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FERBAM AS A CONTROL FOR AVOCADO SCAB

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Many avocado varieties, including Lula, the leading commercial variety in Florida, are very susceptible to avocado scab (*Sphaceloma perseae* Jenkins) as well as to Cercospora (*Cercospora purpurea* Cke.) and anthracnose (*Colletotrichum gloeosporioides* Penz.) infections on fruits. It is necessary to apply copper fungicides five to six times a year to secure clean fruit on highly susceptible varieties. The first three of these applications are made primarily for control of avocado scab.

This fungicidal program is resulting in a gradual build-up of copper residues in the soil, which eventually may reach levels toxic to the avocado tree. Experiments were started in 1958 to find a substitute for copper. In the tests that year, Dyrene and Thioneb failed to effectively control scab. Phaltan and Thiram were promising for scab control but did not control Cercospora spot. Actidione S was very phytotoxic. In 1959 tests, thiram was about equal to copper for control of scab but failed to control Cercospora spot and anthracnose. Glyodin and Niacide also failed to control these diseases. Phaltan caused mild injury to tender leaves in the March application. In 1960 excellent scab control was obtained with Tribasic copper and captan, but two experimental liquid copper formulations were phytotoxic. Oil emulsion was less effective than copper for control of Cercospora spot.

Ferbam, diodine, captan, and a combination of dodine and captan were compared with Tribasic copper sulfate for control of avocado scab in 1961. The test was conducted on Lula avocados. A single plot consisted of four trees, and there were three replications of each treatment. Applications were made February 27, April 3, and May 9-11. Fruits were picked when mature and classified as being scab-free, or having mild or severe scab. Severe scab was defined as the amount of scab which would cause a reduction in fruit grade.

The results of this test, which are summarized in Table 1, show that copper and ferbam were equally effective in controlling avocado scab. Captan, dodine and the combination of the two were less effective. Dodine was phytotoxic to the extent that trees sprayed with it developed chlorotic spots in the foliage. None of the treatments had a significant effect on yield.

Although it is evident that ferbam is deserving of further trial as a control for avocado scab, the grower is cautioned that it is not registered for use on avocados. Approval should not be difficult to obtain, since ferbam is registered for use on other crops such as apples and celery.

*Among the things Doctor Ruehle left behind when he died on August 22 was the

information contained in this paper. He expected to present this to the Society and had entered the title for the program. This last contribution of Doctor Ruehle to the Society was written by the junior author in the spirit of a memorial to one of Florida's leading agricultural scientists.

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Table 1. Results of fungicide test for control of avocado scab on Lula fruit.

Fungicide* and amount/100 gallons	Yield No. fruit per plot	Free of scab (%)	Severe Scab (%)
Tribasic copper sulfate, 3 lbs. + Volck oil, 1 qt.	400	98.1	0.6
Captan, 3 lbs.	399	86.3	5.1
Ferbam, 3 lbs. + Volck oil, 1 qt.	440	98.8	0.3
Dodine, 0.5 lb.	476	74.2	9.9
Dodine, 0.25 lb. + captan, 2 lbs.	350	89.4	3.8

* Applications made on February 28, April 3, and May 9-11.