



### MADERA OFFICE

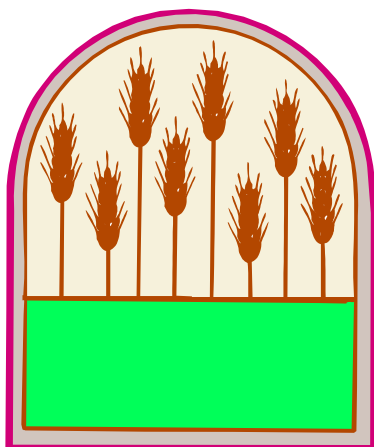
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## WHEAT AND BARLEY VARIETY STUDY RESULTS

Each year wheat and barley variety trials are conducted as part of the University of California Cooperative Extension regional small grains variety evaluation program. Commercially available varieties as well as advanced lines are evaluated at a number of different sites throughout California. The following are results of the tests conducted in Madera County and the overall averages for tests throughout the San Joaquin Valley for a three year period beginning in 2001. Complete results of all trials can be found at <http://agric.ucdavis.edu/crops/cereals/cereal.htm>.

### STRIPE RUST

As most growers are aware a severe epidemic of wheat stripe rust occurred in California this season. Many fields throughout the San Joaquin Valley, including Madera and Merced counties, experienced severe infestations resulting in yield losses as high as 70 percent. This year's regional small grain trials have provided a good opportunity to compare varieties for their resistance and/or susceptibility to stripe rust. Based on observation and evaluations of the main wheat varieties grown in California, in our University of California trials, stripe rust reactions can be summarized as follows:

- Highly Susceptible:** Dirkwin, Bonus, Brooks, Cavalier
- Susceptible:** Yecora Rojo, Anza, Klasic, Eldon, Yolo, Kern, Serra
- Moderately Susceptible:** Express
- Moderately Resistant:** Stander
- Resistant:** Summit, Blanca Grande, Plata

Variety selection becomes the first line of defense against stripe rust, but fungicides are also available. Results of a fungicide trial (Table 1) conducted by Mick Canevari, Farm Advisor, San Joaquin County, indicates the control of various fungicides and the importance of early application timing and their effect on yield. Application of Quadris, post heading, resulted in a significantly lower yield than when applied pre-heading. All pre-heading fungicide applications resulted in significantly higher yields than the untreated control.

**Table 1. (Mick Canevari, Farm Advisor, San Joaquin County)**

Treatment	Rate Lb/A	Application Timing	Yield Lbs/A	Bushel Wt. Lbs
1. Untreated Check			2941 c	53 b
2. TILT	0.28	PRE-HEAD	3816 ab	58 a
3. FOLICUR	0.28	PRE-HEAD	3584 b	57 ab
4. A13705	0.33	PRE-HEAD	4274 a	59 a
5. A13705	0.44	PRE-HEAD	3872 ab	58 a
6. A13705	0.44	PRE-HEAD	3912 ab	58 a
7. STRATEGO	0.40	PRE-HEAD	3912 ab	58 a
8. QUADRIS	0.25	PRE-HEAD	4109 a	58 a
9. HEADLINE	0.25	PRE-HEAD	3940 ab	58 a
10. QUADRIS	0.25	Post HEADING	3119 c	54 b
LSD 5%			421	1.76

**COMMON AND DURUM WHEAT**

This site consisted of a sandy loam soil which had cotton the previous year. Five hundred pounds per acre of 16-16-16 was applied preplant. Wheat was planted on November 22, 2002. Eighty pounds of nitrogen as 11-52-0 was applied with the seed. 8.8 inches of water was applied with a wheel line irrigation system and 8.06 inches of rainfall was received. No fungicides were applied for stripe rust. Harvest occurred on June 11, 2003.

Stripe rust was severe on a number of varieties resulting in extremely low yields. The highly susceptible varieties, Brooks, Cavalier and Bonus only produced 250, 580 and 1630 pounds per acre, respectively. Plata and Summit exhibited excellent tolerance to stripe rust producing 6540 and 6440 pounds per acre respectively. The durum varieties exhibited greater tolerance to stripe rust and as a whole produced 920 pounds more per acre than the common wheat varieties.

**Table 2. 2003 MADERA COMMON WHEAT TEST**

Entry Name	Yield (lbs/acre)	Leaf Rust	Stripe Rust	
			4/17	5/8
<b>CULTIVARS</b>				
20 ANZA	3800	1.0	4.0	4.0
112 YECORA ROJO	1400	1.0	8.0	8.0
353 YOLO	2610	1.0	8.0	8.0
415 KLASIC	2750	1.0	7.8	8.0
638 SERRA	2670	1.0	4.3	4.8
788 EXPRESS	4600	1.0	3.3	4.5
827 CAVALIER	580	1.0	8.0	8.0
901 BROOKS	250	1.0	8.0	8.0
1020 BONUS	1630	1.0	7.5	8.0
1036 KERN	2990	1.0	6.5	8.0

Entry Name	Yield (lbs/acre)	Leaf Rust	Stripe Rust	
			4/17	5/8
1124 ELDON	1790	1.0	8.0	8.0
1130 STANDER	6210	2.3	1.0	3.0
1155 SUMMIT	6440	1.8	1.3	1.0
1156 BLANCA GRANDE	4850	2.8	1.0	1.0
1255 PLATA	6540	4.8	1.0	1.0
1258 BETH HASHITA	5270	2.3	1.0	1.0
1260 DARIEL	1830	1.0	7.0	7.8
1261 KAMA	2420	1.0	4.5	4.0
1413 WINCAL 14	4030	1.0	3.0	1.5

**Table 3. 2003 AND 2001-2003 COMMON WHEAT YIELD SUMMARY (LBS/ACRE)**

Entry Name	San Joaquin Valley			Rainfed Sites		
	2003 (3 loc)	2002-03 (6 loc/yr)	2001-03 (9 loc/yr)	2003 (3 loc)	2002-03 (6 loc/yr)	2001-03 (10 loc/yr)
20 ANZA	4370	5390	5320	1560	2360	2190
112 YECORA ROJO	2700	4490	4680	1440	2270	2170
353 YOLO	3870	5530	5560	1540	2330	2260
415 KLASIC	4030	5470	5670	1670	2770	2600
638 SERRA	4230	5010	5230	1870	2710	2470
788 EXPRESS	5110	5730	5430	2120	2910	2570
827 CAVALIER	2210	4450	4820	1210	2430	2430
901 BROOKS	1330	4080	4560	1020	2220	2350
1020 BONUS	2150	4720	5040	1260	2420	2390
1036 KERN	4350	5730	5630	1780	2690	2470
1124 ELDON	2760	4680	4910	1220	1980	1950
1130 STANDER	6470	6640	6140	2420	3020	2580
1155 SUMMIT	7280	7230	6600	2730	3040	2560
1156 BLANCA GRANDE	6500	6820	6410	2050	2800	-
1255 PLATA	7240	7280	6660	2830	3200	-
1258 BETH HASHITA	6040	5980	5710	2020	2770	-
1260 DARIEL	3080	4780	4970	1310	2340	-
1261 KAMA	3540	5100	5060	1390	2330	-

**TABLE 4. 2003 MADERA DURUM WHEAT TEST**

Entry Name	Yield (lbs/acre)	Black Point	Stripe Rust	
			4/17	5/8
<b>CULTIVARS</b>				
112 YECORA ROJO (hrs)	1500	1.5	8.0	8.0
819 BRAVADUR	5400	1.0	1.3	1.5
878 DURAKING	4330	1.0	2.3	2.8
947 KOFA	5280	1.5	6.0	8.0
951 KRONOS	5020	1.0	3.0	3.5
983 RIA	4440	1.0	4.3	4.0
1024 MOHAWK	5380	1.0	3.0	4.3
1103 DELUXE	4950	1.0	3.0	4.5
1166 CROWN	6180	1.0	1.0	2.0
1179 MATT	5320	1.0	2.0	2.5
1210 PLATINUM	6780	1.0	1.0	2.5
1211 TOPPER	3720	1.5	2.5	3.0
1215 ORITA	3760	1.0	3.5	3.5
1253 CANDURA	4020	2.5	4.5	4.0

**TABLE 5. 2003 AND 2001-2003 DURUM WHEAT YIELD SUMMARY (LBS/ACRE)**

Entry Name	San Joaquin Valley		
	2003 (3 loc)	2002-03 (6 loc/yr)	2001-03 (9 loc/yr)
<b>CULTIVARS</b>			
112 YECORA ROJO (hrs)	2960	4610	4890
819 BRAVADUR	5660	-	-
878 DURAKING	5810	6400	6270
947 KOFA	5000	5720	5520
951 KRONOS	5450	5680	5580
983 RIA	5220	5600	5400
1024 MOHAWK	5680	6300	6060
1103 DELUXE	5710	6120	5900
1166 CROWN	6770	6690	6260
1179 MATT	5450	5700	5470
1210 PLATINUM	7060	7040	6520
1211 TOPPER	5640	6110	5850
1215 ORITA	5110	5920	5610
1253 CANDURA	5230	5530	5330

## BARLEY

This site consisted of a Fresno, El Peco sandy loam soil. Three hundred pounds per acre of ammonium sulfate was applied preplant and 80 pounds per acre of 11-52-0 was applied with the seed. Barley was planted on November 22, 2003. Thirty-six inches of water was applied by four flood irrigations and 8.06 inches of rainfall was received. Forty-eight pounds per acre of UN32 was applied top dressed on April 3. Harvest occurred on June 11, 2003. UC 993 produced the highest yield at 6380 pounds per acre. Max was severely infested with stripe rust resulting in a low yield of 4920 pounds per acre. Some of the advanced lines (data not shown) produced yields ranging from 6760 to 6940 pounds per acre with all having excellent tolerance to both stripe and leaf rust.

**TABLE 6. 2003 MADERA BARLEY TEST**

Entry Name	Yield (lbs/acre)	BYDV	Leaf Rust	Stripe Rust	Frost Damage
<b>CULTIVARS</b>					
603 UC 603	4890	1.0	1.0	1.0	2.3
816 MAX	4920	1.0	1.0	8.0	1.0
885 PATTI	6160	1.0	1.0	1.0	2.3
933 UC 933	6380	1.0	1.0	1.0	2.3
937 UC 937	5520	1.0	1.0	1.0	3.3
951 MELTAN	3860	4.0	1.0	1.0	1.0
969 UC 969	4480	1.0	1.0	1.0	2.5
1085 COMMANDER	6120	1.0	1.8	4.6	1.0
1120 BELLA UNION	4740	1.3	1.0	1.0	2.8

**TABLE 7. 2003 AND 2001-2003 BARLEY YIELD SUMMARY (LBS/ACRE)**

Entry Name	San Joaquin Valley			Rainfed Sites		
	2003 (3 loc)	2002-03 (6 loc/yr)	2001-03 (9 loc/yr)	2003 (3 loc)	2002-03 (6 loc/yr)	2001-03 (10 loc/yr)
<b>CULTIVARS</b>						
603 UC 603	5640	5290	5100	2920	3030	2510
816 MAX	5430	5740	5090	2520	2590	2090
885 PATTI	7060	6460	6410	2740	2780	2310
933 UC 933	6260	5940	6120	3360	3480	3050
937 UC 937	6040	5990	5990	3480	3410	2840
951 MELTAN	4090	3620	3970	3000	3260	2890
969 UC 969	5080	5000	5220	3000	2930	2540
1120 BELLA UNION	4760	-	-	2790	-	-

# 2003 CALIFORNIA ALFALFA & FORAGE SYMPOSIUM

December 18 -19, 2003

Monterey, California

Go to website at <http://alfalfa.ucdavis.edu> for  
program and registration information



For special assistance  
regarding our programs,  
please contact us.

Sincerely,

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