

AIR-BORNE RUST INOCULUM OVER WESTERN CANADA IN 1966¹

G.J. Green²

Cereal rust spore traps were operated in Western Canada in 1966 as in previous years. Vaseline-coated microscope slides were exposed to the air currents for 48-hour periods at six locations in Manitoba and Saskatchewan. The numbers of spores caught (Table 1) on the Vaseline-coated surface were counted by means of a microscope. The slides exposed at Saskatoon were examined at the Canada Department of Agriculture Research Station there; the other slides were examined at the Winnipeg Research Station.

Few rust spores were carried into Western Canada from the south in May and early June. Small

numbers of spores were caught on most slides during the latter half of June, but spore showers were generally light. The numbers of spores caught during the first half of July continued to be small, but after the middle of the month their numbers increased sharply, presumably because of local rust development. The large numbers of leaf rust spores caught at Regina and Saskatoon in August probably resulted mainly from the late development of leaf rust on susceptible Thatcher wheat in the northerly part of Saskatchewan.

The total numbers of spores of both rusts caught on the slides were not as great as in 1965, but are greater than in most recent years (1).

- ¹ Contribution No. 241 from the Canada Department of Agriculture, Research Station, Winnipeg, Manitoba.
² Plant Pathologist.

Literature cited

1. Green, G.J. 1966. Air-borne rust inoculum over Western Canada in 1965. Can. Plant Dis. Survey 46: 20-21.

Table 1. Numbers of urediospores of stem rust and leaf rust per square inch caught on Vaseline-coated slides exposed for 48-hour periods at 3 locations in Manitoba and 3 locations in Saskatchewan in 1966.

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	2	6	0	0	0	0	1	1		
May 31 -												
June 1	0	0	1	4			2	11	3	5	0	0
2-3	0	0	1	0	0	1	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0
6-7	0	0	0	0	0	0	0	1	0	0	0	0
8-9	0	0	0	0	0	0	0	1	0	4	0	0
10-11	0	0	0	0	0	0	0	0	0	1	0	0
12-13	0	0	0	0	0	0	0	0	0	0	0	0
14-15	0	0	0	0	0	0	0	0	0	1	0	0
16-17	0	0	0	2	0	0	1	0	0	1	0	6
18-19	0	0	0	0	0	0	0	1	0	2	0	0
20-21	1	3	0	2	0	0	0	2	0	6	0	4
22-23	1	5	2	4	0	0	0	2	0	2	0	1
24-25	0	0	0	1	0	2	0	0	0	1	0	8
26-27	0	0	2	2	0	2	0	1	1	4	0	6
28-29			0	1	0	2	2	39	2	8	0	0
June Total	2	9	6	16	0	7	5	58	6	35	0	25

Table 1. (Continued)

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
June 30-												
July 1	0	0	0	0	0	0	1	2	1	5	0	0
2-3	4	5	0	0	1	1	0	2	0	0	0	30
4-5	0	0	0	1	1	2	1	8	1	9	0	26
6-7	0	1	0	2	1	2	1	6	1	3	0	8
8-9	3	12	1	1	1	4	0	4	4	9	0	52
10-11	1	1	1	3	1	4	5	15	2	9	0	50
12-13	1	4	0	0	1	2	2	11	2	7	0	8
14-15	6	18	10	23	1	6	5	30	8	35	0	6
16-17	4	2	28	32	3	21	49	560	11	128	2	36
18-19	4	16	4	11	5	54	34	336	9	149	4	202
20-21	48	270	10	101	17	90	7	238	16	302	4	2,624
22-23	4	25	1	8	1	19	2	36	0	8	16	780
24-25	9	81	2	37	7	20	9	118	5	205	0	972
26-27	4	47	2	36	2	39	26	1,992	0	492	0	898
28-29	9	200	49	1,253	4	95	46	3,203	19	2,941	4	1,984
30-31	23	156	11	204	4	134	9	893	23	3,136	0	3,564
July Total	120	838	119	1,712	50	493	197	7,454	102	7,438	30	11,240
Aug. 1-2	0	37	39	2,125	5	190	23	2,802	9	2,349	4	376
3-4	74	432	9	571	2	313			4	1,246	4	6,512
5-6	39	236	16	135	2	46	2	406	5	925	0	568
7-8	47	712	11	118	5	37	5	181	2	814	0	212
9-10	116	364	16	79	2	51	16	1,871			8	756
11-12	53	199	97	591	23	410	12	1,584	-		24	9,408
13-14	79	522	81	158	2	92	32	1,137	9	197	4	744
15-16	100	742	179	2,271	11	339	16	441	46	7,081	8	1,912
17-18	44	62	109	1,202	74	1,161	16	127	206	5,950	24	1,716
19-20	160	149	97	1,225	21	188	0	0	9	568	28	590
21-22	1,347	1,320	183	1,245	18	67	2	11	0	285	46	468
23-24	294	508	209	867	65	323	25	288	42	20,649	20	852
25-26	387	216			58	211	47	348	116	12,390	18	366
27-28	802	781	373	1,624	246	752	4	85	18	4,702	72	880
29-30	97	162	244	721	132	269	55	353	79	12,626	136	944
31 Sept. 1	69	67	53	139	21	70	12	193	70	9,269	100	420
Aug. Total	3,708	6,509	1,716	13,071	687	4,519	267	9,827	615	79,051	496	26,724
TOTAL	3,830	7,356	1,843	14,805	737	5,019	469	17,339	724	86,525	526	37,989