

AVOCADO ROOT ROT SURVEY

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For a number of years there has been no question that avocado root rot, caused by the fungus *Phytophthora cinnamomi*, has been one of the most serious problems facing the California avocado industry. There has been some question, however, as to the magnitude of infection in terms of numbers of trees or number of acres affected.

To try and ascertain the extent of avocado root rot infection in commercial orchards, survey cards were sent in June, 1968 to all known commercial avocado growers in California. Each grower was asked to return the cards with the following information: (1) Location of orchard giving nearest town or community; (2) Total acreage of orchard; (3) Number of trees known to be infected with root rot; (4) Number of trees suspected of root rot infection; (5) Number of infected trees that have been removed; (6) Date root rot was first noted; (7) Variety(s) infected and (8) Age of trees infected.

Survey cards were returned over a period of several months and the survey was considered completed on January 1, 1969. The results are summarized in Table 1.

Of interest is that 28 per cent of the cards sent were returned — a significant number on a voluntary survey. More meaningful is the fact that the cards returned represented 50 per cent of the commercial avocado acreage in the state, based on California Crop and Livestock Reporting Service figures as of December 31, 1967. For these reasons it seems safe to assume that the survey fairly represents the avocado root rot situation for the state.

Projecting the results of the 50 per cent acreage return on the survey cards to 100 per cent of the state avocado acreage would give 62,238 trees known to be infected. 36,062 trees suspected of infection and 89,936 trees removed because of infection. This is a total, if all infected, suspected and pulled trees were combined in one block, of 188,236 trees or, using an average of 60 trees per acre, 3,137 acres. This acreage figure of infection is conservative since the survey obviously could not include those properties on which all avocado trees had been removed in the past because of root rot. If this acreage was included, it has been estimated that it would amount to at least another two to three thousand acres.

From the standpoint of variety and age, Fuerte trees, 10 years or older, were most affected by root rot. This was expected since Fuertes have been grown longer and the trees have had more time to become infected. Root rot showed no favorites, however, and all varieties at all ages were reported as having the disease.

The results of the survey are not unexpected and certainly the picture is not a pretty one. It does, however, fortify the need for continued investigation and research in finding a solution to the problem.

Table 1
AVOCADO ROOT ROT SURVEY — SUMMARY

	<i>San Diego</i>	<i>Orange</i>	<i>Los Angeles</i>	<i>River-side</i>	<i>San Ber-nardino</i>	<i>Ventura</i>	<i>Santa Barbara</i>	<i>Tulare-Fresno</i>	<i>State Total</i>
No. properties reporting	886	102	83	12	8	138	189	12	1,430
Total acres reporting	6,603	549	253	40	41	1,821	1,438	87	10,832
% of County total acres	51	42	20	8	34	57	58	72	50
No. properties w/o root rot	463	44	41	8	8	116	107	9	796
% of total reporting	52	43	49	67	100	84	57	75	56
No. properties with root rot	423	58	42	4	0	22	82	3	634
% of total reporting	48	57	51	33	0	16	43	25	44
No. trees known infected	17,306	2,562	4,257	42	0	786	6,125	41	31,119
No. trees suspect infection	9,965	2,273	1,544	91	0	1,963	2,195	0	18,031
No. trees removed	31,335	3,985	3,114	139	0	678	5,681	36	44,968