

## Fresno County Small Grain Variety Performance Trials

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Small grain variety tests were conducted at multiple locations throughout California, coordinated by Wheat Breeder Jorge Dubcovsky. The results from Kings County with Boyett Farms and Fresno County small plot trials are shown on the following pages. The regional wheat, barley and triticale trials were conducted at the Westside Research and Extension Center in Five Points and Corcoran. A special thanks to Milky Way Dairy, Boyette Farms and WSREC for their cooperation in these studies. An Agronomy Progress Report containing more detailed results from all trials is available at: <http://smallgrains.ucdavis.edu> and <http://cetulare.ucanr.edu>.

2014 started off with almost no rain, resulting in poor yields in the dryland regions and requiring most of the small grains to be irrigated up in the irrigated wheat growing regions. Those fields not being irrigated up with sprinklers often ended up with poor, non-uniform stands. In many fields, weeds, especially grasses, caused severe competition to slow emerging small grains. This also created less than optimum conditions for good root growth. Low temperatures in December seemed to have affected final yields. Although there was little rain, temperature conditions were ideal for wheat stripe rust on some varieties. There were large acreages planted to susceptible varieties. Several fields were treated with fungicides one to two times.

Wheat varieties have different levels of genetic resistance to stripe rust, and as several new races of rust develop, the resistance breaks down. Often, our best silage varieties are also the high yielding grain varieties with high protein, resistance to disease and resistance to lodging and early maturing. A dual purpose variety gives options, particularly when grain prices are high and silage prices low or vice versa, or when water may be limited. Choose more than one variety or grain type to reduce the impacts of weather, disease, harvest schedules, and economics.

- First and foremost, select and plant varieties with good disease resistance along with high yield potential.
- Second, a well-timed fungicide application has shown to reduce the yield loss even in resistant varieties when weather conditions favor the disease. Stripe rust resistance based on observations from the University of California statewide variety tests indicate:

**Highly Susceptible:** Joaquin, Mika, Blanca Grande, Yecora Rojo, Dirkwin

**Susceptible:** WB-Paloma, Pacheco, Summit

**Moderately Susceptible:** PR 1404, Redwing, Kronos, Duraking, Clear White, Cristallo

**Moderately resistant:** Trical 118, Westmore, Ultra, Camelot, Crown, Platinum, Topper, Blanca Fuerte, Volante, Trical 105, Desert King

**Resistant:** Cal Rojo, Blanca Grande 515, Summit 515, Lariat, Lassik, Patwin, Blanca Royale, Rockland, Fortissimo, SY 158T, Joaquin Oro

## 2014 California Wheat Variety Survey California Wheat Commission

Overall estimated wheat plantings for the 2014 harvest year are 560,000 acres; down 18% from last year's variety survey acreage. Lower plantings are attributed to weaker wheat prices and lack of rain at planting time, increased competition from other crops, and uncertainty of the availability of irrigation water. Due to the high price being paid for silage and hay this year, a record amount of wheat acreage is expected to be cut for non-grain purposes for the livestock and dairy industries. Through the winter of 2013/2014, California continued to receive record low rainfall. For many locations, calendar year 2013 was the driest year in over 130 years.

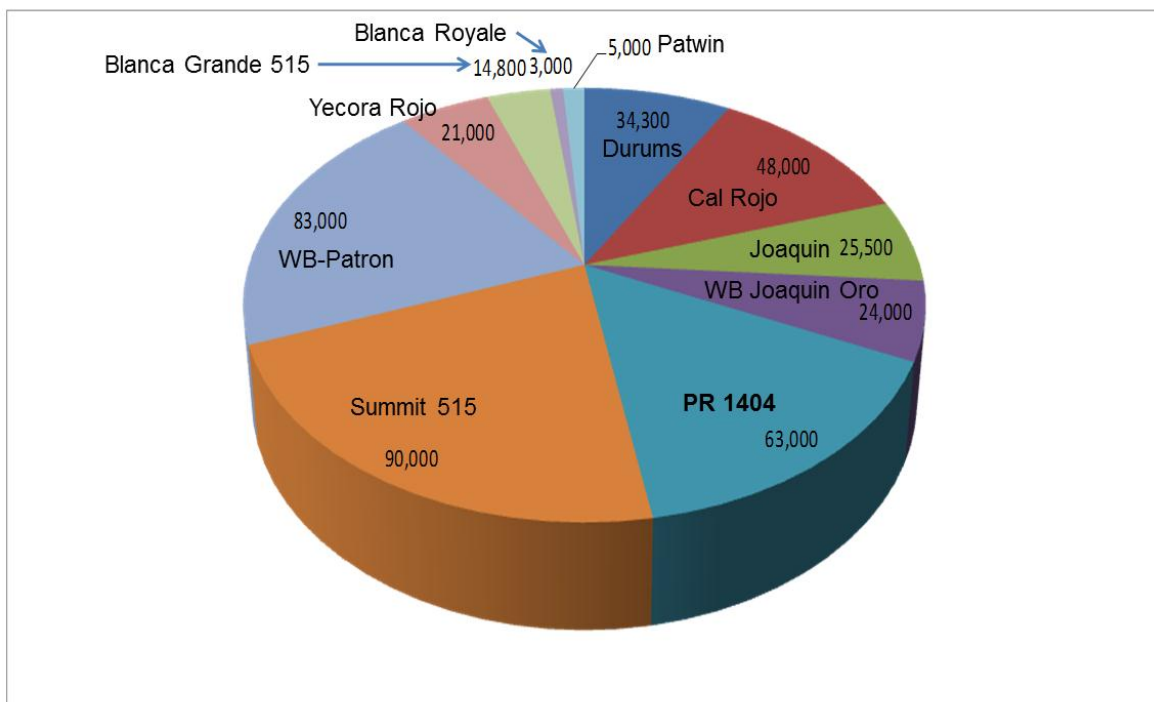
### RED AND WHITE WHEAT:

Hard Red wheat varieties accounted for 78% of all acreage grown in California this year; 72% of which is grown in the San Joaquin Valley. SY Summit 515 was the top planted red wheat variety, followed by the forage varieties WB Patron and PR 1404. Cal Rojo topped the red wheat varieties grown in Sacramento Valley. Yecora Rojo remained the most commonly planted red variety planted in the far northern and southern parts of California. Blanca Grande 515 was the top Hard White wheat planted and Yamhill, New Dirkwil, and Alpowa topped the Soft White varieties.

### DURUM:

Total Durum acreage is down 34% from last year, reducing the proportion of Durum planted in California to 8%. The San Joaquin Valley Durum crop is down 44% from last year, while Imperial Valley Desert Durum® has 30% less acreage. The top varieties in Southern California are Orita, Desert King, and Havasu. Volante, Fortissimo, and Desert King HP are the predominant varieties in the San Joaquin Valley.

## CA Wheat and Durum Acreage - 2014



California Wheat Commission. 2014.  
<<http://www.californiawheat.org/>>.

## 2014 Common Wheat and Triticale Yields

		San Joaquin Valley			
Entry	Name	Yield SJ Valley	Yield KERN	Yield FRESNO	Yield KINGS
<b><u>CULTIVARS</u></b>					
	20 ANZA	5830 (26)	5510 (29)	5570 (15)	6420 (29)
	1340 MIKA	4610 (46)	3590 (46)	4710 (42)	5550 (44)
	1419 PATWIN	5580 (33)	5260 (34)	5340 (27)	6130 (36)
	1424 JOAQUIN	6240 (11)	6630 (8)	5260 (31)	6830 (11)
	1478 CAL ROJO	5560 (34)	5040 (38)	5080 (34)	6560 (20)
	1495 LASSIK	6060 (18)	5590 (27)	6030 (5)	6560 (20)
	1521 REDWING	6250 (10)	6200 (13)	5550 (16)	7000 (8)
	1522 BLANCA ROYALE	5950 (23)	5820 (21)	5430 (24)	6600 (16)
	1526 PR 1404	5710 (28)	4880 (39)	5550 (16)	6710 (13)
	1550 TRIPLE IV	5070 (42)	5070 (36)	4370 (45)	5770 (40)
	1590 ULTRA	6240 (11)	6090 (16)	6120 (2)	6510 (22)
	1608 FV 2808	5620 (32)	5140 (35)	5440 (23)	6290 (32)
	1650 WB-ROCKLAND	5270 (41)	5430 (31)	4950 (38)	5430 (45)
	1657 BLANCA GRANDE 515	6500 (2)	6880 (2)	5960 (7)	6680 (14)
	1658 SUMMIT 515	5990 (21)	6880 (2)	5000 (37)	6090 (38)
	1660 SY 314	6070 (17)	6280 (11)	5500 (20)	6440 (27)
	1667 NEW DIRKWIN	4670 (45)	3920 (44)	4900 (41)	5200 (46)
	1680 PATWIN 515	6090 (15)	5620 (26)	5470 (22)	7180 (4)
	1688 LCS-STAR	6360 (8)	6150 (15)	5680 (12)	7260 (3)
	1723 LCS-ATOMO	6420 (5)	5640 (24)	6040 (4)	7580 (2)
	1728 WB-JOAQUIN ORO	5530 (35)	6000 (18)	4930 (39)	5660 (43)
	1729 WB-PERLA	5690 (30)	5590 (27)	5280 (29)	6220 (34)
	1730 WB-9229	5980 (22)	5890 (20)	5540 (18)	6500 (23)
	1731 WB-PATRON	5530 (35)	4650 (41)	5640 (13)	6300 (31)
	1766 SY-VACA	5700 (29)	4880 (39)	5640 (13)	6590 (18)
<b><u>ADVANCED LINES</u></b>					
	1498 WWW BR0202W	5340 (39)	6160 (14)	4140 (46)	5740 (42)
	1726 LCS 08SB0738	6080 (16)	5920 (19)	5920 (8)	6400 (30)
	1744 UC 1744	5490 (37)	5070 (36)	4920 (40)	6470 (25)
	1745 UC 12014/35	6220 (13)	6820 (4)	5380 (26)	6460 (26)
	1746 APB 770229	6410 (6)	6020 (17)	5530 (19)	7690 (1)
	1747 APB 430701	5000 (43)	3910 (45)	5320 (28)	5750 (41)
	1748 WB 9112	5670 (31)	5310 (33)	5120 (33)	6600 (16)
	1749 WB 7618	5880 (24)	6290 (10)	5130 (32)	6230 (33)
	1750 WB 7390	5830 (26)	5730 (23)	5280 (29)	6490 (24)
	1751 WB 9904	6010 (20)	5350 (32)	6130 (1)	6570 (19)
	1767 UC 13010-23	6500 (2)	6270 (12)	6050 (3)	7170 (5)
	1768 UC 13010-31	5870 (25)	5500 (30)	5430 (24)	6670 (15)
	1769 UC 13010-34	6370 (7)	6360 (9)	5800 (9)	6950 (9)
	1772 LCS 11SB0096	6270 (9)	6770 (5)	5030 (36)	7020 (7)
	1773 LCS 11SB0097	6040 (19)	6640 (7)	5050 (35)	6440 (27)
	1774 WWW COI565W	5480 (38)	5640 (24)	4700 (43)	6110 (37)
	1775 WWW AUBR6122W	5330 (40)	4360 (43)	5490 (21)	6140 (35)
	1777 SX908	3870 (47)	3520 (47)	3530 (47)	4570 (47)
	1778 Tx06V7266	6430 (4)	6700 (6)	5760 (10)	6830 (11)
	1779 NEW DIRKWIN HIGH PROTEIN	4970 (44)	4440 (42)	4620 (44)	5840 (39)
	1780 APB 12104	6770 (1)	7420 (1)	6010 (6)	6880 (10)
	1781 APB 11512	6210 (14)	5820 (21)	5690 (11)	7110 (6)
<b><u>TRITICALE</u></b>					
	3097 TRICAL 105	5740 (5)	6110 (5)	4920 (4)	6200 (4)
	3164 WB-PACHECO	6530 (1)	7900 (1)	4720 (5)	6970 (1)
	3168 CAMELOT	6140 (4)	6800 (3)	5490 (3)	6130 (5)
	3169 SY 158T	6210 (3)	6330 (4)	5510 (2)	6790 (2)
	3170 SY 115T	6450 (2)	7130 (2)	5620 (1)	6600 (3)
	MEAN	5840	5750	5330	6440
	CV	10.83	6.73	7.21	10.13
	LSD (0.05)	518.19	549.04	545.55	926.1

Numbers in parentheses indicate relative rank in column.

## 2014 Durum Wheat Yields

Entry Name	San Joaquin Valley			
	Yield SJ Valley	Yield KERN	Yield FRESNO	Yield KINGS
<u>CULTIVARS</u>				
878 DURAKING	6650 (16)	7100 (21)	6180 (13)	6780 (12)
951 KRONOS	6300 (23)	6420 (27)	5890 (19)	6630 (19)
1166 CROWN	6630 (17)	7180 (18)	6460 (8)	6400 (24)
1210 PLATINUM	6760 (12)	7910 (8)	5850 (20)	6820 (11)
1211 TOPPER	6710 (15)	6410 (29)	6460 (7)	7170 (4)
1215 ORITA	6310 (22)	6650 (24)	6770 (1)	5590 (33)
1375 DESERT KING	6980 (8)	8270 (4)	6380 (11)	6610 (20)
1429 FORTISSIMO	5900 (31)	5820 (30)	5930 (18)	5920 (32)
1431 VOLANTE	6180 (26)	6530 (25)	5970 (17)	6140 (29)
1473 Q-MAX	5840 (32)	5670 (31)	5620 (27)	6200 (27)
1479 HAVASU	6040 (30)	6460 (26)	5370 (31)	6410 (23)
1484 WESTMORE	6910 (9)	8170 (5)	6020 (15)	6850 (10)
1582 MAESTRALE	6170 (27)	7100 (20)	5470 (30)	6170 (28)
1583 SARAGOLLA	5470 (33)	4400 (33)	5630 (26)	6110 (31)
1585 UC-TIPAI	7030 (6)	7770 (13)	6490 (4)	7020 (7)
1607 WB-MEAD	6090 (29)	5460 (32)	6020 (14)	6640 (18)
1627 DESERT KING-HP	6340 (21)	7500 (16)	5680 (25)	6120 (30)
1640 APB-TIBURON	7010 (7)	7790 (11)	6390 (10)	7060 (6)
1654 WB-MOHAVE	6290 (24)	7070 (22)	5250 (32)	6750 (14)
1690 UC-MIWOK	6730 (14)	7860 (10)	5540 (28)	7080 (5)
<u>ADVANCED LINES</u>				
1655 WB YU807-115	-	-	-	-
1697 LCS KIKO NICK	7280 (1)	8470 (1)	6690 (3)	6980 (8)
1698 LCS ATHORIS	7100 (4)	8000 (7)	6760 (2)	6750 (13)
1721 LCS ALIRON	6760 (12)	7180 (18)	6470 (6)	6730 (16)
1733 WWW D2517	6510 (18)	7770 (12)	5820 (22)	6260 (25)
1756 UC 1756	7150 (3)	8440 (2)	5970 (16)	7350 (1)
1758 UC 1758	6120 (28)	6420 (27)	5520 (29)	6510 (21)
1770 UC 13210-5	6900 (10)	7890 (9)	6290 (12)	6730 (15)
1771 UC 13210-21	7090 (5)	8440 (2)	6470 (5)	6700 (17)
1776 WWW D2517Bell025	6500 (19)	7480 (17)	5840 (21)	6430 (22)
1782 APB 11705	7220 (2)	8170 (6)	6400 (9)	7330 (2)
1783 APB 11907	6230 (25)	6750 (23)	5190 (33)	6860 (9)
1784 APB 11908	6470 (20)	7710 (14)	5760 (23)	6240 (26)
1785 APB 11710	6770 (11)	7620 (15)	5720 (24)	7180 (3)
1786 KAMUT	2530 (34)	1300 (34)	3500 (34)	2490 (34)
MEAN	6440	7030	5930	6500
CV	12.28	8.35	11.12	11.41
LSD (0.05)	685.31	974.26	948.43	1065.34

Numbers in parentheses indicate relative rank in column.

## 2014 Fresno Barley

Entry	Name	1000			Lodging		Shatter	Stripe Rust 4/30	BYDV 4/30
		Yield (lbs/acre)	Test Wt (lbs/bu)	Kernel Wt (g)	Plant Ht (in)	Soft Dough			
<b>CULTIVARS</b>									
603	UC 603	4640	20	52.7	32	1.0	1.0	1.0	1.0
816	MAX	5610	13	54.7	27	1.0	1.0	1.0	2.5
933	UC 933	5340	14	52.5	33	1.0	1.3	1.0	1.0
969	UC 969	4460	21	54.5	33	1.0	1.0	1.0	1.0
1047	ISHI	6500	2	53.8	31	1.0	1.3	1.0	1.3
1134	TAMALPAIS	5260	15	60.8	30	1.0	1.0	1.0	1.0
<b>ADVANCED LINES</b>									
161	UCD UFRGS-028152	1840	28	43.4	53	1.0	1.5	2.5	1.0
1255	UCD B369	-	-	-	-	-	-	-	-
1256	UCD B398	5720	10	52.9	30	1.0	1.0	1.0	1.0
1260	UCD B372	6550	1	52.4	36	1.0	1.3	1.0	1.3
1261	UCD A237	5840	8	51.8	34	1.0	1.3	1.0	1.0
1280	UCD 1280	6030	6	53.5	37	1.8	2.3	1.8	1.5
1317	UCD 1317	4210	23	61.2	32	1.0	1.0	1.0	3.5
1318	UCD 1318	4950	16	59.1	34	1.0	1.0	1.0	1.0
1319	UCD 1319	4790	19	61.3	33	1.0	1.0	1.0	1.0
1321	UCD 1321	4810	18	61.6	32	1.0	1.0	1.0	1.0
1351	UCD UYP 210	6280	4	51.3	34	1.0	1.0	1.0	1.3
1355	UCD K1-11C	3820	26	48.2	41	1.0	1.0	3.0	1.0
1356	UCD K2-A	4410	22	46.3	40	1.8	1.8	1.5	1.0
1357	UCD K3-4H	3930	25	49.2	38	1.0	1.0	2.3	1.3
1358	UCD K11-B	3750	27	48.4	41	1.0	1.0	2.5	1.5
1378	11MQ31	4090	24	55.6	37	1.0	2.0	1.5	1.0
1379	UCD UYP3	6150	5	53.0	34	1.0	1.0	1.0	1.0
1380	UCD UYP2	5610	12	59.3	37	1.3	1.3	1.0	1.0
1381	UCD UYP306	4940	17	62.0	29	1.0	1.0	1.0	1.0
1382	UCD UYP275	5680	11	50.6	37	1.0	1.8	1.0	1.0
1383	UCD UYP210	5830	9	52.3	31	1.0	1.0	1.0	1.0
1384	UCD 08YP 111 (1231 EARLY)	6330	3	52.7	35	1.0	1.0	1.0	1.3
1385	UCD 08YP 111 (1231 LATE)	5860	7	51.9	34	1.0	1.0	1.0	1.0
MEAN		5110		53.8	35	1.1	1.2	1.3	1.1
CV		10.61		0.8	8.79	25.8	33.1	28.8	31.1
LSD (.05)		785.66		0.9	6.22	0.4	0.6	0.5	0.5

Rating scale for diseases (area of flag-1 leaf affected), lodging, shatter, blackpoint, and yellowberry: 1 = 0-3%, 2 = 4-14%, 3 = 15-29%, 4 = 30-49%, 5 = 50-69%, 6 = 70-84%, 7 = 85-95%, 8 = 96-100%.

BYDV ratings (see scale above) were based on percentage of plants showing foliar symptoms.

Numbers in parentheses indicate relative rank in column.

Protein is expressed at 12% moisture.

# Small Grain Silage Variety Trial 2013

Tulare/Kings Co. - Wright, Banuelos, Souza, Collar

Variety	Type	Harvest % H <sub>2</sub> O	Tons/A 70% H <sub>2</sub> O	Lodging %
<b>Summit 515</b>	HRW	59.6	<b>30.4</b>	3
<b>Blanca Royale</b>	HWW	59.3	<b>28.1</b>	28
<b>Cal Rojo</b>	HRW	57.2	<b>28.0</b>	1
<b>Ultra</b>	HRW	60.8	<b>27.8</b>	6
<b>Patwin</b>	HWW	63.7	<b>27.6</b>	3
<b>SY 314</b>	HRW	59.1	<b>27.4</b>	0
<b>WB-Patron</b>	Beardless HRW	61.4	<b>26.9</b>	46
<b>Tricale 158 EP</b>	T	68.7	<b>26.2</b>	9
<b>Blanca Grande 515</b>	HWW	56.2	<b>25.8</b>	64
<b>Tricale 115</b>	T	66.1	<b>25.6</b>	0
<b>FV 2808</b>	Beardless W	67.2	<b>24.6</b>	74

# Small Grain Silage Variety Trial 2014

Tulare/Kings Co. - Wright, Banuelos, Souza, Collar

Variety	Type	Harvest % H <sub>2</sub> O	Tons/A 70% H <sub>2</sub> O	Height (in)	Lodging %
Patwin	HWW	65.9	24.9	35	34
Triticale 115	T	71.0	24.0	40	0
Pacheco	T	70.1	23.1	46	45
Triticale 158 EP	T	73.5	23.1	42	1
Triticale 105	T	70.1	22.9	46	62
SY 314	HRW	63.8	22.7	37	67
Joaquin Oro	HRW	59.8	22.5	36	47
Summit 515	HRW	64.5	22.3	36	63
Cal Rojo	HRW	63.5	22.2	33	54
WB Patron	Beardless HRW	63.9	21.8	40	69
Camelot	Beardless T	68.9	21.2	43	55
LC Star	HWW	66.9	21.0	38	77
PR 1404	Beardless HRW	69.4	20.5	40	76
Blanca Royale	HWW	65.7	19.8	36	58
SY VACA	Beardless SRW	72.4	19.7	40	32
Ultra	HRW	66.6	19.4	35	78
Blanca Grande 515	HWW	62.7	19.3	37	78

**Small Grain Silage Variety Trial 2013**  
**Tulare/Kings Co. - Wright, Banuelos, Souza, Collar**

Variety	ADF	NDF	Lignin	TDN	Ash
Summit 515	32.1	47.3	4.7	59.4	10.7
Blanca Royale	29.6	44.7	4.4	60.8	10.4
Cal Rojo	31.0	45.7	4.4	59.7	11.4
Ultra	31.0	45.8	4.5	59.5	11.7
Patwin	32.0	47.1	4.5	59.2	11.6
SY 314	31.9	47.1	4.5	59.1	11.4
WB-Patron	31.0	46.1	4.6	60.1	10.4
Tricale 158 EP	35.2	51.8	5.3	58.2	10.3
Blanca Grande 515	30.0	44.9	4.4	59.4	11.7
Tricale 115	31.8	47.6	4.9	60.9	9.6
FV 2808 (Beardless)	33.9	48.1	4.8	57.9	12.6



## Small Grain Silage Variety Trial 2014

Tulare/Kings Co. - Wright, Banuelos, Souza, Collar

Variety	Protein % DM	ADF	NDF	Lignin	Ash	TDN
Summit 515	13.6	28.1	43.5	3.8	9.5	63.5
Blanca Grande 515	13.4	28.4	43.9	3.9	9.5	63.1
Ultra	13.2	29.7	45.5	4.2	9.8	62.1
Cal Rojo	12.5	27.8	43.0	3.8	9.7	63.8
SY VACA	13.4	36.5	54.3	4.9	11.5	57.6
Blanca Royale	12.6	29.1	45.0	4.1	9.4	62.8
Patwin	12.8	30.7	47.0	4.1	10.0	61.8
LC Star	12.4	33.2	49.8	4.8	10.2	59.8
SY 314	12.2	31.9	48.0	4.4	10.9	59.8
WB Patron	12.6	29.7	45.7	4.1	9.2	62.9
PR 1404	12.9	31.8	48.1	4.4	10.3	61.0
Joaquin Oro	15.1	26.7	41.6	3.8	10.1	63.0
Pacheco	11.0	30.1	46.5	4.1	8.6	63.8
Camelot	11.3	31.9	49.0	4.6	8.3	62.4
Triticale 105	12.0	30.5	46.8	4.5	8.7	63.3
Triticale 115	10.4	30.6	46.6	4.5	9.1	62.7
Triticale 158 EP	10.7	33.3	50.7	4.9	8.6	61.3

# *Small Grain News*

**September 2014**

*Fresno County Small Grain*

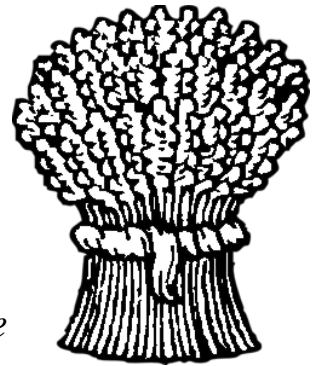
*Variety Performance Trials*

*2014 California Wheat Variety Survey*

*California Wheat Commission*

*2014 Tulare County Small Grain Silage*

*Variety Trial*



Steve Wright

Farm Advisor

Kings and Tulare Counties