

CEREAL RUST BULLETIN

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Issued by:

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- Wheat stripe rust is widespread from South Dakota to Indiana.
- Wheat leaf rust is very light this year throughout the U.S.
- Oat crown rust is light in the northern oat growing area.

Winter wheat harvest has begun from southern Indiana to southern Kansas. Most of the northern planted spring small grain is well behind the normal growth stages for this time of the year.

Wheat stem rust. There have been no new reports of wheat stem rust in the central plains since CRB #5 (<http://www.cdl.umn.edu/crb/2001crb/01crb5.html>) when stem rust infections were scattered and light. In early June, severe wheat stem rust was found in a southern Louisiana nursery on plants which were planted, much later than the normal, in late January.

Wheat leaf rust. During the second week in June, trace-10% leaf rust severities were reported in plots and traces in fields of soft red winter wheat cultivars from northeastern Missouri to northwestern Ohio (Fig. 1). The cooler than normal temperatures during the last part of May and first part of June actually slowed leaf rust development. As stated in CRB #5, this is an abnormally poor year for leaf rust development throughout most of the U.S.

In mid-June, light leaf rust was observed on the flag leaves of hard red winter wheats in an east central South Dakota nursery.

By the last week in May, 10-70% leaf rust severities were observed on susceptible cultivars in a nursery in east central Virginia.

During the second week in June, 10% leaf rust severities were found on susceptible cultivars at the milk growth stage in southeastern Washington.



The preliminary leaf rust race identifications and corresponding virulence formula from collections made in the southern U.S. in April are presented in Tables 1 and 2. The identified races so far are not significantly different from the races identified in the southern U.S. in 2000.

Table 1. Preliminary wheat leaf rust race identifications through June 19, 2001

Pt code	Number of isolates					VA
	AL	FL	GA	LA	TX	
MBBJ				1		
MBDS				2	7	
MCDS				1	8	
MBRJ			4			
MBRK	4	2	2			
MCRJ						2
MDRJ	1				2	
NBCR	1					
TLGF	2			1		
TLGJ	4	2	4			
TLGS				2		
TLGP	2		4			
TLRJ				3		
Total isolates	14	4	14	10	17	2
Total collections	8	2	7	5	9	1

Table 2. Pt code and virulence formula

Pt code	Virulence formula
MBBJ	1,3,10,14a
MBDS	1,3,10,14a,17,B
MCDS	1,3,10,14a,17,26,B
MBRJ	1,3,3ka,10,11,14a,30
MBRK	1,3,3ka,10,11,14a,18,30
MCRJ	1,3,3ka,10,11,14a,26,30
MDRJ	1,3,3ka,10,11,14a,24,30
NBCR	1,2c,10,18,30,B
TLGF	1,2a,2c,3,9,11,14a,18
TLGJ	1,2a,2c,3,9,10,11,14a
TLGS	1,2a,2c,3,9,10,11,14a,B
TLGP	1,2a,2c,3,9,11,14a,18,B
TLRJ	1,2a,2c,3,3ka,10,11,14a,30

Wheat stripe rust. By mid-June, wheat stripe rust development was extensive from east central South Dakota to northeastern Indiana and severities ranged from traces to 80% on flag leaves. The past two



years have seen the most widely dispersed stripe rust development observed throughout the northern winter wheat area in at least 40 years. In many of the northern locations rust severities ranged from trace to 10% and the pustules were large and producing spores. If conditions stay cool and moist the rust should continue to increase. In contrast to last year, stripe rust and leaf rust have not been found together on the same leaves, which probably indicates they did not develop from the same spore shower. Much of this stripe rust development originated from spores produced farther south in Texas, Oklahoma, Kansas or adjacent states.

On June 8 and 9, light infections of wheat stripe rust were found in soft red winter wheat plots at Rosemount, and St. Paul, Minnesota, respectively. Hot temperatures that followed the initial rust sighting in the Minnesota plots set back the rust development, but cool and moist weather in mid-June has resulted in further development.

In early June, stripe rust was severe in irrigated wheat, but light in dryland wheat in northeastern Colorado.

In mid-June, 100% severities of wheat stripe rust were reported on susceptible winter wheat cultivars in plots in western Washington. In eastern Washington 40% severities were observed in some fields of susceptible varieties. During the past two weeks weather conditions have improved for stripe rust increase in most of the Pacific Northwest.

Oat stem rust. There have been few reports of oat stem since CRB #5 (<http://www.cdl.umn.edu/crb/2001crb/01crb5.html>).

Oat crown rust. There have no new reports of crown rust since CRB #5

Buckthorn. In the first week in June, infections were light on buckthorn hedges in southwestern Ontario.

Barley stem rust. No new occurrences of barley stem rust have been reported in the U.S. since CRB # 5

Barley leaf rust. During the first week in June, leaf rust was increasing on susceptible barley in southwestern Ontario, but severities were low because of the cool conditions in late May and early June.

Stripe rust on barley. In mid-June, stripe rust was severe on susceptible barley varieties in western Washington and starting to increase on varieties in eastern Washington fields. During the past two weeks weather conditions have been good for stripe rust increase in most of the Pacific Northwest.

Rye leaf rust. In mid-June, traces of leaf rust were reported in a rye field in northeastern Indiana.

Rye stem rust. There have been no reports of rye stem rust this year.

Stem rust on barberry. In mid-June, a few aecial infections were observed on common barberry bushes in south central Wisconsin.



Fig. 1. Leaf rust severities in wheat fields - June 19, 2001

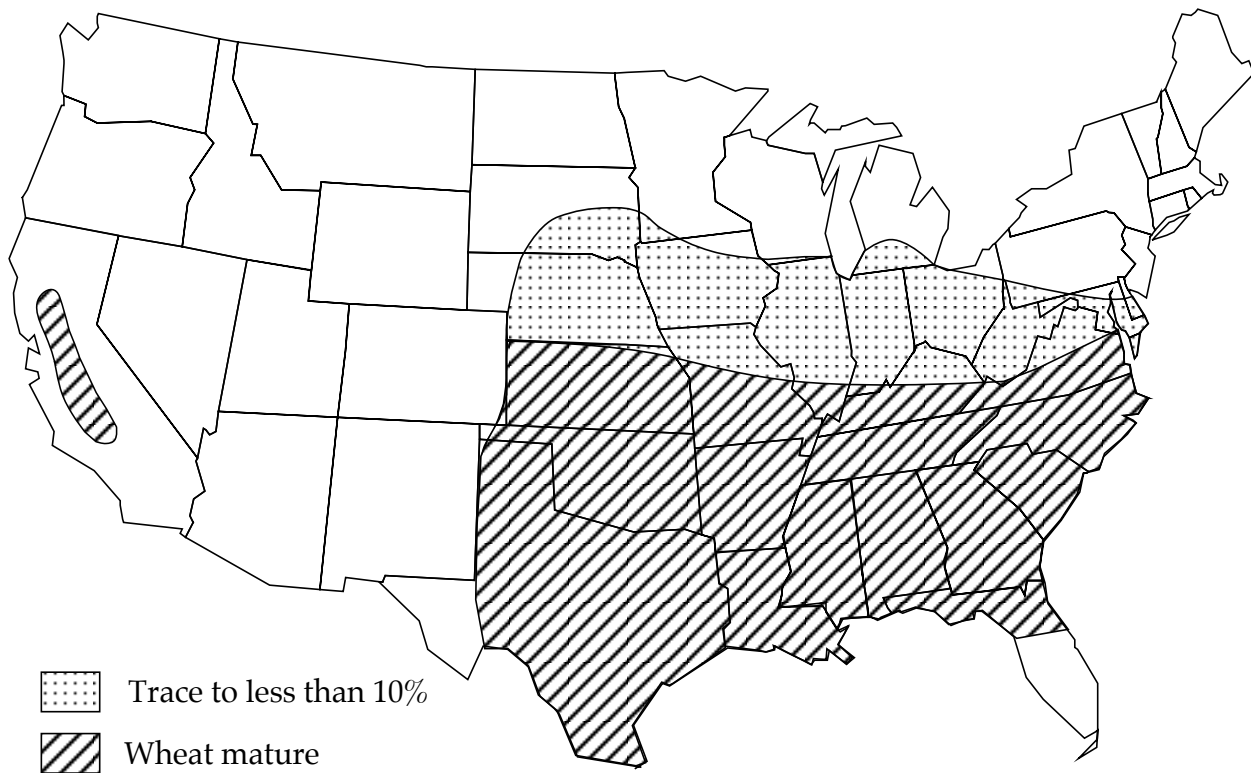


Fig. 2. Stripe rust severities in wheat fields - June 19, 2001

