To	Date
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	1 *page from Sonja Peters and Soumia Bentefrit*

PLANT PATHOLOGY SHORT COURSE 2009
This one day course held February 24 was offered by Bill McPhee and the Okanagan Packinghouse Fieldmen's Group.

"Diagnosing Root Disorder", Dr. Ribeiro, Ribeiro Plant Lab near Seattle.

Pathogen	Cause	Visual simptoms
Verticillium	fooding	
Fusarium	mechanical damage	roots break off
Pythium		
Pythophthora	mineral deficiencies	reddish brown lesions
Armillaria		
Thielaviopsis		infected roots are black and mushy
Rhizoctonia		dieback, infected roots are firm & hard

Fireblight vs Pythophthora cactorum
- Symptoms of fireblight include oozing (depending on the time of year), the lesion is brown in colour, difficult to see distinction between healthy tissue vs not.
- Symptoms of P. cactorum include red brown lesions, distinction between healthy vs not is clear, color of plant and leaf size are different (new leaves can be smaller), and will not see mycillium of Pythophthora.

Phytophthora megasperma: delayed buds break, no leaves due to infected roots.
Phytophthora cinnamoni: root rot on fir causes discoloration of cambium.

"Isolation and Identification of Pathogens from Roots of Local Tree Fruit Orchards", Dr. Danielle Hirkala, University of British Columbia Okanagan Campus.

Dr. Hirkala is working on the Preventative Extension Program. The goal is to develop threshold levels to determine if there is a problem. This program is still in the development stage.

To identify the pathogens they are using the polymerase chain reaction (PCR) technique to determine its DNA. They also hope to use the PCR for fee-for-service. Cost would be approximately $10-12 per sample and the experiment take about 12 hours. The entire system costs about $13, 000 to setup.

Findings so far: of 31 orchards sampled in the valley, 70% of all root rot pathogens were Fusarium, Cylindrocarpon and Rhizoctonia causing tree fruit decline and replant diseases.
Trichoderma is isolated and used as biocontrol.