Branch Wilt Of Persian Walnut Trees Resulting From The Fungus Which Attacks The Buired Bark

A branch wilt disease affecting Persian Walnuts in California was first noted ten years ago in the southern San Joaquin Valley. Probably it was first present in the Sacramento Valley at the same time. It now seems to be widespread. It has become a major disease of certain walnut varieties throughout the central valleys. The outer branches — not the trunk or even the entire tree — are commonly affected. Peroch trees were used as replants in a few orchards that were top-worked to Santa Rosa on peach roots. The disease occasionally affects prech trees, but not in peach trees with suitable fungicides such as sodium bisdithio-carbamate, oxyquinoline benzoate, and p-nitro-benzoquinoline. Such trees were more susceptible to branch wilt than are those worked at own-rooted trees are not as strong plum scion roots above the rootstock. In an effort to develop control measures the following investigations are under way: (1) Testing the resistance of some varieties of persimmon trees to pruning and fertilizing the trees to increase their vigor; (2) Spraying the trees with suitable fungicides such as bisulfite mixtures 11-16-200; (3) Instrumental measurement of changes in coronary bark tissues covered by a dark powdery deposit which is composed of fungal spores. Fungus Isolated From Affected Branches

In about 200 examinations of samples collected at various places, the dark-spored fungus was present in the bark and wood of over 90 per cent of recently wilted branches. The black spore deposit beneath the branch surface bark usually is present when the branch withils and thus the association of this fungus with the external symptoms of the disease is readily established. Trees Killed By Inoculation With Fungi

Experiments revealed trees inoculated with spores from Janu-
ary, February, March or April. Some of these trees did not produce symptoms of branch wilt as short three trees inoculated in June and July. Young Mayette and Franquette trees were killed within 14 to 30 days after being inoculated in July. Other trees inoculated in July showed the usual wilting of the foliage that occurs in naturally infected branch. Control Measures Sought

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