

Report for Slosson Research Endowment
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The project for testing additional ornamental woody plants to determine their resistance or susceptibility to the oak root fungus, *Armillaria mellea* was funded for the year 2003-2004. The purpose for the project resulted from many requests from horticulturists, landscapers, extension service workers and home gardeners to extend the number of plants known to be resistant to the fungus. Nothing has been added to the list “Plants Resistant or Susceptible to *Armillaria mellea*” for a number of years. Although the search is principally for resistant plants, information regarding susceptibility also is valuable.

The project was slow to start because the inoculum used consists of branches, ½ to 1 inch in diameter and 3 to 5 inches long which have been colonized by the fungus. In the past, this was done for many years on sterile pieces in jars in the laboratory, but because my lab now is in the headhouse of a greenhouse where there is much traffic, contamination was found to be a serious problem. After many unsuccessful attempts, a different method for preparing inoculum had to be developed. It was found that intended inoculum pieces could be colonized by putting them in a pot in UC Davis mix with one or two pieces of wood colonized with the fungus. Although the fungus does not grow through the soil (except for a strain found in Lake County), it does grow through the planting mixes UC Mix and UC Davis Mix. Our greenhouses stopped using those two mixes and started using ‘Super Soil’. This resulted in more testing to see if the fungus would grow in that planting mix. Fortunately, it was found to grow in a slightly emended ‘Super Soil’.

To date 10 plants each of the following have been inoculated and the numbers killed by the fungus to date also are listed.

	Number dead to date
* <i>Abutilon vitifolium</i> ‘Veronica Tenannant’	7
<i>Cestrum elegans</i>	1
<i>Crotalaria agatiflora</i>	0
* <i>Cornus capitata</i>	3
<i>Datura</i> ’ Double Purple	0
* <i>Brachycome</i> sp.	2
<i>Iochroma cyanea</i>	0
* <i>Acer fulvescens</i> var. pentalobum	3
* <i>Sesbania tripitii</i>	6
<i>Abutilon</i> ‘Mauna Loa’	0
<i>Abutilon megapotamicum</i> ‘Marianne’	2
* <i>Globulalia</i> sp.	7
<i>Duranta repens</i>	0
<i>Loropetalum chinensis</i>	0
<i>Acokanthera</i> sp.	0

Plants marked with an asterisk will be added to the susceptible list.

Some of the plants have been exposed to the fungus for over a year whereas the most recent inoculation was started last week. All plants if not killed will be left exposed to the fungus for at least a year before they are determined as resistant. Plants tested long enough to be added to the resistant list include *Crotalaria agatiflora*, *Datura* 'Double Purple' and *Iochroma cyanea*.

Ten new species are arriving next week and will be tested as inoculum becomes available.

It is requested that the project be funded as originally requested for another year.