This method has been particularly successful in the production of spores of Glomerella cingulata. On a single plate, over 10×10^{10} spores (approximately 1 g. dry weight) can be produced on potato dextrose agar in 3 days. Spores of Monilinia fructicola and Alternaria solani have also been produced in quantity in the same way.

PESTICIDE RESEARCH INSTITUTE,
CANADA DEPARTMENT OF AGRICULTURE,
LONDON, ONTARIO.

THE SUSCEPTIBILITY OF POTATO VARIETIES TO STORAGE ROTS CAUSED BY FUSARIUM SAMBUCINUM FCKL. F6 WR. AND FUSARIUM CAERULEUM (LIB.) SACC.

G.W. Ayers[1]

The susceptibility of thirteen potato varieties to rot caused by Fusarium species was assessed by immersing artificially wounded tubers in spare suspensions of the pathogens. The experiments were conducted in replicates of four with 20 tubers per varietal replicate. Tuber lots were inoculated with F. sambucinum €6 on January 11 and examined for extent of decay on May–5, 1960. Inoculation with F. caeruleum was effected on February 10 and examinations were made on June 10, 1960.

The value of figures presented in the Tables 1 and 2 is mainly in the comparative ratings of the varieties tested.

Under epidemic conditions which prevail in Prince Edward Island in certain years serious storage rot losses have occurred in harvested tubers of the Sebago variety. Screening results obtained in the current and previous experiments have shown that Sebago is very highly susceptible to rot caused by F. sambucinum f6. Certain other varieties listed below appear only slightly less susceptible, while stocks of Irish Gobbler and F5350 proved quite resistant.

The variety Keswick has shown a high degree of susceptibility to F. caeruleum in the field and it would be expected that varieties approaching or exceeding the ratings established for Keswick in this experiment might be severely affected under epidemic conditions. It is apparent, from the results obtained, that several varieties are quite resistant to "caeruleum" decay.

---

[1] Plant Pathologist, Experimental Farm, Research Branch, Canada Department of Agriculture, Charlottetown, P. E. I.

Table 1. Relative susceptibility of thirteen potato varieties to tuber rot caused by F. sambucinum f6

Variety	Average per cent rot	Converted average
Sebago	83.4	66.2
F4724	79.2	63.0
Keswick	75.7	60.6
F5143	74.6	59.9
Kennebec	70.7	57.3
Fundy	69.4	56.5
Green Mountain	68.2	55.7
F4913	58.3	49.8
F5317	58.1	49.7
F4834	50.1	45.1
F4519	34.8	36.1
Irish Cobbler	12.6	20.7
F5350	9.5	17.8
N.D.S. at P=0.05		4.8

Table 2. Relative susceptibility of thirteen potato varieties to tuber rot caused by F. caeruleum

Variety	Average per cent rot	Converted averages
F5350	54.1	47.4
Keswick	43.0	41.0
F4913	36.0	36.8
F4834	31.0	33.8
Fundy	29.3	32.7
F4519	17.4	23.6
F4724	17.2	24.2
Irish Cobbler	12.3	20.2
Sebago	9.7	17.7
F5317	4.8	10.8
F5143	3.0	9.9
Green Mountain	3.0	9.7
Kennebec	0.4	2.5
N.D.S. at P=0.05		5.8

EXPERIMENTAL FARM
CANADA DEPARTMENT OF AGRICULTURE
CHARLOTTETOWN, P.E.I.