

Occurrence of Zucchini Yellow Mosaic Virus in the United States in 1985

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During the growing season of 1985, in the United States, zucchini yellow mosaic virus (ZYMV) was more widespread than in any previous year. Epidemics occurred in the following states: Arizona, Arkansas, California, Florida, Georgia, Iowa, Minnesota, Pennsylvania, New Jersey, New York, South Carolina, and Texas. Everywhere, cultivars of summer squash, pumpkin (Cucurbita pepo) and melon (Cucumis melo) were most affected by this virus. However, in some states, winter squash (C. maxima and C. moschata) and watermelon (Citrullus lanatus) were also severely damaged. As it was noted during past surveys, the Florida strain (ZYMV-FL) appeared to be the most prevalent. This strain differs from the Connecticut strain (ZYMV-CT) in that it incites symptoms which resemble those caused by watermelon mosaic virus 1 (WMV-1) (3).

In New York, the epidemics generally occurred in the central part of the state, where many fields of summer and winter squash were abandoned, because fruits were unmarketable. Particularly affected was 'Butternut' (C. moschata), which usually is sporadically infected by cucumber mosaic virus (CMV) and watermelon mosaic virus 2 (WMV-2), the two widespread viruses of the region. Work is in progress to incorporate resistance to ZYMV, as well as to other viruses in summer and winter squash, using an accession of C. moschata from Nigeria ('Nigerian Local') (3), which we have demonstrated to be resistant also to CMV, WMV-1, and WMV-2.

The sudden outbreaks of ZYMV infection in different regions of the USA and abroad, would strongly suggest transmission via seed. Studies are in progress to elucidate this important aspect of the epidemiology of this devastating virus, which was characterized only 5 years ago (1, 2).

Literature Cited

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