

Progress toward the Development of a Model to Quantify the Efficacy of Detection Strategies for *Phytophthora ramorum*

Yashika Forrester; 4700 River Road Unit 117, Riverdale, MD 20737; Betsy Randall-Schadel, USDA APHIS PPQ Center for Plant Health Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, 1730 Varsity Drive, Suite 300, Raleigh, NC 27606; Allan Hogue, David Oryang, and Robert McDowell, USDA APHIS Policy and Program Development Risk Analysis Systems, 4700 River Road Unit 117, Riverdale, MD 20737; (301)734-8015, Yashika.N.Forrester@aphis.usda.gov;

The emergence of Sudden Oak Death and the continuing appearance of new incidences have prompted a coordinated federal, state and local effort to manage the risk of spreading *Phytophthora ramorum* through nursery stock within the USA. The wide host range and the commonality of symptoms with other pathogens and environmental influences complicate detection of this pathogen. A mathematical model is under development to evaluate the effectiveness of different strategies to detect *P. ramorum*. The model uses event sequence diagram analysis to compare selected strategies. An event sequence diagram sequentially illustrates individual events that can occur in a system along with their subsequent probabilities. Aggregated expert judgment data is used to supplement empirical data. The advantages and disadvantages of the novel use of this model will be highlighted.