrigation	Rainfall (inches)
Fresno2	2016	Common & Triticale; Durum	36.4083	-120.0752	Posocharanet clay loam	tomato	11/30/15	Sprinkler @ plant; SDI @ boot, heading, anthesis (20.8" total)	7.53
Imperial	2016	Common & Triticale; Durum	32.8110	-115.4437	Imperial-Glenbar silty clay loam	sudangrass	11/18/15	5 flood irrigations, 32" total	0.88
Imperial	2015	Wheat, Durum			Imperial-Glenbar silty clay loam	Alfalfa	12/11/14	Flood 6X	1.69"
Imperial	2014	Wheat, Durum			Imperial-Glenbar silty clay loam	Alfalfa	12/19/13	Flood 6X (48" total)	0.01"
Kern	2016	Common & Triticale; Durum	35.3696	-119.3332	Westhaven fine sandy loam	cotton	11/18/15	3 flood irrigations, 18" total	5
Kern	2015	Wheat, Durum			Sandy Loam	Cotton	11/24/14	Flood 4X	4.65"
Kern	2014	Wheat, Durum			Copus Silty Clay	Cotton	12/2/13	Flood: 4X (32" total)	1.44"
Kings	2015	Wheat, Durum			Armona Loam and Gepford Clay	Cotton	11/25/14	Flood: 4X	4.46"
Kings	2014	Wheat, Durum			Armona Loam and Gepford Clay	Cotton	11/19/13	Flood: 4X (19" total)	2.55"
MacArthur	2015	Spring Barley, spring wheat			Loamy Fine Sandy	Fallow	4/22/15	Sprinkler 5X (10" total)	3.74"
MacArthur	2014	Spring Barley, Spring wheat			Loamy Fine Sandy	Fallow	4/16/14	Sprinkler 5X (10" total)	3.80"
Siskiyou	2016	Winter Wheat	41.7869	-122.4418	Montague clay	fallow	10/26/15	2 flood irrigations, 14" total	15.1
Siskiyou	2015	Winter Wheat			Clay loam	Fallow	10/30/14	Sprinkler 1X (2-3 inches total)	30.07"
Siskiyou	2014	Winter Wheat			Clay loam	Fallow	10/30/13	Sprinkler 1X (2-3 inches total)	11.86"
San Luis Obispo	2016	Barley	35.6642	-120.4147	Pico fine sandy loam	pasture	11/28/16	none	7.65
Tehama	2016	Barley	39.8663	-122.3771	Newville gravelly loam	fallow	11/30/15	none	17
Tulare	2016	Common & Triticale; Barley	35.8127	-119.0471	Centerville clay	fallow	11/19/15	none	6.37
Tulelake	2016	Winter Wheat	41.9653	-121.4735	Tulebasin mucky silty clay loam	sudangrass	10/30/16	7 sprinkler irrigations, 11" total	10.1
Tulelake	2016	Spring Wheart	41.9653	-121.4735	Tulebasin mucky silty clay loam	sudangrass	4/21/16	12" total from 8 sprinkler	3.6
Tulelake	2015	Winter Wheat			Tule basin mucky silty clay loam	Sudan Grass	10/29/14	Sprinkler	9.67"

Site Name	Year	Tests	Latitude	Longitude	Soil Type	Previous Crop	Planting Date	Irrigation	Rainfall (inches)
Tulelake	2015	Spring Barley, Spring wheat			Tule basin mucky silty clay loam	Sudan Grass	4/22/15	Sprinkler	1.90"
Tulelake	2014	Winter Wheat			Tule basin mucky silty clay loam	Sudan Grass	10/29/13	Sprinkler (15.65" total)	6.57"
Tulelake	2014	Spring Barley, Spring wheat			Tule basin mucky silty clay loam	Sudan Grass	4/17/14	Sprinkler (17.7" total)	1.98"

Table 53: Details regarding the fertilization management of all test locations.

Site Name	Year	Fertilizer management
Chico	2015	300 lb/ac True Organics feather meal, 12-3-0
Clarksburg	2016	125lb N (preplant, aqua)
Clarksburg	2015	125# (aqua) Preplant;
Clarksburg	2014	120# (aqua) Preplant; 46# N (urea) topdress
Colusa	2016	120lb N (preplant as aqua)
Colusa	2014	Preplant: 120# N (NH3)
Corning	2015	Preplant: 70# N (Urea); 70# N 16-20-00 at planting
Corning	2014	Preplant: 70# N (Urea); 70# N 16-20-00 at planting
Davis	2016	192lb N (92#N @ plant; 50#N @ jointing; 50#N @ heading)
Davis	2015	92#N (urea) with 1% sulfur preplant, Topdress (at tillering): 60#N (wheat), 50# N (barley), Topdress (at jointing): 50#N (wheat), Topdress (at anthesis): 50#N (wheat)
Davis	2014	92#N (urea) with 1% sulfur preplant, Topdress (at tillering): 60#N (wheat), 50# N (barley), Topdress (at jointing): 50#N (wheat), Topdress (at anthesis): 50#N (wheat)
Davis RF	2016	142lb N (92#N @ plant; wheat: 50#N @ jointing)
Delta	2016	137lb N (150# 11-52-0 @ preplant; 120#N topdress early vegetative)
Delta	2015	200# 11-52-0 Preplant ; 100# Urea topdress
Delta	2014	200# 11-52-0 Preplant ; 100# Urea topdress
Etna	2015	Preplant: 100# N
Fresno	2016	200lb N (wheat); 100lb N (barley) (50#N preplant; water run 50#N @ tillering; wheat: + 50#N @ joint + 50#N @ boot)
Fresno	2015	50# N (Urea) preplant, Topdress: 50# N (urea) at tillering (all); Topdress: 50# N (urea) at jointing (all); Topdress: 50# N (urea) at anthesis (wheat only)
Fresno	2014	50# N (Urea) preplant, Topdress: 50# N (urea) at tillering (all); Topdress: 50# N (urea) at jointing (all); Topdress: 50# N (urea) at anthesis (wheat only)
Fresno2	2016	250lb N (100# N @ Planting; 100# N @ boot; 50#N @ heading)
Imperial	2016	360lb N (90# N @ Planting; 90# N @ 3 wks; 95# N @ 12 wks; 85# N @ 15 wks)
Imperial	2015	Preplant: 100# N, 341# N (anhydrous ammonia in 4 irrigations)
Imperial	2014	Preplant: 100# N, 341# N (anhydrous ammonia in 4 irrigations)
Kern	2016	160lb N (100#N preplat; 60#N as urea in vegetative stage)
Kern	2015	Preplant: 100# N, 50# N (Urea) topdress (jointing)
Kern	2014	Preplant: 400 lb/acre 5.5-26-31, 180# N (NH3); 177# N (NH3) between 4 irrigations
Kings	2015	Preplant: 100# 11-52-0 and 100# N (urea), Topdress: 1X 50#N at tillering, Topdress: 3X 50# N (UN-32) with irrigation;
Kings	2014	Preplant: 100# 11-52-0 and 100# N (urea), Topdress: 1X 50#N at tillering, Topdress: 3X 50# N (UN-32) with irrigation;
MacArthur	2015	60#N (urea) at tillering; 40#N (Urea) at jointing
MacArthur	2014	60#N (urea) at tillering
Montague	2016	140lb N (preplant as NH3)
Montague	2015	150 lbs of N (anhydrous ammonia)
Montague	2014	150 lbs of N (anhydrous ammonia)
San Luis Obispo	2016	40lb N (planting as 30-12-0-6

Site Name	Year	Fertilizer management
Tehama	2016	150lb N (70# N preplant as 16-20-0; 80#N @ jointing as amm.sulf.)
Tulare	2016	50lb N (at tillering as urea)
Tulelake	2016	100lb N (50# N @ Planting as urea; 50# N at tillering as UAN32)
Tulelake	2016	100-cre at planting (urea), 50# N/Acre 6/15 tillering (UAN32)
Tulelake	2015	70- Urea at planting; 80- Urea at tillering
Tulelake	2015	110- Urea at planting, 80- UAN32 at tillering (wheat), 70- Urea at planting (barley)
Tulelake	2014	70- Urea at planting; 80- Urea at tillering
Tulelake	2014	110- Urea at planting, 80- UAN32 at tillering (wheat), 70- Urea at planting (barley)

## 5. Abbreviations

Explanations of data presented in the variety performance tables:

- *3-yr yield (lbs/acre)/Protein (%)* - Yield or protein estimate over three season and across all test locations.
- *3-yr St.Err.Yield* - The error associated with the above estimate.
- *3-yr Yield Rank* - The rank of a variety relative to all other varieties in the trials.
- *Diff. from overall mean* - How much the variety differs in terms of yield or protein from the over all mean.
- *St.Err.Diff. from overall mean* - The error associated with the above estimate.

BYDV=Barley Yellow Dwarf Virus

Days (D) to Heading & D to Maturity are from 3/1/2016

### **Wheat and Triticale**

HRS= Hard Red Spring

HWS= Hard White Spring

HRW= Hard Red Winter

HWW= Hard White Winter

SRS= Soft Red Spring

SWS= Soft White Spring

TRIT= Triticale

### **Barley**

2RSF= 2-ROW SPRING FEED

6RSF= 6-ROW SPRING FEED

2RS(N)= NAKED 2-ROW SPRING

6RS(N)=NAKED 6-ROW SPRING

2RSM= 2-ROW SPRING MALT

6RSM= 6-ROW SPRING MALT

6RWF= 6-ROW WINTER FEED

6RW(H)= 6-ROW WINTER HOODED

## 6. Entry lists

Table 54: Details for entries tested (excluding the Intermountain).

Species	Name	UC Number	Type	Status
Barley	UC71 186 5	161	6RSF	
Barley	UC B372	1260	6RSF	
Barley	UC K1 11C	1355		
Barley	UC K2 A	1356		
Barley	UC K3 4H	1357		
Barley	UC K11 B	1358		
Barley	UC 11 MQ 31	1378		
Barley	UC UYP 2B	1380		
Barley	UC UYP 306B	1381		
Barley	UC UYP 275B	1382		
Barley	UC 08YP 111 1231 EARLY	1384		
Barley	UC 1319	1319	6RSN	
Barley	UC 1321	1321	6RSN	
Barley	UC UOP 110	1407		
Barley	UC 603	603	6RSF	
Barley	MAX	816	6RSF	
Barley	UC 933	933	6RSF	
Barley	UC 969	969	6RSF	
Barley	ISHI	1047	6RSF	
Barley	TAMALPAIS	1134	6RSN	
Barley	UC B369	1255	6RSF	
Barley	UC B398	1256	6RSF	
Barley	UC A237	1261	6RSF	
Barley	UC 1263	1263	6RSN	
Barley	UC 1266	1266	6RSN	
Barley	UC 1280	1280	6RSF	
Barley	UC 1317	1317	6RSN	
Barley	UC 1318	1318	6RSN	
Barley	UC UYP 210A	1351	6RSF	
Barley	UC BUTTA 12 96	1360		
Barley	UC UYP 3B	1379		
Barley	UC UYP 210B	1383		
Barley	UC 08YP 111 1231 LATE	1385		
Barley	UC 1390	1390	2RSM	
Barley	UC UOP 95	1399	2RSM	
Barley	UC UOP 96	1400		
Barley	UC UOP 97	1401		
Barley	UC UOP 98	1402		
Barley	UC UOP 99	1403		
Barley	UC UOP 100	1404		

Species	Name	UC Number	Type	Status
Barley	UC UOP 102	1405		
Barley	UC UOP 105	1406		
Barley	UC UOP 111	1408		
Barley	UC MP103	1409	2RSM	
Barley	UC MP179	1410	2RSM	
Barley	OSU FULL PINT	1411	2RSM	
Barley	SCHALLER	1413	6RSF-H	
Durum	UC TIPAI	1585	DURUM	
Durum	LCS ATHONIS	1698	DURUM	
Durum	WWW D2517	1733	DURUM	
Durum	UC 1756	1756	DURUM	
Durum	UC 1758	1758	DURUM	
Durum	APB 11705	1782	DURUM	
Durum	APB 11907	1783	DURUM	
Durum	APB 11908	1784	DURUM	
Durum	APB 11710	1785	DURUM	
Durum	WB YU807 115	1655	DURUM	
Durum	WWW DURAKING	878	DURUM	
Durum	WWW CROWN	1166	DURUM	
Durum	WWW PLATINUM	1210	DURUM	
Durum	WWW TOPPER	1211	DURUM	
Durum	WWW Q MAX	1473	DURUM	
Durum	LCS ALIRON	1721	DURUM	
Durum	UC 13210 5	1770	DURUM	
Durum	UC 13210 21	1771	DURUM	
Durum	WWW D2517BELL025	1776	DURUM	
Durum	NO_NAME	1786	DURUM	
Durum	UC 14215 11	1797	DURUM	Advanced
Durum	UC 14215 14	1798	DURUM	
Durum	UC 14215 42	1799	DURUM	
Durum	AS COLOMBO	1800	DURUM	
Durum	WWW D3085	1801	DURUM	
Durum	APB 571189	1811	DURUM	
Durum	APB KRONOS	951	DURUM	Released
Durum	WB ORITA	1215	DURUM	Released
Durum	UC DESERT KING	1375	DURUM	Released
Durum	SY FORTISSIMO	1429	DURUM	Released
Durum	SY VOLANTE	1431	DURUM	Released
Durum	APB HELIOS	1440	DURUM	Released
Durum	WB HAVASU	1479	DURUM	Released
Durum	APB WESTMORE HP	1484	DURUM	Released
Durum	AS MAESTRALE	1582	DURUM	Released
Durum	AS SARAGOLLA	1583	DURUM	Released
Durum	WB MEAD	1607	DURUM	Released
Durum	UC DESERT KING HP	1627	DURUM	Released

Species	Name	UC Number	Type	Status
Durum	APB TIBURON	1640	DURUM	Released
Durum	WB MOHAVE	1654	DURUM	Released
Durum	UC MIWOK	1690	DURUM	Released
Durum	LCS KIKO	1697	DURUM	Released
Durum	UC 1796	1796	DURUM	Advanced
Durum	APB 571217	1810	DURUM	Advanced
Durum	APB 571353	1812	DURUM	Advanced
Durum	APB 335	1813	DURUM	Advanced
Durum	APB 540505	1822	DURUM	Advanced
Durum	APB 410077	1823	DURUM	Advanced
Durum	UC 15210 11	1824	DURUM	Advanced
Durum	UC 15210 12	1825	DURUM	Advanced
Durum	UC 15210 24	1826	DURUM	Advanced
Durum	APB 540165	1827	DURUM	Advanced
Durum	LCS 12E4006	1832	DURUM	Advanced
Durum	LCS 13SD0056	1833	DURUM	Advanced
Oat	UC71 183 1	162	6RSF	
Triticale	BAG TYNDAL	3171	TRITICALE	Released
Triticale	APB 660049	3172	TRITICALE	
Triticale	APB 9919	3173	TRITICALE	
Triticale	BAG NU WHEAT	3174	TRITICALE	
Triticale	BAG BG 198-14	3175	TRITICALE	
Triticale	BAG BG 225-14	3176	TRITICALE	
Triticale	NS TRICAL 105	3097	TRITICALE	Released
Triticale	WB PACHECO	3164	TRITICALE	Released
Triticale	NS CAMELOT	3168	TRITICALE	Released
Triticale	NS TRICAL 158EP	3169	TRITICALE	
Triticale	NS TRICAL 115T	3170	TRITICALE	
Triticale	PRL 011TS 429	3177	TRITICALE	
Triticale	NS 10T50020	3178	TRITICALE	
Triticale	NS 10T70126	3179	TRITICALE	
Wheat (fall sown)	WWW BR0202W	1498	HWS	Advanced
Wheat (fall sown)	LCS 08SB0738	1726	HWS	Advanced
Wheat (fall sown)	UC 1744	1744	HWS	Advanced
Wheat (fall sown)	APB 770229	1746	HWS	Advanced
Wheat (fall sown)	APB 430701	1747	HRS	Advanced
Wheat (fall sown)	UC 13010 31	1768	HRS	Advanced
Wheat (fall sown)	UC 13010 34	1769	HWS	Advanced
Wheat (fall sown)	WWW COI565W	1774	HWS	Advanced
Wheat (fall sown)	WWW AUBR6122W	1775	HWS	Advanced
Wheat (fall sown)	SX908	1777	SWS	Advanced
Wheat (fall sown)	APB 12104	1780	HRS	Advanced
Wheat (fall sown)	APB 11512	1781	HWS	Advanced
Wheat (fall sown)	WWW MIKA	1340	HRS	Released
Wheat (fall sown)	UC CLEAR WHITE	1361	HWS	Released

Species	Name	UC Number	Type	Status
Wheat (fall sown)	UC PATWIN	1419	HWS	Released
Wheat (fall sown)	WB JOAQUIN	1424	HRS	Released
Wheat (fall sown)	WB PR 1404	1526	HRS	Released
Wheat (fall sown)	WB PERLA	1729	HWS	Released
Wheat (fall sown)	UC 13010 23	1767	HRS	Advanced
Wheat (fall sown)	LCS 11SB0096	1772	HRS	Advanced
Wheat (fall sown)	LCS 11SB0097	1773	HRS	Advanced
Wheat (fall sown)	BAG NEW DIRKWIN HP	1779	SWS	Advanced
Wheat (fall sown)	UC 14010 17	1789	HRS	Advanced
Wheat (fall sown)	UC 14010 20	1790	HRS	Advanced
Wheat (fall sown)	UC 14010 22	1791	HWS	Advanced
Wheat (fall sown)	UC 14010 29	1792	HRS	Advanced
Wheat (fall sown)	UC 14014 42	1793	HWS	Advanced
Wheat (fall sown)	SY 034	1794	HRS	Advanced
Wheat (fall sown)	SY DAYN	1795	HWS	Released
Wheat (fall sown)	WB DA907 005	1803	HRS	Advanced
Wheat (fall sown)	LCS 10SB0087 B	1804	HRS	Advanced
Wheat (fall sown)	LCS UI PLATINUM	1805	HWS	Advanced
Wheat (fall sown)	APB 500553	1806	HRS	Advanced
Wheat (fall sown)	APB 430429	1808	HRS	Advanced
Wheat (fall sown)	APB 717	1809	HWS	Advanced
Wheat (fall sown)	UC ANZA	20	HRS	Released
Wheat (fall sown)	SY CAL ROJO	1478	HRS	Released
Wheat (fall sown)	UC LASSIK	1495	HRS	Released
Wheat (fall sown)	SY REDWING	1521	HRS	Released
Wheat (fall sown)	SY BLANCA ROYALE	1522	HWS	Released
Wheat (fall sown)	WB TRIPLE IV	1550	HRS	Released
Wheat (fall sown)	SY ULTRA	1590	HRS	Released
Wheat (fall sown)	WWW FV 2808	1608	HRS	Released
Wheat (fall sown)	WB ROCKLAND	1650	HRS	Released
Wheat (fall sown)	SY BLANCA GRANDE 515	1657	HWS	Released
Wheat (fall sown)	SY SUMMIT 515	1658	HRS	Released
Wheat (fall sown)	SY 314	1660	HRS	Released
Wheat (fall sown)	BAG NEW DIRKWIN	1667	SWS	Released
Wheat (fall sown)	UC PATWIN 515	1680	HWS	Released
Wheat (fall sown)	LCS STAR	1688	HWS	Released
Wheat (fall sown)	LCS ATOMO	1723	HWS	Released
Wheat (fall sown)	WB JOAQUIN ORO	1728	HRS	Released
Wheat (fall sown)	WB 9229	1730	HRS	Released
Wheat (fall sown)	WB PATRON	1731	HRS	Released
Wheat (fall sown)	UC PATWIN 515HP	1743	HWS	Released
Wheat (fall sown)	UC YUROK	1745	HRS	Released
Wheat (fall sown)	WB 9112	1748	HRS	Released
Wheat (fall sown)	WB 7618	1749	HWS	Released
Wheat (fall sown)	WB 7390	1750	HWS	Advanced

Species	Name	UC Number	Type	Status
Wheat (fall sown)	WB 9904	1751	HRS	Released
Wheat (fall sown)	SY VACA	1766	SRS	Released
Wheat (fall sown)	ASSL TAM 204	1778	SRS	Released
Wheat (fall sown)	WB 7566	1802	HWS	Released
Wheat (fall sown)	APB 501189	1807	HRS	Advanced
Wheat (fall sown)	UC 15010 5	1814	HRS	Advanced
Wheat (fall sown)	UC 15010 27	1815	HWS	Advanced
Wheat (fall sown)	UC 15013 15	1816	HWS	Advanced
Wheat (fall sown)	UC 15014 4	1817	HRS	Advanced
Wheat (fall sown)	UC 15014 35	1818	HRS	Advanced
Wheat (fall sown)	APB 500709	1819	HRS	Advanced
Wheat (fall sown)	APB 501129	1820		Advanced
Wheat (fall sown)	APB 8238	1821		Advanced
Wheat (fall sown)	APB 501089	1828	HRS	Advanced
Wheat (fall sown)	APB 8155	1829		Advanced
Wheat (fall sown)	LCS 12SB0197	1830	HRS	Advanced
Wheat (fall sown)	LCS 12SB0224	1831	HWS	Advanced

Table 55: Details for entries tested (Intermountain).

Species	Name	UC Number	Type	Status
Barley	BZ502 265	9050	2RSF	Advanced
Barley	RASMUSSON	9075	6RSM	
Barley	TLB 148	9078	6RSF	
Barley	UC 1292	9089	6RSF	
Barley	UC 1335	9094	2RSM	Advanced
Barley	UC 1372	9109	6RSF	Advanced
Barley	UC 1377	9114	6RSF	
Barley	UC 1386	9115	6RSF H	Advanced
Barley	UC 1387	9116	6RSF H	Advanced
Barley	UC 1388	9117	6RSF H	
Barley	UC 1389	9118	2RSM	Advanced
Barley	UC 1390	9119	2RSM	Advanced
Barley	UC 1391	9120	2RSM	
Barley	UC 1392	9121	2RSM	Advanced
Barley	UC 1394	9123	2RSM	Advanced
Barley	UC 1396	9125	6RSF H	Advanced
Barley	UC 1397	9126	6RSF H	Advanced
Barley	UC 1398	9127	2RSM	
Barley	UC 4B	9128	6RSF	Advanced
Barley	09WA 203 24	9005	2RSF	
Barley	09WA 228 13	9007	2RSF	
Barley	09WA 231 5	9008	2RSF	
Barley	10WA 105 33	9012	2RSF	
Barley	10WA 106 18	9013	2RSF	
Barley	10WA 106 19	9014	2RSF	
Barley	10WA 113 16	9015	2RSF	
Barley	2AB04 X01084 27	9024	2RSM	
Barley	2AB07 X031098 31	9025	2RSM	
Barley	2AB07 X04M219-46	9026	2RSM	
Barley	2AB08 X05M010-82	9029	2RSM	
Barley	2AB09 X06F058HL-31	9031	2RSF H	
Barley	2AB09 X06F084-51	9032	2RSF-H	
Barley	2B09 3425	9033	2RSM	
Barley	2B10 4162	9034	2RSM	
Barley	2B10 4378	9035	2RSM	
Barley	2B11 4949	9038	2RSM	
Barley	2B11 5166	9039	2RSM	
Barley	2ND27705	9043	2RSM	
Barley	2ND28065	9044	2RSM	
Barley	2ND30724	9045	2RSM	
Barley	BZ509 216	9051	2RSF	
Barley	BZ509 448	9052	2RSF	
Barley	MT090180	9064	2RSF	
Barley	MT090190	9066		

Species	Name	UC Number	Type	Status
Barley	MT100120	9067	2RSF	
Barley	MT100126	9068	2RSF	
Barley	UT2136 96	9131	6RSF	
Barley	UT2183 85	9133	6RSF	
Barley	AC METCALFE	9047	2RSM	Released
Barley	BARONESSE	9048	2RSF	Released
Barley	CDC COPELAND	9054	2RSM	Released
Barley	CELEBRATION	9055	6RSM	Released
Barley	CONLON	9056	2RSM	Released
Barley	CONRAD	9057	2RSM	Released
Barley	HARRINGTON	9060	2RSM	Released
Barley	LEGACY	9061	6RSM	Released
Barley	MERIT 57	9062	2RSM	Released
Barley	MILLENNIUM	9063	6RSF	Released
Barley	OSU FULL PINT	9072	2RSM	Released
Barley	PINNACLE	9073	2RSM	Released
Barley	QUEST	9074	6RSM	Released
Barley	STELLAR ND	9076	6RSM	Released
Barley	STEPTOE	9077	6RSF	Released
Barley	TRADITION	9079	6RSM	Released
Barley	UC 1337	9081	6RSF	Advanced
Barley	UC 1341	9082	6RSF	Advanced
Barley	UC 1393	9084	6RSF	Advanced
Barley	UC 960	9087	6RSF	Released
Barley	UC 10B	9088	6RSF	Advanced
Barley	UC 1332	9093	6RSF H	Advanced
Barley	UC 1339	9096	6RSF	Advanced
Barley	UCD 1365	9102	6RSF	Advanced
Barley	UC 1395	9124	6RSF	Advanced
Barley	UC TL20	9129	6RSF	Advanced
Barley	08ARS028 20	9001		
Barley	08ARS112 75	9002		
Barley	08ARS116 91	9003		
Barley	10WA 117 17	9016	2RSF	
Barley	10WA 117 24	9017	2RSF	
Barley	11MQ71	9018	2RSF	
Barley	11WA 107 20	9020		
Barley	11WA 107 43	9021		
Barley	11WA 107 58	9022		
Barley	12WA 120 14	9023		
Barley	2B12 5582	9041		
Barley	2ND30837	9046		
Barley	BUTTA 12	9049		
Barley	BZ509 601	9053		
Barley		9058		

Species	Name	UC Number	Type	Status
Barley	FULL PINT	9059		
Barley	MT090182	9065		
Barley	MT124555	9070		
Barley	UC 1278	9080		
Barley	UC 1365	9083	6RSF	
Barley	UC 1409	9085		
Barley	UC 1410	9086		
Barley	UTSB10902 91	9135		
Barley	UTSB10905 72	9136		
Wheat (spring sown)	05SB84	9139	HRS	
Wheat (spring sown)	BUCK PRONTO	19018	HRS	
Wheat (spring sown)	GLEE	19025	HRS	
Wheat (spring sown)	IDO852	19036	SWS	
Wheat (spring sown)	MERRILL 2	19051	SWS	
Wheat (spring sown)	SX908	19055	SWS	
Wheat (spring sown)	SY BASALT	19061	HRS	
Wheat (spring sown)	TX06V7266	19068	SRS	
Wheat (spring sown)	UC 1743	19074	HWS	
Wheat (spring sown)	WA 8162	19080	SWS	
Wheat (spring sown)	WA8195	19088	SWS	
Wheat (spring sown)	WB1035CL+	19101	SWS	
Wheat (spring sown)	WB6121	19102	SWS	
Wheat (spring sown)	WB9518	19104	HRS	
Wheat (spring sown)	11SB0096	19003	HRS	
Wheat (spring sown)	12SB0131	19004	HWS	
Wheat (spring sown)	12SB0146	19005	HWS	
Wheat (spring sown)	12SW079	19011	SWS	
Wheat (spring sown)	CLEAR WHITE 515	19021	HWS	
Wheat (spring sown)	DAYN	19022	HWS	
Wheat (spring sown)	HRS 3530	19031	HRS	
Wheat (spring sown)	IDO851	19035	SWS	
Wheat (spring sown)	IDO862E	19038	HRS	
Wheat (spring sown)	IDO862T	19039	HRS	
Wheat (spring sown)	JEFFERSON	19041	HRS	
Wheat (spring sown)	M 12001	19049	SWS	
Wheat (spring sown)	SY 04W40292R	19058	HRS	
Wheat (spring sown)	SY 3001 2	19060	HRS	
Wheat (spring sown)	UC 12013 22	19071	HWS	
Wheat (spring sown)	UC 1744	19075	HWS	
Wheat (spring sown)	UC 1745	19076	HRS	
Wheat (spring sown)	UI WINCHESTER	19079	HRS	
Wheat (spring sown)	WA 8217	19084	HRS	
Wheat (spring sown)	YS 601	19107	HWS	
Wheat (spring sown)	YS 801	19109	HRS	
Wheat (spring sown)	YS 802	19110	HRS	

Species	Name	UC Number	Type	Status
Wheat (spring sown)	10SB0087 B	19002	HRS	
Wheat (spring sown)	12SB0197	19006	HRS	
Wheat (spring sown)	12SB0199	19007	HRS	
Wheat (spring sown)	12SB0224	19008	HRS	
Wheat (spring sown)	12SW052	19009	SWS	
Wheat (spring sown)	12SW068	19010	SWS	
Wheat (spring sown)	14SWW1030	19012	SWS	
Wheat (spring sown)	14SWW1059	19013	SWS	
Wheat (spring sown)	ALPOWA	19014	SWS	
Wheat (spring sown)	ALTURAS	19015	SWS	
Wheat (spring sown)	ALUM	19016	HRS	
Wheat (spring sown)	BULLSEYE	19019	HRS	
Wheat (spring sown)	DIVA	19023	SWS	
Wheat (spring sown)	HRS 3100	19027	HRS	
Wheat (spring sown)	HRS 3361	19028	HRS	
Wheat (spring sown)	HRS 3419	19029	HRS	
Wheat (spring sown)	HRS 3504	19030	HRS	
Wheat (spring sown)	IDO1202S	19032	HWS	
Wheat (spring sown)	IDO1203S A	19033	HWS	
Wheat (spring sown)	LCS ATOMO	19044	HWS	
Wheat (spring sown)	LCS IRON 11 SB 0096	19045	HRS	
Wheat (spring sown)	LCS STAR	19046	HWS	
Wheat (spring sown)	LOUISE	19048	SWS	
Wheat (spring sown)	MELBA	19050	SWS	
Wheat (spring sown)	ANZA	19052	HRS	
Wheat (spring sown)	SEAHAWK	19054	SWS	
Wheat (spring sown)	SY 04PN3024 2	19056	SWS	
Wheat (spring sown)	SY 04PN3051 9	19057	HRS	
Wheat (spring sown)	SY 06PN3015 08	19059	HRS	
Wheat (spring sown)	SY BASALT 04W40240R	19062	HRS	
Wheat (spring sown)	SY COHO 04W40292R	19064	HRS	
Wheat (spring sown)	SY SELWAY 04PN3001 2	19065	HRS	
Wheat (spring sown)	SY STEELHEAD	19066	HRS	
Wheat (spring sown)	UI PLATINUM	19077	HWS	
Wheat (spring sown)	UI STONE	19078	SWS	
Wheat (spring sown)	WA 8166	19081	HRS	
Wheat (spring sown)	WA 8189	19082	SWS	
Wheat (spring sown)	WA 8214	19083	SWS	
Wheat (spring sown)	WA 8236	19085	SWS	
Wheat (spring sown)	WB 1035 CL+	19089	SWS	
Wheat (spring sown)	WB 6121	19090	SWS	
Wheat (spring sown)	WB 6341	19091	SWS	
Wheat (spring sown)	WB 6430	19092	SWS	
Wheat (spring sown)	WB 7417	19093	HWS	
Wheat (spring sown)	WB 9200	19094	HRS	

Species	Name	UC Number	Type	Status
Wheat (spring sown)	WB 9518	19096	HRS	
Wheat (spring sown)	WB 9879 CLP	19099	HRS	
Wheat (spring sown)	WB HARTLINE	19100	HWS	
Wheat (spring sown)	WHIT	19105	SWS	
Wheat (spring sown)	YECORA ROJO	19106	HRS	
Wheat (spring sown)	YS 602	19108	SWS	
Wheat (spring sown)	YS 802 1	19111	HRS	
Wheat (fall sown)	AP 700 CL	29005	SWW	
Wheat (fall sown)	AP BADGER	29006	SWW	
Wheat (fall sown)	AZIMUT	29010	HRW	
Wheat (fall sown)	BRUNDAGE 96	29013	SWW	
Wheat (fall sown)	CARA	29015	CLUB	
Wheat (fall sown)	COLONIA	29016	SWW	
Wheat (fall sown)	EXCEDE	29019	SWW	
Wheat (fall sown)	IDN 02 08806A	29029	SWW	
Wheat (fall sown)	IDN 04 00405B	29032	SWW	
Wheat (fall sown)	LWW 04 4009	29049	SWW	
Wheat (fall sown)	NORWEST 554	29061	HRW	
Wheat (fall sown)	OR2090533	29069	SWW	
Wheat (fall sown)	OR2100267	29070	SWW	
Wheat (fall sown)	OR2100937	29071	SWW	
Wheat (fall sown)	ORCF 103	29080	SWW	
Wheat (fall sown)	ORI2101840	29081	SWW	
Wheat (fall sown)	ORI2101841	29083	SWW	
Wheat (fall sown)	ORI2101841 2 GENE	29084	SWW	
Wheat (fall sown)	SIETTE CERROS	29091	SWW	
Wheat (fall sown)	WB 1070 CL	29114	SWW	
Wheat (fall sown)	WB 436	29117	SWW	
Wheat (fall sown)	WB EXP 1038 CL	29120	SWW	
Wheat (fall sown)	WB EXP 458	29121	SWW	
Wheat (fall sown)	WESTBRED 528	29124	SWW	
Wheat (fall sown)	WINCAL 09196	29126	HRW	
Wheat (fall sown)	YS 343	29131	SWW	
Wheat (fall sown)	03 29902A	29002	SWW	
Wheat (fall sown)	BOBTAIL	29011	SWW	
Wheat (fall sown)	BRUNEAU	29014	SWW	
Wheat (fall sown)	DAS 003	29017	SWW	
Wheat (fall sown)	DAS 004	29018	SWW	
Wheat (fall sown)	GOETZE	29026	SWW	
Wheat (fall sown)	IDN 01 10704A	29028	SWW	
Wheat (fall sown)	IDN 02 29001A	29030	SWW	
Wheat (fall sown)	IDN 06 033038	29033	SWW	
Wheat (fall sown)	IDN 06 18102A	29034	SWW	
Wheat (fall sown)	IDO1108	29036	SWW	
Wheat (fall sown)	KASEBERG	29038	SWW	

Species	Name	UC Number	Type	Status
Wheat (fall sown)	KELDIN	29039	SWW	
Wheat (fall sown)	LADD	29040	SWW	
Wheat (fall sown)	LCS ARTDECO	29041	SWW	
Wheat (fall sown)	LCS BIANCOR	29042	SWW	
Wheat (fall sown)	LEGION	29043	SWW	
Wheat (fall sown)	LOR 092	29044	SWW	
Wheat (fall sown)	LOR 334	29045	SWW	
Wheat (fall sown)	LOR 833	29046	SWW	
Wheat (fall sown)	LOR 913	29047	SWW	
Wheat (fall sown)	LOR 978	29048	SWW	
Wheat (fall sown)	LWW 10 1073	29050	SWW	
Wheat (fall sown)	LWW 11 431	29051	SWW	
Wheat (fall sown)	LWW 12 7105	29052	SWW	
Wheat (fall sown)	MARY	29059	SWW	
Wheat (fall sown)	OR2080637	29064	SWW	
Wheat (fall sown)	OR2080641	29065	SWW	
Wheat (fall sown)	OR2090473	29068	SWW	
Wheat (fall sown)	OR2100940	29072	SWW	
Wheat (fall sown)	OR2101043	29073	SWW	
Wheat (fall sown)	OR2110526	29074	SWW	
Wheat (fall sown)	ORCF 101	29077	SWW	
Wheat (fall sown)	ORCF 102	29079	SWW	
Wheat (fall sown)	PUMA WA 8134	29088	SWW	
Wheat (fall sown)	ROSALYN	29090	SWW	
Wheat (fall sown)	SKILES	29092	SWW	
Wheat (fall sown)	STEPHENS	29093	SWW	
Wheat (fall sown)	SY 107	29099	SWW	
Wheat (fall sown)	SY 71-4 EXP	29100	SWW	
Wheat (fall sown)	SY 96-2 EXP	29101	SWW	
Wheat (fall sown)	SY OVATION	29102	SWW	
Wheat (fall sown)	TUBBS	29104	SWW	
Wheat (fall sown)	TUBBS 06	29105	SWW	
Wheat (fall sown)	WA 8169	29111	SWW	
Wheat (fall sown)	WB 1529	29115	SWW	
Wheat (fall sown)	WB 1604	29116	SWW	
Wheat (fall sown)	WB EXP 1028 CL+	29118	SWW	
Wheat (fall sown)	WB EXP 1030 CL+	29119	SWW	
Wheat (fall sown)	WB TRIFECTA	29123	SWW	
Wheat (fall sown)	YAMHILL	29128	SWW	
Wheat (fall sown)	YS 221	29129	SWW	
Wheat (fall sown)	YS 261	29130	SWW	
Wheat (fall sown)	YS 9568 A	29134	SWW	
Wheat (fall sown)	20060126 35C	29003		
Wheat (fall sown)	ARS06134 57C	29009		
Wheat (fall sown)	EXPBZ6W09 471	29022		

Species	Name	UC Number	Type	Status
Wheat (fall sown)	EXPBZ6W09 489	29023		
Wheat (fall sown)	HUFFMAN	29027		
Wheat (fall sown)	IDN 07 28017B	29035		
Wheat (fall sown)	JASPER	29037		
Wheat (fall sown)	LWW12 7105	29055		
Wheat (fall sown)	LWW14 71032	29056		
Wheat (fall sown)	LWW14 71195	29057		
Wheat (fall sown)	LWW14 73163	29058		
Wheat (fall sown)	OR2121086	29075		
Wheat (fall sown)	OR2121252	29076		
Wheat (fall sown)	ORI2101840 2 GENE	29082	SWW	
Wheat (fall sown)	ORLD111833	29085		
Wheat (fall sown)	ORLD112334	29086		
Wheat (fall sown)	ORLD113092	29087		
Wheat (fall sown)	SY 04PN005 25	29094		
Wheat (fall sown)	SY 04PN066 7	29096		
Wheat (fall sown)	SY 04PN096 2	29098		
Wheat (fall sown)	VERDANT	29107		
Wheat (fall sown)	WA 8206	29112		
Wheat (fall sown)	WA 8232	29113		
Wheat (fall sown)	WINCORA	29127		

## 7. References

1. USDA NASS. *National Agricultural Statistics Service* <http://www.nass.usda.gov/>. 2017.
2. Yan, W. and M.S. Kang, *GGE Biplot Analysis. A graphical tool for breeders, geneticists, and agronomists*. 2003, Boca Raton, FL: CRC Press.
3. Yan, W. and N.A. Tinker, *Biplot analysis of multi-environment trial data: Principles and applications*. Canadian Journal of Plant Science, 2006. **86**: p. 623-645.
4. Yan, W. and L.A. Hunt, *Interpretation of genotype X environment interaction for winter wheat yield in Ontario*. Crop Science, 2001. **41**: p. 19-25.
5. Yan, W., *Crop Variety Trials: Data Management and analysis*. First Edition ed. 2014: John Wiley & Sons, Inc. 351.
6. Smith, A.B., B.R. Cullis, and R. Thompson, *The analysis of crop cultivar breeding and evaluation trials: an overview of current mixed model approaches*. Journal of Agricultural Science, 2005. **143**: p. 449-462.
7. CIMIS, *California Irrigation Management Information System* <http://wwwcimis.water.ca.gov/cimis/data.jsp>. 2015, California Department of Water Resources Office of Water Use Efficiency.