

## Pathogen Characterization & Spread

- Pathogen population dynamics and epidemiology in commercial nursery settings (e.g., where can *P. ramorum* survive, dependence on cultivation methods, nutrition, irrigation technique, etc.)
- Dynamics of pathogen movement and spread in nurseries (within a block of plants, across blocks)
- Plant-to-plant spread
- Spread from soil to canopy
- Identify critical control points to prevent spread
- Understanding cultural conditions that reduce the ability of the pest to reproduce and spread
- What are the conditions within nurseries under which *P. ramorum* actually sporulates and spreads, and what are the conditions required for infection? How often does this occur?
- What is the risk of spread from nursery to the environment for different climate zones
- Model pathogen dispersal