

# ESTIMATED SMALL GRAIN LOSSES FROM RUST IN 2003

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February 3, 2004

Acreage harvested and yield production records based on 2003 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.cdl.umn.edu>). 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	75	42.0	3,150	0.0	0.0	0.5	15.9	0.5	15.9	
Arkansas	570	50.0	28,500	0.0	0.0	T*	T	3.0	881.4	
California	370	61.0	22,570	0.0	0.0	2.0	618.4	25.0	7,729.5	
Colorado	2,200	35.0	77,000	0.0	0.0	T	T	1.0	777.8	
Delaware	47	41.0	1,927	0.0	0.0	0.0	0.0	0.0	0.0	
Florida	12	41.0	492	0.0	0.0	1.0	5.0	T	T	
Georgia	230	46.0	10,580	0.0	0.0	1.0	106.9	T	T	
Idaho	720	80.0	57,600	0.0	0.0	0.0	0.0	0.4	231.3	
Illinois	810	65.0	52,650	0.0	0.0	T	T	T	T	
Indiana	430	69.0	29,670	0.0	0.0	T	T	T	T	
Iowa	19	61.0	1,159	0.0	0.0	T	T	T	T	
Kansas	10,000	48.0	480,000	0.0	0.0	1.3	7,082.9	10.6	57,752.6	
Kentucky	330	62.0	20,460	0.0	0.0	T	T	T	T	
Louisiana	140	41.0	5,740	0.0	0.0	1.0	61.1	5.0	305.3	
Maryland	145	37.0	5,365	0.0	0.0	T	T	0.0	0.0	
Michigan	660	68.0	44,880	0.0	0.0	T	T	T	T	
Minnesota	23	42.0	966	0.0	0.0	1.0	9.8	T	T	
Mississippi	125	49.0	6,125	0.0	0.0	1.0	63.8	3.0	191.4	
Missouri	870	61.0	53,070	0.0	0.0	T	T	2.5	1,360.8	
Montana	1,720	37.0	63,640	0.0	0.0	1.0	642.8	T	T	
Nebraska	1,820	46.0	83,720	0.0	0.0	1.0	940.7	10.0	9,406.7	
New Jersey	26	42.0	1,092	0.0	0.0	0.0	0.0	0.0	0.0	
New Mexico	140	30.0	4,200	0.0	0.0	0.0	0.0	0.0	0.0	
New York	120	53.0	6,360	0.0	0.0	T	T	0.0	0.0	
North Carolina	410	36.0	14,760	0.0	0.0	1.0	149.1	0.0	0.0	
North Dakota	120	49.0	5,880	0.0	0.0	3.0	181.9	T	T	
Ohio	1,000	68.0	68,000	0.0	0.0	0.1	68.1	T	T	
Oklahoma	4,600	39.0	179,400	0.0	0.0	T	T	1.0	1,812.1	
Oregon	940	51.0	47,940	0.0	0.0	T	T	0.1	48.0	
Pennsylvania	165	43.0	7,095	0.0	0.0	T	T	0.0	0.0	
South Carolina	185	39.0	7,215	0.0	0.0	T	T	T	T	
South Dakota	1,380	43.0	59,340	0.0	0.0	2.0	1,236.3	2.0	1,236.3	
Tennessee	270	50.0	13,500	0.0	0.0	T	T	T	T	
Texas	3,450	28.0	96,600	0.0	0.0	1.0	1006.3	3.0	3,018.8	
Utah	125	41.0	5,125	0.0	0.0	0.0	0.0	0.0	0.0	
Virginia	160	46.0	7,360	0.0	0.0	T	T	T	T	
Washington	1,800	65.0	117,000	0.0	0.0	0.1	118.9	1.5	1,783.5	
West Virginia	7	41.0	287	0.0	0.0	T	T	0.0	0.0	
Wisconsin	175	69.0	12,075	0.0	0.0	T	T	T	T	
Wyoming	145	27.0	3,915	0.0	0.0	0.0	0.0	0.0	0.0	
Total from Abov	36,534	46.7	1,706,408		0.0		12,308.1		86,551.4	
U.S. % Loss				0.00		0.68		4.79		
U.S. Total	36,541	46.7	1,707,069							

\*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	1,000 bushels	Percent	1,000 bushels	Percent	1,000 bushels
Colorado	29	40.0	1,160	0.0	0.0	T	T	T	T
Idaho	450	66.0	29,700	0.0	0.0	0.0	0.0	0.7	209.4
Minnesota	1,800	58.0	104,400	T	T	1.0	1,054.5	T	T
Montana	2,700	22.0	59,400	0.0	0.0	T*	T	T	T
Nevada	4	75.0	300	0.0	0.0	0.0	0.0	0.0	0.0
North Dakota	6,400	39.5	252,800	T	T	1.0	2,553.5	T	T
Oregon	140	40.0	5,600	0.0	0.0	0.1	5.6	0.3	16.9
South Dakota	1,340	42.0	56,280	0.0	0.0	1.0	568.5	T	T
Utah	10	46.0	460	0.0	0.0	0.0	0.0	0.0	0.0
Washington	545	41.0	22,345	0.0	0.0	0.1	23.2	3.5	811.3
Wisconsin	5	45.0	225	0.0	0.0	T	T	0.0	0.0
Wyoming	6	25.0	150	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total from Above</b>	<b>13,429</b>	<b>39.7</b>	<b>532,820</b>		<b>T</b>		<b>4,205.3</b>		<b>1,037.6</b>
U.S. % Loss				T		0.78		0.19	
<b>U.S. Total</b>	<b>13,429</b>	<b>39.7</b>	<b>532,820</b>						

\*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	1,000 bushels	Percent	1,000 bushels	Percent	1,000 bushels
Arizona	115	100.0	11,500	0.0	0.0	0.0	0.0	0.0	0.0
California	115	100.0	11,500	0.0	0.0	1.0	129.1	10.0	1,292.1
Minnesota	2	58.0	116	0.0	0.0	0.0	0.0	0.0	0.0
Montana	630	23.0	14,490	0.0	0.0	0.0	0.0	0.0	0.0
North Dakota	1,980	29.5	58,410	0.0	0.0	0.0	0.0	0.0	0.0
South Dakota	27	23.0	621	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total from Above</b>	<b>2,869</b>	<b>33.7</b>	<b>96,637</b>		<b>0.0</b>		<b>129.1</b>		<b>1,292.1</b>
U.S. % Loss				0.00		0.13		1.32	
<b>U.S. Total</b>	<b>2,869</b>	<b>33.7</b>	<b>96,637</b>						

## 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	118.0	3,540	0.0	0.0	0.0	0.0	0.0	0.0
California	58	64.0	3,712	0.0	0.0	1.0	38.3	2.0	76.5
Colorado	82	109.0	8,938	0.0	0.0	0.0	0.0	0.0	0.0
Delaware	21	59.0	1,239	0.0	0.0	0.0	0.0		
Idaho	720	66.0	47,520	0.0	0.0	0.0	0.0	0.0	0.0
Kansas	8	57.0	456	0.0	0.0	0.0	0.0		
Kentucky	8	75.0	600	0.0	0.0	0.0	0.0		
Maine	27	65.0	1,755	0.0	0.0	0.0	0.0		
Maryland	38	57.0	2,166	0.0	0.0	0.0	0.0		
Michigan	14	56.0	784	0.0	0.0	0.0	0.0		
Minnesota	170	75.0	12,750	T*	T	T	T		
Montana	810	39.0	31,590	0.0	0.0	0.0	0.0	0.0	0.0
Nebraska	4	50.0	200	0.0	0.0	0.0	0.0		
Nevada	3	80.0	240	0.0	0.0	0.0	0.0		
New Jersey	3	45.0	135	0.0	0.0	0.0	0.0		
New York	12	50.0	600	0.0	0.0	T	T		
North Carolina	14	56.0	784	0.0	0.0	T	T		
North Dakota	1,980	60.0	118,800	T	T	T	T		
Ohio	6	58.0	348	0.0	0.0	0.0	0.0		
Oregon	60	64.0	3,840	0.0	0.0	0.0	0.0	T	T
Pennsylvania	65	61.0	3,965	0.0	0.0	0.0	0.0		
South Dakota	55	53.0	2,915	T	T	T	T		
Utah	35	80.0	2,800	0.0	0.0	0.0	0.0		
Virginia	45	62.0	2,790	0.0	0.0	T	T		
Washington	310	47.0	14,570	0.0	0.0	0.1	14.7	0.5	73.3
Wisconsin	35	55.0	1,925	0.0	0.0	T	T		
Wyoming	75	95.0	7,125	0.0	0.0	0.0	0.0		
Total from Above	4,688	58.9	276,087		T		53.0		149.8
U.S. % Loss				T		0.02		0.06	
U.S. Total	4,688	58.9	276,087						

\*T = Trace

# 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	NA**	NA	NA	0.0	0.0	0.5	NA
Arkansas	NA	NA	NA	0.0	0.0	T	T
California	35	80.0	2,800	1.0	28.6	1.0	28.6
Colorado	15	65.0	975	0.0	0.0	0.0	0.0
Georgia	30	56.0	1,680	0.0	0.0	T	T
Idaho	25	65.0	1,625	0.0	0.0	T	T
Illinois	50	89.0	4,450	0.0	0.0	T	T
Indiana	15	70.0	1,050	0.0	0.0	T	T
Iowa	130	83.0	10,790	0.0	0.0	T	T
Kansas	70	65.0	4,550	0.0	0.0	T	T
Maine	30	78.0	2,340	0.0	0.0	0.0	0.0
Michigan	75	70.0	5,250	0.0	0.0	T	T
Minnesota	265	71.0	18,815	T	T	1.0	190.0
Missouri	18	67.0	1,206	0.0	0.0	T	T
Montana	45	44.0	1,980	0.0	0.0	0.0	0.0
Nebraska	90	73.0	6,570	T	T	T	T
New York	70	63.0	4,410	0.0	0.0	T	T
North Carolina	22	59.0	1,298	0.0	0.0	0.0	0.0
North Dakota	360	59.0	21,240	T	T	1.0	214.5
Ohio	60	66.0	3,960	0.0	0.0	0.0	0.0
Oklahoma	25	36.0	900	0.0	0.0	0.0	0.0
Oregon	20	75.0	1,500	0.0	0.0	0.0	0.0
Pennsylvania	110	59.0	6,490	0.0	0.0	T	T
South Carolina	20	56.0	1,120	0.0	0.0	T	T
South Dakota	230	68.0	15,640	T	T	1.0	158.0
Texas	140	45.0	6,300	1.0	65.6	3.0	196.9
Utah	6	82.0	492	0.0	0.0	0.0	0.0
Washington	15	50.0	750	0.0	0.0	T	T
Wisconsin	230	67.0	15,410	0.0	0.0	T	T
Wyoming	23	46.0	1,058	0.0	0.0	0.0	0.0
Total from Above	2,224	65.0	144,649		94.2		788.0
U.S. % Loss				0.06		0.54	
U.S. Total	2,224	65.0	144,649				

\*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	50	16.0	800	0.0	0.0	*T	T
Illinois							
Kansas							
Michigan							
Minnesota							
Nebraska							
New York							
North Carolina							
North Dakota	15	50.0	750	0.0	0.0	T	T
Ohio							
Oklahoma	90	24.0	2,160	0.0	0.0	T	T
Pennsylvania							
South Carolina							
South Dakota	14	48.0	672	0.0	0.0	T	T
Texas							
Wisconsin							
Other US States***	170	28.7	4,872				
<b>Total from Above</b>	<b>339</b>	<b>27.3</b>	<b>9,254</b>		<b>0.0</b>		<b>T</b>
U.S. % Loss				0.00		T	
<b>U. S. Total</b>	<b>339</b>	<b>27.3</b>	<b>9,254</b>				

\*T = Trace

\*\*\* Other US States include IL, KS, MI, MN, NE, NY, NC, PA, SC, TX, and WI