

plants are grown continuously at any one daily temperature regime (2). Even with this procedure, we seldom achieve infection of all test plants even in the most highly infectious soils. Usually most plants become infected in plots of highly infectious soil at Ottawa in October and sometimes in pots of infectious soil kept outdoors through October (23). Wiese and Hooper (5), noting the high infection in pots of infectious soil kept outdoors in the fall in Michigan, reported that symptom severity and percentage of test plants infected were increased by cool and freezing temperatures. A period of such conditions, which was not included in our tests, may be necessary for maximum disease development.

There appear to be several factors affecting the transmissibility of WSSMV from soil. Although certain sequences of temperature are of major importance, moisture content and other factors may also affect the infectivity of the soil at specific times. The low infectivity of most soil samples shortly after collection from the field in May each year indicates a lack of reliability of soil tests done immediately on non-dried soil samples collected at that time. Tests done after the soil samples have been dried for a period appear more reliable. We have not determined the effects of much shorter periods of drying soils collected in May. However, other tests have

indicated that keeping soil moist has a temporary suppressive effect on infectivity. At present we have no satisfactory explanation for the great differences in infectivity of soils collected from different fields in which WSSM appeared to be equally prevalent, but the explanation is probably related to the concentration or activity of the vector, and possibly to failure to provide conditions that would activate the vector and virus optimally in all the soils.

Literature cited

1. Slykhuis, J. T. 1970. Factors determining the development of wheat spindle streak mosaic caused by a soil-borne virus in Ontario. *Phytopathology* 60:319-331.
2. Slykhuis, J. T. 1974. Differentiation of transmission and incubation temperatures for wheat spindle streak mosaic virus. *Phytopathology* 64:554-557.
3. Slykhuis, J. T. 1975. Seasonal transmission of wheat spindle streak mosaic virus. *Phytopathology* 65:1133-1136.
4. Slykhuis, J. T., and Z. Polak. 1969. Verification of wheat spindle streak mosaic virus as a cause of mosaic of wheat in Ontario. *Can. Plant Dis. Surv.* 49:108-111.
5. Wiese, M. V., and G. R. Hooper. 1971. Soil transmission and electron microscopy of wheat spindle streak mosaic. *Phytopathology* 61:331-332.

Correction

In the article by G.J. Green entitled "Air-borne rust inoculum over western Canada in 1974", volume 55, no. 2, page 49, the last entry in column 1, Table 1 should read "1974 total".