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## Graduate Student Information

Name Marianne Powell

Institution Washington State University

State WA

Faculty Supervisor Dr. Debra Ann Inglis

Department Vegetable Pathology Program, WSU Mount Vernon NWREC

Project Title Biodegradable Mulches for Specialty Crops Produced Under Protective Covers

Start Date June 2010

### Project Summary: (brief paragraph)

Marianne Powell graduated with a B.S. in Plant Biology from the University of Washington (UW) in June 2010. She worked with Dr. Soo-Hyung Kim and graduate student Drew Zwart in the Plant Ecophysiology lab where she conducted a survey of *Phytophthora* spp. on woody plants within two Seattle urban parks to determine if restoration practices influence *Phytophthora* populations. Marianne also worked with Dr. Gundla Bosch in the UW Chemical Engineering Lab on a project using shotgun proteomics and MS/MS to identify tumor-inducing proteins of *Agrobacterium tumefaciens* grown in pH 5 and 7. Her research interests focus on plant-pathogen interactions and during her graduate training she is looking forward to learning more about microbe isolation techniques, molecular identification methods, and biotic and environmental factors that influence plant disease occurrence. While in Dr. Inglis' lab, she will be part of the SCRI-SREP project on "Biodegradable Mulches for Specialty Crops Produced Under Protective Covers." Her thesis project will focus on: (i) plant health and root disease issues resulting from growing crops under biodegradable mulches (BDMs) within open fields and high tunnel systems, (ii) the relative ability of existing and emerging BDM products to meet performance standards and biodegrade in the soil environment, (iii) the presence/absence of mulch by-products in the soil environment and the potential effects on soil ecology.