

AIR - BORNE RUST INOCULUM OVER WESTERN CANADA IN 1968<sup>1</sup>G.J.Green and J.W.Martens<sup>2</sup>

The concentration of rust inoculum in the air over Western Canada in 1968 was measured by trapping urediospores. The method used has been des-

cribed (1). Spore traps were located at Winnipeg, Morden, and Brandon, Manitoba, and at Indian Head, Regina, and Saskatoon, Saskatchewan.

Table 1 Number of urediospores of stem rust and leaf rust per square inch caught on vaseline-coated slides exposed for 48-hour periods at three locations in Manitoba and three locations in Saskatchewan in 1968

Date	Winnipeg		Morden		Brandon		Indian Head		Regina		Saskatoon	
	Stem rust	Leaf rust	Stem rust	Leaf rust	Stem rust	Leaf rust	Stem rust	Leaf rust	Stem rust	Leaf rust	Stem rust	Leaf rust
May total	0	0	0	2	0	1	0	1	0	2	0	0
June 1-2	0	1	0	1	0	4	0	0	0	0	0	3
3-4	0	0	0	25	0	1	0	7	0	1	0	0
5-6	0	16	0	1	0	5	0	2	0	3	0	0
7-8	0	2	0	1	0	0	0	3	0	4	0	0
9-10	0	2	0	0	0	0	0	0	0	2	0	0
11-12	0	9	0	3	0	0	0	0	0	0	0	0
13-14	0	7	0	4	0	1	0	0	0	1	0	0
15-16	0	0	0	3	0	0	0	0	0	0	0	2
17-18	0	15	0	3	0	0	0	2	0	4	0	8
19-20	0	8	0	28	0	1	0	3	0	6	0	11
21-22	0	2	0	0	0	5	0	8	0	1	0	11
23-24	0	11	0	0	0	2	0	1	0	0	0	7
25-26	0	6	0	8	0	0	0	31	0	26	0	13
27-28	0	32	0	5	9	0	15	0	4	0	12	3
29-30	0	0	0	3	0	1	0	4	0	1	0	1
June total	0	111	0	139	0	35	0	65	0	61	0	86
July 1-2	0	4	0	23	0	0	0	1	0	7	0	33
3-4	0	5	0	0	0	1	0	3	0	13	0	2
5-6	0	5	0	193	0	3	0	2	0	5	0	4
7-8	0	17	0	45	0	3	0	0	0	11	0	81
9-10	10	224	47	483	2	9	6	5	9	4	84	0
11-12	2	106	1	107	2	21	1	18	0	2	0	5
13-14	0	40	0	77	0	0	0	1	0	0	0	13
15-16	0	0	0	2	0	2	0	3	0	6	0	5
17-18	0	81	0	21	0	0	0	2	0	1	0	0
19-20	0	98	18	601	4	69	3	7	5	45	0	0
21-22	3	135	2	59	0	7	0	0	0	5	0	4
23-24	0	13	1	50	0	2	0	2	0	2	0	6
25-26	10	2220	1	461	0	49	0	5	0	8	0	7
27-28	5	42	0	30	1	31	2	38	0	39	1	47
29-30	2	53	0	1	2	69	3	2	4	2	93	0
July total	32	3043	70	2153	11	266	15	388	11	321	1	245

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<sup>2</sup> Plant Pathologists.

A few spores of leaf rust were caught during May, and a spore shower occurred across Manitoba and southern Saskatchewan between June 1 and June 6 (Table 1). This spore shower probably caused the

Table 1 (Concluded)

Date	<u>-Winnipeg</u>		<u>Morden</u>		<u>Brandon</u>		<u>Indian Head</u>		<u>Regina</u>		<u>Saskatoon</u>	
	<u>Stem</u>	<u>Leaf</u>	<u>Stem</u>	<u>Leaf</u>	<u>Stem</u>	<u>Leaf</u>	<u>Stem</u>	<u>Leaf</u>	<u>Stem</u>	<u>Leaf</u>	<u>Stem</u>	<u>Leaf</u>
	rust	rust	rust	rust	rust	rust	rust	rust	rust	rust	rust	rust
July 31-												
Aug. 1	1	141	1	394	0	39	0	15	0	11	0	8
2-3	0	44	6	146	2	19	0	9	0	15	0	26
4-5	9	538	1	231	7	376	1	13	0	1	0	31
6-7	9	342	0	95	0	8	1	2 3	0	1 5	0	0
8-9	2	90	0	70	0	42	0	25	0	14	0	0
10-11	11	403	38	1310	2	73	0	26	1	31	0	3
12-13	9	577	4	541	0	189	0	26	1	78	0	3
14-15	0	3	1	105	1	15	0	9	2	40	0	26
16-17	2	66	14	393	4	103	8	60	20	68	3	3
18-19	7	307	28	997	5	26	0	5	3	4	0	2
20-21	13	507	7	270	4	91	0	1	2	14	0	2
22-23	2	50	4	125	8	80	0	0	0	5	0	0
24-25	0	28	3	144	0	41	12	15	117	131	3	28
26-27	66	598	96	850	1	46	1	5	23	64	0	26
28-29	70	764	90	342	1	30	0	1	21	66	0	0
30-31	1	11	18	86	0	0	7	41	116	204	3	4
Aug. total	202	4469	311	6099	35	1178	30	274	306	761	9	162
<b>TOTAL</b>	234	7623	381	8393	46	1480	45	728	317	1145	10	493

first leaf rust infections in Manitoba, which were found on June 12. Leaf rust spores were caught during most 48-hour exposures at all spore trap locations from June 12 to August 31. A moderate amount of leaf rust developed in Western Canada, and the total number of leaf rust spores caught was about average (1).

Stem rust spores were first caught on July 9 and they appeared erratically from that date to the end of August. Stem rust was first reported on sus-

ceptible varieties in field plots in southern Manitoba on July 23. It developed slowly and was scarce in Western Canada until late September. The total number of stem rust spores caught was the lowest since 1961.

### Literature cited

- 1 Green, G J 1968 Air-borne rust inoculum over Western Canada in 1967. Can Plant Dis. Surv. 48:1-5.