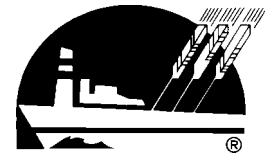


Wheat Sheet



September 2003

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Stripe Rust – What happened this year?

A severe epidemic of wheat stripe rust occurred in California this season. Many other states across the country also experienced severe stripe rust. In California the combination of mild winter temperatures and early sowing (particularly of wheat for forage for dairies) resulted in very early infections. Cool conditions then persisted much longer in spring than usual, allowing stripe rust to reach very high severity throughout the Central Valley. One small focus of infection in the Imperial Valley was detected where a plot of the variety Cavalier had an area of 10-20 plants with stripe rust severity approaching 70%. This could be the first occurrence of stripe rust in the Imperial Valley. Spike infections were common throughout the Central Valley.

At the end of last season 12 races of wheat stripe rust were identified from collections from California. Based on the infection of wheat varieties this season, additional and different races are now present. ♦

2003 Wheat Variety Trials

This was a good year to compare varieties for their reaction (resistance/susceptibility) to Stripe Rust since disease pressure was high on wheat growing throughout the Sacramento and San Joaquin Valleys. Table 2 (page 3) lists yield results for the main varieties and selected advanced breeding lines from eight University of California Cooperative Extension statewide testing sites where stripe rust was severe. Of these sites, only the Kings County location had a fungicide treatment applied.

Stripe Rust reactions of the main common wheat varieties grown in California are based on observations from the University of California statewide variety tests:

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, and Plata

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Crop Disaster Assistance

Seventeen counties are seeking federal disaster relief due to the effects of stripe rust. County Agriculture Commissioners must file with the State of California Office of Emergency Services (OES) and validate that there has been a 30% loss of the effected crop in their area. OES in turn makes a request of the U S Secretary of Agriculture for a disaster designation for

Disaster Assistance, continued on page 2

Fungicide Trials *(Mick Canevari, Farm Advisor, San Joaquin Co. 08/03)*

This year, more fungicide applications were made to wheat in California than ever before. Field experiments evaluating fungicides were conducted by farm advisors in Glenn, Butte, Colusa and San Joaquin (Delta) counties. Even though Quadris fungicide was applied after disease was well established in these experiments, treated Express plots averaged about 1000 lb/acre more than untreated plots. In one experiment in Glenn County with the highly susceptible variety Bonus, plots treated with Quadris yielded about 2000 lb/acre more than untreated plots.

Table 1 shows the results of the trial conducted on Victoria Island in the Delta region. The fungicide treatments were applied once at pre-heading (during flag leaf stage). This normally is optimum timing in California, but because of the early onset of disease this season, stripe rust infections had already become established. Treatment 10 was applied later after heading when rust had developed in the spikelets. Results of the early (pre-head) timing showed a yield increase with most fungicides and better grain quality. The late application was of little value for yield or quality. *Note: Please read label for forage and feed restrictions.*

Table 1

TREATMENT	Rate Lb/A	Application Timing	Yield Lbs/A	Bushel Wt. Lbs	1000 Kernel Wt / Gms	% Control Rust Flag leaf	% Rust Infected kernels
1.Untreated Check			2941 c	53 b	29 b	0	56
2.TILT	0.28	PRE-HEAD	3816 ab	58 a	36 a	92.4	35
3.FOLICUR	0.28	PRE-HEAD	3584 b	57 ab	34 a	81.5	35
4.A13705	0.33	PRE-HEAD	4274 a	59 a	37 a	98.6	30
5.A13705	0.44	PRE-HEAD	3872 ab	58 a	36 a	98.2	33
6.A13705	0.44	PRE-HEAD	3912 ab	58 a	35 a	92.3	32
7.STRATEGO	0.40	PRE-HEAD	3912 ab	58 a	35 a	89.0	35
8.QUADRI	0.25	PRE-HEAD	4109 a	58 a	35 a	99.6	27
9.HEADLINE	0.25	PRE-HEAD	3940 ab	58 a	35 a	91.2	36
10.QUADRI	0.25	Post HEADING	3119 c	54 b	30 b	N/A	N/A
LSD 5%			421	1.76	3.4		

Disaster Assistance, *cont. from page 2*

wheat rust. This designation grants farmers in primary (requesting) and contiguous counties access to low interest emergency loans. A separate disaster relief program must be approved by Congress before any direct payments are made possible. Traditionally, disaster payments are only available to farmers with a certain loss threshold in primary counties (those granted disaster designations.)

The following counties have submitted their request – Alameda, Butte, Contra Costa, Fresno, Glenn, Kern, Kings, Merced, Madera, Sacramento, San Joaquin, Solano, Stanislaus, Tulare, Tehama, Yolo, and Yuba.

Both the California Wheat Commission and the California Association of Wheat Growers are investigating alternative disaster assistance. Growers interested in disaster relief should contact their Congressional Representative, County Agricultural Commissioner and their local Farm Service Agency. ♦

Regional Test Location

Variety	Madera	Kings*	Kern	UC Davis	Butte	Colusa	Sac/SJ Delta Glenn
Anza	3800	5280	4040	2420	2750	2710	3510 2070
Bonus	1630	3070	1760	670	2030	170	610 820
Brooks	250	2490	1260	440	1150	270	270 660
Express	4600	5120	5590	3350	4040	3870	3200 3770
Kern	2990	5200	4840	2290	2880	2400	2900 3280
Serra	2670	5290	4730	2730	3770	2700	2530 2320
Dariel	1830	3720	3690	1320	2330	230	300 1080
Bet Hashita	5270	6220	6640	4700	3880	4810	5720 4210
Stander	6210	6760	6450	5540	4980	6110	5980 5050
Summit	6440	7240	8170	6260	6000	7570	7310 5780
Klasic	2750	5410	3920	1670	2430	1760	2450 3070
Blanca Grande	4850	7750	6900	6040	4460	6050	6540 3860
Plata	6540	7230	7960	6260	5880	7240	6890 6030
Yecora Rojo	1400	3800	2880	980	1920	660	360 2210
Yolo	2610	5000	4010	1630	2290	850	2120 1940
UC 1361	4910	6310	6690	4370	2640	5560	5160 3640
E1288 (BZ998-256W)	5990	7610	6930	5890	4130	5260	6460 -
E1341 (DA9998-12)	5340	6650	5850	4620	5060	5120	5370 4620
E1392 (DA900-229)	4930	6640	6990	5260	5700	6720	6730 -
E1398 (APBW990D-773)	600	2540	2260	570	710	220	100 780
E1399 (WWWBR4779)	190	1650	1060	410	930	160	170 1050
E1400 (WWWBR5874)	2350	3870	3580	2460	2490	2260	2820 1620

DURUM

Kronos	5020	7270	4060	3600
Bravadur	5400	6860	4700	4140
Duraking	4330	7400	5720	3940
Kofa	5280	5940	3780	2360
Ria	4440	6660	4570	3140
Mohawk	5380	7060	4580	3340
Deluxe	4950	6910	5280	3590
Crown	6180	8030	6080	5180
Matt	5320	6560	4470	3300
Platinum	6780	7840	6560	5240
Topper	3720	7450	5760	4480
Orita	3760	7000	4560	3690
Candura	4020	6440	5230	3350
UC 1375	6410	8680	5700	5090
E1250 (YU895-130)	4220	7570	4680	2300
E1304 (WWWWD5384-2)	4940	7640	3610	2530
E1318 (RSI99WV30411)	3420	7480	4460	1010
E1371 (YU897-44)	4320	6770	3800	3010
E1380 (APBD99-224)	4780	6540	4210	3410
E1409 (APBD990D-394)	4420	7270	4600	3370
E1412 (WWWWD4079)	5310	7490	4660	3120

What is being done to address stripe rust in the future?

The University of California Cooperative Extension is establishing a screening nursery for wheat stripe rust at UC Davis for breeding lines and other germplasm.

Through the leadership of Jorge Dubcovsky, UC Davis, a project has been funded for the past two years that incorporates modern molecular marker assisted selection technologies in public breeding programs. The project accelerates the incorporation of multiple disease resistance genes and genes with positive effects on quality into wheat varieties. Fifteen wheat breeding programs from around the US are involved.

*Quadris fungicide was applied at Kings site on 4/9/03. Wheat was headed at that time.

Vacant board positions.

The Commission is looking for grower representatives to serve out full and partial terms as a Commissioner (board member) or Alternate Commissioner (board member) in the following areas. (Full terms run for three years.) Interested growers should contact the Commission office.

District 1: Siskiyou, Tehama, Lassen, Modoc, Shasta Counties. Commissioner and Alternate needed. Term ends 2006.

District 2: Butte, Glenn Counties. Alternate Commissioner needed. Term ends 2005.

District 3: Colusa, Lake Counties. Commissioner and Alternate needed. Term ends 2004.

District 4: Napa, Sonoma, Yolo. Alternate Commissioner needed. Term ends 2004.

District 5: Amador, El Dorado, Placer, Yuba, Nevada, Sutter, Sierra and south Sacramento Counties. Commissioner and Alternate needed. Term ends 2004.

District 9: Fresno County. Commissioner needed. Term ends 2004. ♦

Financial Statements Available

The California Wheat Commission Financial Statements for the fiscal years ended April 30, 2003 & 2002 and Independent Auditor's Report are available for viewing on the Commission's website, www.californiawheat.org.

Growers may contact the Commission office directly to request a copy by mail. ♦

How to contact the Commission office.

California Wheat Commission

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