

TESTS OF PERSEA SPECIES FOR RESISTANCE TO PHYTOPHTHORA CINNAMOMI

George A. Zentmyer and C. A. Schroeder

Associate Plant Pathologist at the Citrus Experiment Station, University of California (Riverside), and Associate Professor of Horticulture at the University of California (Los Angeles).

During the past few years a number of tests have been conducted on the resistance to Phytophthora root rot of various collections of native avocados and related species of *Persea* from Mexico, Central America, and the southern United States. Most of the materials have been collected by the writers of this article; some have been sent in by other interested persons.

Materials have been tested as seedlings or as rooted cuttings¹; resistance trials have been conducted in naturally infested soil, in artificially infested soil, and in inoculated solution cultures. Of the various varieties and species collected only two, *Persea borbonia* and *Persea Skutchii*, have shown appreciable resistance. *Persea borbonia* seed were obtained by Schroeder from the southern United States, *Persea Skutchii* seed were collected by Zentmyer in Honduras and Costa Rica. The immediate usefulness of *P. borbonia* is doubtful because it is not compatible with the avocado; hybridization is a possibility, however. No information is available on the compatibility of *P. Skutchii* and the avocado, though failure of budwood importations of this species to become established on avocado seedlings indicates that compatibility may be low.

A list of the collections tested, with their general rating as to resistance to *Phytophthora cinnamomi* follows:

Material	Source	Results of Test
<i>Persea americana</i> (Aguacate Mico)	Honduras	Susceptible
" " (Orizaba 5)	Mexico	Very susceptible
" " (Ocotepc)	Mexico	Very susceptible
" " (Coscomatepec)	Mexico	Susceptible
" " H9	Honduras	"
" " G21	Guatemala	"
" " M15	Mexico	"
" " M16	Mexico	"
" " M20	Mexico	"
" " N1	Nicaragua	"
<i>Persea borbonia</i>	Southern U.S.	Resistant
<i>Persea floccosa</i> (Aquila)	Mexico	Susceptible
<i>Persea gigantea</i>	Honduras	"
<i>Persea indica</i>	Canary Islands	Very susceptible to stripe canker phase of disease
<i>Persea lingue</i>	Chile	Susceptible
<i>Persea longipes</i>	Mexico	Very susceptible
<i>Persea nubigena</i>	Guatemala	Susceptible
<i>Persea schiedeana</i> (Orizaba)	Mexico	"
" " (Chocola)	Guatemala	"
" " G20	Guatemala	"
" " (UCLA clone)	Guatemala	"
<i>Persea Skutchii</i>	Honduras	Resistant
	Guatemala	"