

ESTIMATED SMALL GRAIN LOSSES FROM RUST IN 2005

Compiled by David L. Long, Plant Pathologist
davidl@umn.edu

USDA-ARS Cereal Disease Laboratory
1551 Lindig Street, St. Paul, MN 55108

January 31, 2006

Acreage harvested and yield production records based on 2005 Crop Production Summary, Agricultural Statistics Board, USDA. Loss data are a summary of estimates made by personnel of the State Departments of Agriculture, University extension and research projects, Agricultural Research Service, USDA, and the Cereal Disease Laboratory.

Losses were calculated for each rust as follows:

$$\text{Loss (specific rust)} = \frac{(\text{Production}) \times (\text{Percent loss})}{(100\%) - (\text{Percent loss due to rusts})}$$

Losses were indicated as a trace when the disease was present but no fields were known to have suffered significant losses. When a few fields suffered measurable losses this was reflected as a percent of the state's production. Zeros indicate the disease was not reported in that state during the season. Blanks for stripe rust indicate that the disease was not reported nor does it occur annually in that state. Trace amounts were not included in the calculation of totals and averages.

Please note: The small grain rust loss reports are maintained on our webpage (<http://www.ars.usda.gov/mwa/cdl>). To request a hardcopy e-mail David Long or write to the Cereal Disease Laboratory.

WINTER WHEAT

State	1,000 acres harvest	Yields in bushels per acre	Production in 1,000 of bushels	Losses due to:					
				Stem Rust		Leaf Rust		Stripe Rust	
				Percent	1,000 bushels	Percent	1,000 bushels	Percent	1,000 bushels
Alabama	45	50.0	2,250	0.0	0.0	*T	T	T	T
Arkansas	160	52.0	8,320	0.0	0.0	T	T	5.0	437.9
California	300	72.0	21,600	0.0	0.0	2.0	464.5	5.0	1,161.3
Colorado	2,200	24.0	52,800	0.0	0.0	T	T	1.0	533.3
Delaware	51	70.0	3,570	0.0	0.0	T	T	0.0	0.0
Florida	8	45.0	360	0.0	0.0	T	T	T	T
Georgia	140	53.0	7,280	0.0	0.0	T	T	1.0	73.5
Idaho	730	91.0	66,430	0.0	0.0	0.1	68.5	3.0	2,056.7
Illinois	600	61.0	36,600	0.0	0.0	T	T	T	T
Indiana	340	72.0	24,480	0.0	0.0	1.0	2,469.5	T	T
Iowa	15	50.0	750	0.0	0.0	T	T	T	T
Kansas	9,500	40.0	380,000	0.0	0.0	2.0	8,444.4	8.0	33,777.8
Kentucky	300	68.0	20,400	0.0	0.0	0.1	20.5	0.2	40.9
Louisiana	100	48.0	4,800	0.0	0.0	1.0	51.1	5.0	255.3
Maryland	140	66.0	9,240	0.0	0.0	T	T	0.0	0.0
Michigan	590	66.0	38,940	0.0	0.0	T	T	T	T
Minnesota	15	36.0	540	0.0	0.0	1.0	5.5	T	T
Mississippi	65	50.0	3,250	0.0	0.0	1.0	33.2	1.0	33.2
Missouri	540	54.0	29,160	0.0	0.0	1.0	300.6	2.0	601.2
Montana	2,100	45.0	94,500	0.0	0.0	T	T	T	T
Nebraska	1,760	39.0	68,640	0.0	0.0	1.0	722.5	4.0	2,890.1
New Jersey	23	53.0	1,219	0.0	0.0	T	T	0.0	0.0
New Mexico	270	36.0	9,720	0.0	0.0	0.0	0.0	0.0	0.0
New York	95	54.0	5,130	0.0	0.0	T	T	0.0	0.0
North Carolina	435	57.0	24,795	0.0	0.0	T	T	T	T
North Dakota	285	39.0	11,115	0.0	0.0	2.0	226.8	T	T
Ohio	830	71.0	58,930	0.0	0.0	1.0	595.3	T	T
Oklahoma	4,000	32.0	128,000	0.0	0.0	1.0	1,361.7	5.0	6,808.5
Oregon	780	61.0	47,580	0.0	0.0	0.1	49.6	4.0	1,984.6
Pennsylvania	145	54.0	7,830	0.0	0.0	T	T	0.0	0.0
South Carolina	165	52.0	8,580	0.0	0.0	T	T	T	T
South Dakota	1,490	44.0	65,560	0.0	0.0	2.0	1,338.0	T	T
Tennessee	150	56.0	8,400	0.0	0.0	T	T	0.5	42.2
Texas	3,000	32.0	96,000	0.0	0.0	3.7	4,337.0	15.2	17,816.8
Utah	135	47.0	6,345	0.0	0.0	T	T	5.0	333.9
Virginia	160	63.0	10,080	0.0	0.0	T	T	T	T
Washington	1,800	67.0	120,600	0.0	0.0	0.1	123.2	2.0	2,463.7
West Virginia	5	60.0	300	0.0	0.0	T	T	T	T
Wisconsin	175	57.0	9,975	0.0	0.0	1.0	100.8	T	T
Wyoming	145	30.0	4,350	0.0	0.0	T	T	T	T
Total from Above	33,787	44.4	1,498,419		0.0		20,713.4		71,348.0
U.S. % Loss				0.00		1.30		4.49	
U.S. Total	33,794	44.4	1,499,129						

*T = Trace

SPRING WHEAT

State	1,000 acres harvest	Yields in bushels per acre	Production in 1,000 of bushels	Losses due to:					
				Stem Rust		Leaf Rust		Stripe Rust	
				Percent	1000.0 bushels	Percent	1000.0 bushels	Percent	1000.0 bushels
Colorado	19	65.0	1,235	0.0	0.0	0.0	0.0	0.0	0.0
Idaho	450	72.0	32,400	0.0	0.0	0.1	0.0	2.0	661.2
Minnesota	1,730	41.0	70,930	0.0	0.0	4.0	2955.4	T	T
Montana	2,550	32.0	81,600	0.0	0.0	T	T	T	T
Nevada	3	85.0	255	0.0	0.0	0.0	0.0	0.0	0.0
North Dakota	6,600	34.0	224,000	0.0	0.0	2.0	4571.4	T	T
Oregon	115	52.0	5,980	0.0	0.0	0.0	0.0	8.0	478.4
South Dakota	1,690	40.0	67,600	0.0	0.0	2.0	1379.6	T	T
Utah	13	58.0	754	0.0	0.0	T	T	5.0	39.7
Washington	425	44.0	18,700	0.0	0.0	0.1	19.1	4.0	770.6
Wisconsin	7	41.0	287	0.0	0.0	T	T	T	T
Wyoming	7	45.0	315	0.0	0.0	0.0	0.0	0.0	0.0
Total from Above	13,609	37.1	504,456	0.0	0.0		8925.5		1949.9
U.S. % Loss					0.0	1.7		0.4	
U.S. Total	13,609	37.1	504,456	0.0					

*T = Trace

DURUM WHEAT

State	1,000 acres harvest	Yields in bushels per acre	Production in 1,000 of bushels	Losses due to:					
				Stem Rust		Leaf Rust		Stripe Rust	
				Percent	1000.0 bushels	Percent	1000.0 bushels	Percent	1000.0 bushels
Arizona	79	100.0	7,900	0.0	0.0	0.0	0.0	0.0	0.0
California	69	95.0	6,555	0.0	0.0	0.0	0.0	5.0	345.0
Idaho	20	88.0	1,760	0.0	0.0	0.0	0.0	0.0	0.0
Montana	585	28.0	16,380	0.0	0.0	0.0	0.0	0.0	0.0
North Dakota	1,950	35.0	68,250	0.0	0.0	0.0	0.0	0.0	0.0
South Dakota	13	20.0	260	0.0	0.0	0.0	0.0	0.0	0.0
Total from Above	2,716	37.2	101,105		0.0		0.0		345.0
U.S. % Loss				0.0		0.0		0.3	
U.S. Total	2,716	37.2	101,105						

OAT

State	1,000 acres harvest	Yields in bushels per acre	Production in 1,000 of bushels	Losses due to:			
				Stem Rust		Crown Rust	
				Percent	1,000 bushels	Percent	1,000 bushels
Alabama	20	55.0	1,100	0	0	*T	T
California	20	75.0	1,500	T	T	T	T
Colorado	15	75.0	1,125	0.0	0.0	0.0	0.0
Georgia	20	60.0	1,200	0.0	0.0	T	T
Idaho	20	64.0	1,280	0.0	0.0	0.0	0.0
Illinois	40	79.0	3,160	0.0	0.0	T	T
Indiana	9	69.0	621	0.0	0.0	T	T
Iowa	125	79.0	9,875	0.0	0.0	T	T
Kansas	40	59.0	2,360	0.0	0.0	T	T
Maine	28	70.0	1,960	0.0	0.0	0.0	0.0
Michigan	75	61.0	4,575	0.0	0.0	T	T
Minnesota	205	62.0	12,710	T	T	3.0	393.1
Missouri	20	65.0	1,300	0.0	0.0	T	T
Montana	35	53.0	1,855	0.0	0.0	0.0	0.0
Nebraska	60	73.0	4,380	T	T	T	T
New York	75	54.0	4,050	0.0	0.0	0.0	0.0
North Carolina	23	73.0	1,679	0.0	0.0	0.0	0.0
North Dakota	240	59.0	14,160	T	T	1.0	143.0
Ohio	60	60.0	3,600	0.0	0.0	T	T
Oklahoma	10	41.0	410	0.0	0.0	T	T
Oregon	18	78.0	1,404	0.0	0.0	0.0	0.0
Pennsylvania	110	55.0	6,050	0.0	0.0	0.0	0.0
South Carolina	20	59.0	1,180	0.0	0.0	T	T
South Dakota	180	72.0	12,960	T	T	3.0	400.8
Texas	110	43.0	4,730	0.3	15.8	10.1	533.2
Utah	7	73.0	511	0.0	0.0	0.0	0.0
Virginia	3	61.0	183	0.0	0.0	0.0	0.0
Washington	8	75.0	600	0.0	0.0	0.0	0.0
Wisconsin	219	64.0	13,760	0.0	0.0	1.0	139.0
Wyoming	12	50.0	600	0.0	0.0	0.0	0.0
Total from Above	1,823	63.0	114,878		15.8		1,609.1
U.S. % Loss				0.01		1.38	
U.S. Total	1,823	63.0	114,878				

*T = Trace

BARLEY

State	1,000 acres harvest	Yields in bushels per acre	Production in 1,000 of bushels	Losses due to:					
				Stem Rust		Leaf Rust		Stripe Rust	
				Percent	1,000 bushels	Percent	1,000 bushels	Percent	1,000 bushels
Arizona	30	100.0	3,000	0.0	0.0	0.0	0.0	0.0	0.0
California	60	63.0	3,780	0.0	0.0	*T	T	2.0	77.1
Colorado	59	130.0	7,670	0.0	0.0	0.0	0.0	0.0	
Delaware	27	81.0	2,187	0.0	0.0	0.0	0.0		
Idaho	600	87.0	52,200	0.0	0.0	0.0	0.0	0.2	104.6
Kansas	14	42.0	588	0.0	0.0	0.0	0.0		
Kentucky	9	83.0	747	0.0	0.0	0.0	0.0		
Maine	22	60.0	1,320	0.0	0.0	0.0	0.0		
Maryland	41	86.0	3,526	0.0	0.0	0.0	0.0		
Michigan	11	47.0	517	0.0	0.0	0.0	0.0		
Minnesota	90	43.0	3,870	0.0	0.0	T	T		
Montana	700	56.0	39,200	0.0	0.0	0.0	0.0	0.0	0.0
Nevada	2	85.0	170	0.0	0.0	0.0	0.0		
New Jersey	2	71.0	142	0.0	0.0	0.0	0.0		
New York	15	49.0	735	0.0	0.0	0.0	0.0		
North Carolina	19	78.0	1,482	0.0	0.0	T	T		
North Dakota	1,060	54.0	57,240	0.0	0.0	T	T		
Ohio	5	60.0	300	0.0	0.0	0.0	0.0		
Oregon	45	45.0	2,025	0.0	0.0	0.0	0.0	0.2	4.1
Pennsylvania	47	72.0	3,384	0.0	0.0	0.0	0.0		
South Dakota	47	49.0	2,303	0.0	0.0	T	T		
Utah	24	80.0	1,920	0.0	0.0	0.0	0.0		
Virginia	45	87.0	3,915	0.0	0.0	T	T		
Washington	205	61.0	12,505	0.0	0.0	0.0	0.0	0.5	62.8
Wisconsin	30	53.0	1,590	0.0	0.0	T	T		
Wyoming	60	93.0	5,580	0.0	0.0	0.0	0.0		
Total from Above	3,269	64.8	211,896		0.0		T		248.6
U.S. % Loss				0.00		T		0.12	
U.S. Total	3,269	64.8	211,896						

*T = Trace

RYE

State	1,000 acres harvest	Yields in bushels per acre	Production in 1,000 of bushels	Losses due to:			
				Stem Rust		Leaf Rust	
				Percent	1,000 bushels	Percent	1,000 bushels
Georgia	30	27.0	810	0.0	0.0	*T	T
Oklahoma	70	20.0	1,400	0.0	0.0	T	T
Other US States**	179	29.8	5,327	0.0	0.0	T	T
Total from Above	279	27.0	7,537		0.0		T
U.S. % Loss				0.00		T	
U. S. Total	279	27.0	7,537				

*T = Trace

** Other US States include IL, KS, MI, MN, NE, NY, N,ND, PA and SD.