

FIRE BLIGHT

Controlled at Last

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Fire blight, the first bacterial disease to be discovered (1878) seemed over many decades destined to be the last to be adequately controlled. Now, happily, we have found what seems to be a simple and effective procedure that will control fire blight. (*In fact, our experimental plot is so well "cured" that we are seeking a pear orchard in which fire blight is severe, so we can continue our research. Any offers?*)

Here's what we did experimentally, and the result.

Antibiotic spray.

During the past two years we have applied an antibiotic spray to a block of 6-year-old Bartlett pears. These were so infected by fire blight that the owner planned to remove them, having despaired of controlling fire blight that had killed many of the Bartlett tops back to the trunk.

More than 50 trees in a variety planting of older pears and apples adjoining the Bartlett pears were sprayed at the same time, because some of them had fire blight.

Two sprays of a commercial antibiotic, Agrimycin (90% streptomycin sulfate and 10% tetracycline), were applied. The first spraying was at full bloom and the second, 10 days later.

Blight reduced

Trees were examined six times during the summer of 1954. Blight was greatly reduced, only nine trees showing twig blight or body canker. Five trees were considered worthless and removed. These were trees that had cankers on branches over an inch in diameter; and spray was not expected to penetrate the bark sufficiently to control them.

In 1955 the same trees were sprayed again, and that summer not a single fire blight infection was found in the young Bartletts. One limb in the top of an older Bartlett tree was girdled by a hold-over canker and was removed.

During both test years there was a heavy set of fruit on all trees which had not been severely blighted before the experiments; those severely blighted had no good fruiting wood.

Method Succeeds

Our findings in Arizona find support at other agricultural experiment stations that have indicated that two sprays of a streptomycin formulation can control fire blight. The treatment controls fire blight on apple and other kinds of trees.

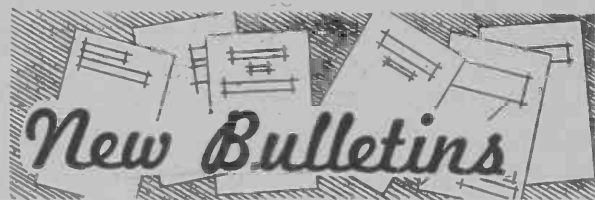
Fire blight attacks more than pears. It attacks apple trees, more than 50 species of stone fruits and ornamentals of the rose family. (Pyracanthas and cottoneasters are frequently blighted in Arizona). Bartlett, by far the most popular variety of pear, is so susceptible to fire blight that it is no longer grown in many regions on account of severe damage to the trees by fire blight.

Severe pruning in an attempt to remove all infected branches has resulted in succulent regrowth even more susceptible to blight. Bordeaux sprays have been fairly successful in reducing blight but often cause a considerable russetting of the fruit—which decreases its market value. The Bartlett pear grows well in Arizona at moderate elevations, but fire blight has killed the commercial plantings and most of the home plantings.

Our proving that the antibiotic formulation of 90% streptomycin sulfate and 10% tetracycline will control fire blight makes possible the growing of desirable pear and apple varieties in Arizona.



Fire Blight has ruined this thriving pear tree. The remaining live limbs will die the following year.



EXTENSION SERVICE

- Circular 179. (Revised) Cotton Insect Control
- Circular 210. (Revised) Arizona Insect Control Recommendations, 1956
- Circular 235. Simplified Slip Covers
- Circular 236. The Young Homemaker Learns Easy Sewing Skills
- Circular 237. Planting and Pruning Roses
- Circular 238. Beekeeping in Arizona

EXPERIMENT STATION

- Bulletin 270. Arizona Agriculture 1956.
- Bulletin 271. Virus Diseases of Plants in Arizona. II. Field and Experimental Observations on Curley-top Affecting Vegetable Crops (Available about April 15)
- Technical Bulletin 130. The Uptake of Radiostrontium by Certain Type Crops from Calcareous Soils
- Report 126. Mineral Content of Arizona-Grown Alfalfa with Particular Reference to Minor Elements
- Report 127. 1955 Corn Variety Tests
- Report 129. 1955 Oil Seed Crop Tests, Soybeans, Castor Beans, Flax, Sesame
- Report 130. A Progress Report on Alfalfa Pollination in Arizona