



# Field

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# Crops

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## Contents

### Wheat and Barley Varieties for the 2008 Crop

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## Wheat and Barley Varieties for the 2008 Crop

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*Be careful when reviewing the tables to note whether they are for irrigated or rain fed conditions.*

### Wheat Yields

This year's wheat yields in the Sacramento Valley were again impacted by wheat stripe rust disease. New races of wheat stripe rust are continuing to develop. Two new previously resistant varieties: Summit and Blanca Grande, had high levels of stripe rust throughout the Central Valley in 2006 and 2007.

The yield results for nine Sacramento Valley UC Cooperative Extension trials from 2005 to 2007 are given in Table 1. Three very new wheat varieties still have excellent stripe rust resistance. They are Cal Rojo (Farmers Grain), Espresso (Adams Grain) and Patwin (UC Davis). Cal Rojo, over the nine locations, was 500 pounds per acre higher yielding than its closest competitor, Patwin and 1,000 pounds per acre higher than the next highest yielding varieties.

### Wheat Protein

The 2007 protein results for these trials are not available yet.

### Wheat Stripe Rust Ratings

Wheat stripe rust ratings for the four 2007 Central Valley trials are shown in Table 2. Be sure to read the disease rating scale at the bottom of the table. The ratings range from 1 to a maximum of 8, but a rating of a 4 could be as high as 49 percent infection of the flag leaf.

## Rain Fed Wheat

There were three harvestable rain fed wheat trials in the Sacramento Valley during the last three years. These trials plus three trials from the San Joaquin Valley are shown in Table 3.

## Irrigated Barley

Barley is not widely grown in the Sacramento Valley. Barley is not affected by wheat stripe rust, but has a new similar disease of its own, barley stripe rust. This disease first appeared in the late 1990's and eliminated many barley varieties and decreased the barley acreage statewide. There are three barley varieties, UC 937, UC 933 and Ishi, which have good resistance to barley stripe rust. They also have some resistance to scald and net blotch, diseases that are at least partially responsible for barley not being widely grown in the Sacramento Valley. **This disease resistance has been weakening in the past four years.** Table 4 is a yield summary of four trials over a three year period for several barley varieties.

Recently in the Sacramento Valley, the predominant barley disease has been the spotting form of barley net blotch. This disease is carried over on crop residue and

on planting seed. Barley should not follow barley in a crop rotation. If there was any net blotch in the field where the planting seed was produced, then the planting seed should be treated with a fungicide prior to planting.

UC 937 has a weakness of losing entire heads if winds occur after the grain is mature. Harvesting UC 937 as soon as it is mature will be important if windy weather occurs. UC 937 is capable of very similar yields to UC 933, but must be managed carefully to avoid severe shattering losses.

## Rain Fed Barley

Four rain fed barley trials in the Sacramento Valley in 2005-2007 and seven trials from the southern part of the San Joaquin Valley are included in Table 5.

## Summary

There are fewer choices of both wheat and barley varieties for the 2008 crop, but there are several good ones of both wheat and barley. However, in this rapidly changing disease situation, **consider planting more than one variety to decrease your risk of severe losses** from any specific disease.

Table 1: 2005-07 Sacramento Valley irrigated wheat yield summary. Yields are in pounds per acre & the numbers in parentheses indicate the relative rank in the column.

Variety	Average 2005-07 (9 Loc-Yr)	Butte		Colusa		UC Davis			Sac-SJ Delta		
		2005	2006	2005	2007	2005	2006	2007	2005	2006	2007
<b>WHEAT</b>											
ANZA	4580 (15)	2120 (17)	4320 (14)	6240 (11)	3170 (16)	4430 (11)	5060 (16)	4380 (12)	4790 (10)	6670 (17)	
EXPRESS	4640 (14)	4410 (11)	5180 (11)	4730 (16)	3860 (13)	4160 (12)	5240 (14)	4080 (13)	2790 (17)	7340 (15)	
SUMMIT	5410 (7)	4950 (8)	5870 (7)	6450 (9)	4290 (9)	3030 (17)	6040 (7)	6030 (4)	4450 (12)	7590 (11)	
BLANCA GRANDE	5410 (8)	4640 (10)	4920 (13)	5410 (15)	5340 (7)	4100 (13)	6200 (5)	4990 (10)	5290 (9)	7800 (7)	
MICA	4250 (16)	3150 (15)	3590 (16)	4640 (17)	3420 (15)	5460 (8)	4920 (17)	2540 (16)	2800 (15)	7680 (8)	
DASH 12	5340 (9)	4090 (13)	5530 (8)	5870 (14)	3910 (12)	6420 (3)	5920 (8)	3890 (14)	4100 (13)	8370 (3)	
CLEAR WHITE	5260 (11)	4330 (12)	5520 (9)	6370 (10)	4260 (10)	3880 (14)	5300 (13)	4950 (11)	5670 (5)	7050 (16)	
SOLANO	5250 (12)	4930 (9)	5450 (10)	6610 (7)	4210 (11)	3070 (16)	5830 (10)	5240 (8)	4520 (11)	7400 (14)	
PATWIN	5910 (6)	5320 (6)	6380 (6)	6600 (8)	5460 (6)	5500 (7)	5500 (12)	5230 (9)	5550 (8)	7630 (9)	
JOAQUIN	5210 (13)	3670 (14)	3700 (15)	6230 (12)	3610 (14)	3300 (15)	6770 (3)	5520 (6)	6130 (3)	7980 (6)	
WWW BR6000W	5280 (10)	5140 (7)	4940 (12)	6010 (13)	4740 (8)	6510 (2)	5110 (15)	3860 (15)	3150 (14)	8040 (5)	
CAL ROJO	6410 (5)	7010 (3)	6980 (4)	7080 (6)	5880 (5)	5240 (9)	5880 (9)	5390 (7)	6580 (2)	7610 (10)	
EXPRESSO	*			4360 (25)		5630 (4)	5610 (18)		5470 (7)	7520 (12)	
BLANCA FUERTE	*			7700 (5)		5480 (5)	6670 (4)		5640 (4)	8380 (3)	
<b>TRITICALE</b>											
TRICAL BRAND 105	6540 (4)	5740 (5)	6950 (5)	8000 (3)	6520 (4)	7110 (2)	6160 (6)	5920 (5)	4080 (13)	8400 (2)	
TRICAL BRAND 118	7970 (1)	7940 (1)	8440 (1)	8510 (1)	8840 (1)	7280 (1)	7220 (2)	7890 (1)	6830 (1)	8760 (1)	
TRICAL BRAND 116	6810 (3)	5840 (4)	7250 (3)	7940 (4)	6690 (3)	5000 (10)	7010 (3)	7660 (2)	6360 (3)	7580 (13)	
TRICAL BRAND 98	7230 (2)	7260 (2)	7990 (2)	8110 (2)	7230 (2)	5520 (6)	7720 (1)	7430 (3)	5740 (6)	8060 (4)	
CV	9.3	15.2	9.9	10.3	11.0	6.5	5.0	8.8	14.8	6.6	
LSD <sub>(.05)</sub>	240	1010	720	860	700	430	400	610	960	680	

\* Need all nine locations-years to include in average, so compare these varieties in individual trials.

Table 2: 2007 **irrigated wheat** stripe rust summary for the Central Valley. The rating scale is at the bottom of the table & the numbers in parentheses indicate the relative rank in the column.

Variety	Mean	Colusa	UC	Sac-SJ	Kings
	(4 Loc)		Davis	Delta	
ANZA	4.3 (38)	3.8	6.0	5.0	2.3
EXPRESS	4.0 (36)	4.3	4.3	6.3	1.3
SUMMIT	5.3 (40)	4.3	5.0	7.8	4.0
BLANCA GRANDE	5.1 (39)	4.3	5.5	7.0	3.5
MICA	1.0 (1)	1.0	1.0	1.0	1.0
DASH 12	1.3 (30)	1.3	1.5	1.5	1.0
CLEAR WHITE	3.0 (35)	2.3	3.0	5.8	1.0
SOLANO	4.0 (36)	4.5	3.8	5.3	2.5
PATWIN	1.1 (27)	1.0	1.0	1.3	1.0
JOAQUIN	1.0 (1)	1.0	1.0	1.0	1.0
WWW BR6000W	1.0 (1)	1.0	1.0	1.0	1.0
CAL ROJO	1.0 (1)	1.0	1.0	1.0	1.0
OTIS	1.0 (1)	1.0	1.0	1.0	1.0
EXPRESSO	1.0 (1)	1.0	1.0	1.0	1.0
BLANCA FUERTE	1.0 (1)	1.0	1.0	1.0	1.0
CV	26.2	23.2	20.4	21.9	42.4
LSD (.05)	0.3	0.5	0.5	0.7	0.8

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

Table 3: 2005-07 Central Valley **rainfed wheat** yield summary. Yields are in pounds per acre & the numbers in parentheses indicate the relative rank in the column.

Variety	Average 2005-07 (6 Loc-Yr)	Glenn			Tulare		
		2005	2006	2007	2005	2006	2007
<b>WHEAT</b>							
ANZA	2550 (12)	2690 (6)	3330 (10)	2420 (15)	3420 (11)	3330 (14)	800 (2)
EXPRESS	2490 (13)	1790 (12)	3430 (8)	3390 (9)	3360 (13)	3470 (12)	430 (15)
SUMMIT	2720 (6)	1590 (14)	2940 (15)	4150 (2)	3500 (7)	4050 (5)	500 (11)
BLANCA GRANDE	2630 (10)	1980 (11)	3970 (2)	3590 (6)	3690 (6)	3530 (10)	330 (16)
MICA	2630 (11)	2610 (7)	3710 (6)	2350 (16)	3480 (8)	3590 (9)	760 (4)
DASH 12	2830 (3)	1750 (13)	3510 (7)	3270 (11)	3730 (5)	4330 (2)	620 (9)
CLEAR WHITE	2450 (14)	2920 (3)	2730 (16)	2880 (14)	3260 (16)	3010 (15)	700 (7)
SOLANO	2680 (7)	2290 (8)	3930 (4)	3540 (8)	3430 (10)	3760 (8)	450 (14)
PATWIN	2670 (8)	2050 (9)	3040 (13)	3450 (10)	3400 (12)	3790 (7)	710 (6)
JOAQUIN	2440 (15)	1200 (16)	3360 (9)	3480 (9)	3830 (4)	2890 (16)	520 (10)
WWW BR6000W	2830 (4)	1980 (10)	4110 (1)	3060 (12)	3970 (3)	4090 (4)	480 (13)
CAL ROJO	*		3950 (3)	3800 (7)		4230 (3)	520 (11)
EXPRESSO	*			3260 (16)			490 (12)
BLANCA FUERTE	*			4070 (3)			320 (17)
TRIPLE IV	*			2610 (28)			200 (39)
<b>TRITICALE</b>							
TRICAL BRAND 105	2660 (9)	3120 (2)	3090 (12)	2920 (13)	3440 (9)	3400 (13)	810 (1)
TRICAL BRAND 118	3260 (1)	3480 (1)	3820 (5)	3870 (4)	4270 (1)	4350 (1)	770 (3)
TRICAL BRAND 116	2790 (5)	2820 (4)	3110 (11)	3660 (5)	3280 (14)	4010 (6)	710 (5)
TRICAL BRAND 98	2900 (2)	2720 (5)	3350 (9)	4270 (1)	4010 (2)	3530 (11)	640 (8)
CV (%)	24.3	28.5	12.1	13.8	12.5	7.9	66.1
LSD (.05)	460	940	830	590	620	400	-

\* Need all six locations-years to include in average, so compare these varieties in individual trials.

Table 4: 2005-07 Sacramento Valley **irrigated barley** yield summary. Yields are in pounds per acre & the numbers in parentheses indicate the relative rank in the column.

Variety	Average 2005-07 (4 Loc-Yr)	Butte	UC Davis		
		2005	2005	2006	2007
UC 603	5480 (13)	5410 (8)	6180 (11)	5160 (13)	5180 (13)
UC 933	6360 (7)	5350 (9)	7050 (4)	6080 (8)	6990 (3)
UC 937	5990 (11)	5200 (10)	6050 (13)	5910 (10)	6780 (6)
MELTAN	3670 (14)	3190 (14)	2140 (14)	5110 (14)	4250 (14)
UC 969	5760 (12)	4540 (13)	6440 (10)	6620 (3)	5450 (12)
ISHI	6480 (4)	5120 (11)	7040 (5)	6850 (1)	6900 (4)
CV	8.6	14.8	11.1	7.8	7.2
LSD <sub>(.05)</sub>	360	1060	930	640	610

Table 5: 2005-07 Central Valley and San Luis Obispo **rainfed barley** yield summary. Yields are in pounds per acre & the numbers in parentheses indicate the relative rank in the column.

Variety	Average 2005-07 (11 Loc-Yr)	Glenn			Tehama	Fresno	Tulare			San Luis Obispo		
		2005	2006	2007	2007	2007	2005	2006	2007	2005	2006	2007
UC 603	2720 (14)	2740 (13)	3500 (13)	2990 (13)	1480 (14)	220 (14)	3670 (6)	3670 (14)	510 (6)	4440 (12)	4040 (10)	540 (12)
UC 933	3150 (6)	3140 (11)	4230 (11)	3930 (6)	2120 (11)	760 (1)	3620 (9)	5100 (5)	400 (10)	5400 (2)	4380 (5)	300 (14)
UC 937	3120 (7)	2720 (14)	4120 (12)	4610 (1)	2250 (6)	440 (6)	3530 (10)	4860 (8)	560 (5)	5100 (6)	4280 (7)	690 (7)
MELTAN	3040 (9)	3360 (10)	4340 (9)	3200 (12)	2530 (2)	710 (2)	3850 (3)	4610 (11)	660 (4)	4840 (9)	3720 (12)	780 (5)
UC 969	3030 (10)	3000 (12)	5140 (1)	2460 (14)	2020 (12)	280 (13)	3520 (12)	4700 (10)	280 (13)	4920 (8)	4470 (4)	760 (6)
ISHI	3450 (2)	3390 (9)	4320 (10)	3550 (10)	2190 (9)	310 (10)	4100 (2)	4970 (7)	420 (9)	5750 (1)	5370 (1)	790 (4)
CV	39.5	11.5	10.3	11.8	20.3	64.9	18.2	7.7	64.4	15.2	11.6	57.1
LSD <sub>(.05)</sub>	-	530	620	550	610	370	-	500	-	970	760	-

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