

## AN ISOLATE OF VERTICILLIUM FOUND PATHOGENIC TO WILT-RESISTANT TOMATOES

**V**ERTICILLIUM WILT is a widespread soil-borne fungus disease of many crops in California that may cause serious damage to susceptible tomatoes. In 1951 a high level of resistance to *Verticillium albo-atrum* in tomato was found in a wild tomato from Peru. This resistance has since been incorporated into many commercial tomato varieties, and into virtually all tomato varieties released in California since about 1960.

### Resistance source

This source of resistance, conferred by the *Ve* gene, when incorporated into commercial varieties, has been highly effective in reducing losses caused by the form of *Verticillium* wilt, now designated tomato strain 1. This strain is commonly found in California and many parts of the United States. Within the past few years, however, there have been isolated instances of *Verticillium* infection in tomato varieties resistant to the tomato strain 1. In 1971 moderate *Verticillium* damage was observed in one commercial field in San Joaquin County and diseased plants were found in fields in Yolo, Santa Clara, and Monterey counties.

Clearly, a different pathogenic form of the fungus, capable of infecting tomato varieties carrying the *Ve* gene for resistance, has become established in several commercial tomato-growing areas of California. This second form of *Verticillium albo-atrum* is here designated as tomato strain 2.

### Distribution

Apparently this strain is not widely distributed and thus does not appear to be an immediate threat to the California tomato industry. It should be considered a potential hazard for the future, and sources of resistance to strain 2 are now being sought in anticipation of future needs.

Although we are referring to these strains as "tomato strains," both strain 1 and strain 2 will infect many crops in addition to tomato.

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## 'SWAN HILL'

## FRUITLESS OLIVE IS PATENTED

The 'Swan Hill' fruitless olive discussed in the article by J. J. Nussbaum and A. T. Leiser, "Rooting Cuttings of 'Swan Hill' Fruitless Olive", which appeared in the July, 1972, issue of CALIFORNIA AGRICULTURE is patented by the Regents of the University of California, as U. S. Plant Patent 3197. Propagation is restricted to holders of licenses issued by the Regents through its Board of Patents. Present Licensees are:

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P. O. Box 424  
Exeter, California 93221

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P. O. Box 308  
Saratoga, California 95070

Trees of the 'Swan Hill' fruitless olive may be obtained from these sources dependent upon the availability of nursery stock.

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