

Final report to ODA/OAN

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Title: Spatial and temporal dynamics of foliar *Phytophthora* spp. on *Rhododendron* in nursery environments

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Project Objectives

1. Assess the patterns of abundance and distribution in time and space of foliar *Phytophthora* species on *Rhododendron* in 5 commercial nurseries.
2. Characterize *Phytophthora* epidemics to determine spatial patterns of the epidemic and abundance and distribution of species and genotypes.

Progress report

We have sampled 4 nurseries intensively to date and had to repeat sampling in two nurseries (Table 1).

Table 1. *Phytophthora* samples obtained in 2011 from commercial nursery production systems.

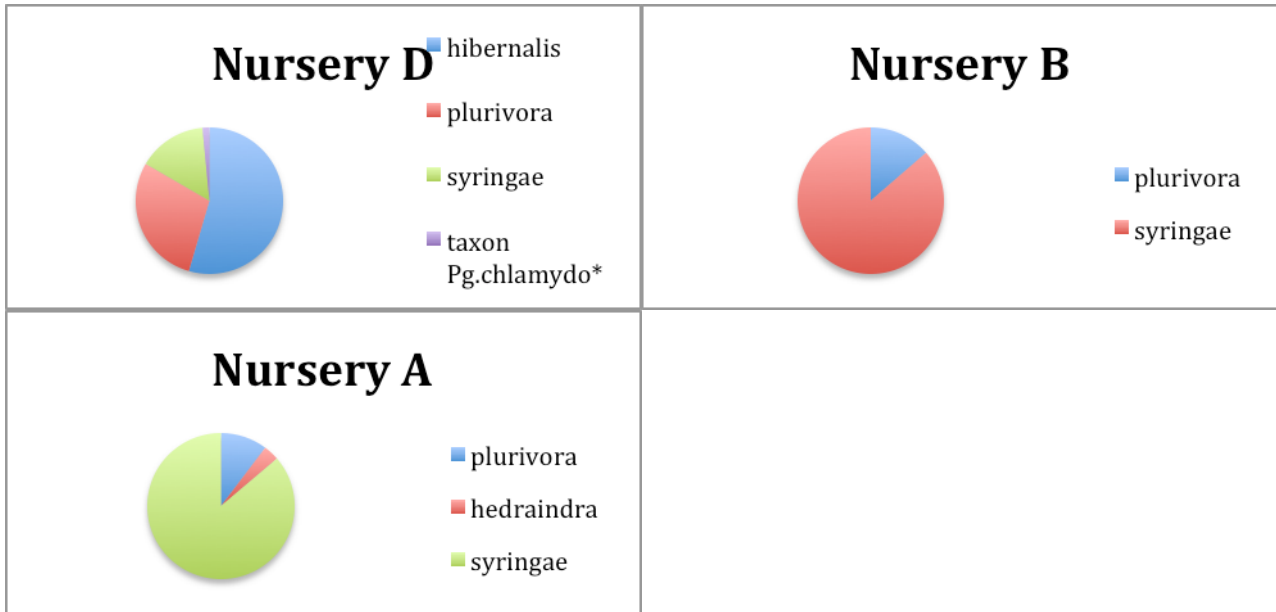
Nursery	Isolates obtained
A	33
B	1
2B	21
C	1
2C	1
D	68

We identified each isolate to species and determined species abundance for each nursery (Table 2). In nursery C we were not able to obtain enough isolates despite repeated sampling efforts. This nursery will again be sampled in Fall of 2011.

Table 2. *Phytophthora* species distribution in 4 Oregon nurseries.

Nursery	<i>Phytophthora</i> Species	# of isolates
A	plurivora	3
A	hedraindra	1
A	syringae	25
B	plurivora	3
B	syringae	19
C	syringae	2
D	hibernalis	36
D	plurivora	19
D	syringae	10
D	taxon Pg.chlamydo*	1

All nurseries had relatively high abundance of *P. syringae* and *P. plurivora*. Nursery D had a high abundance of *P. hibernalis* not found in other nurseries:



Additional field sampling was conducted in Fall, Winter and Spring and these additional isoaltes have been characterized. A publication reporting this work in a peer-reviewed journal is almost finalized and will be submitted in the fear.

This work has important implications for understanding the behavior of *Phytophthora* in commercial nursery production systems and will provide novel insights to further refine Best Management Practices for Phytophthora disease.