

Final Report entitled
**CONTINUING THE NURSERY RESEARCH INTERNSHIP PROGRAM AT
OREGON STATE UNIVERSITY NORTH WILLAMETTE RESEARCH AND
EXTENSION CENTER**

submitted to
AGRICULTURAL RESEARCH FOUNDATION

for
**OREGON DEPARTMENT OF AGRICULTURE
NURSERY RESEARCH AND REGULATORY COMMITTEE**

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Background

The nursery research internship program at the North Willamette Research & Extension Center gives students educational and work experience in nursery crop research and production. The interns perform a wide variety of tasks related to container and field production, in areas such as integrated pest management, disease management, irrigation and fertility. Interns will be participating in research both on site as well as collaborative research at local nurseries. The students will have many opportunities to interact with professors, staff and members of the nursery industry giving them a better understanding of nursery production along with the principles of research. During the course of the internship, each student works on an independent research/extension project allowing them to focus on a specific topic of interest.

Students who are studying horticulture or plant science are sought from universities and colleges across the U.S. and Canada. These students are hired on grant funds and work full-time for 3-6 months in 2009. Applicants for internships must currently be full-time students and intend to be returning students in the fall. Preference is given to students with course work in horticulture and/or those considering a career in the nursery or related industries.

Internships allow the North Willamette to obtain skilled personnel which are necessary to execute often detailed and labor intensive nursery research projects. The students' main role is to help establish and maintain research plots and assist in data collection. Interns will also gain experience and knowledge that can help place them in nurseries or related industries in the Pacific Northwest.

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Project Objectives

1. Provide students with plant science education and training related to nursery research.
2. To further the nursery research efforts at Oregon State University.

Proposed Methods and Time Line

Spring 2009. Develop position announcement and distribute to universities and colleges throughout North America that have horticulture/plant science programs. Screen applications and conduct interviews. Select two candidates.

Summer 2009. Interns' schedule will reflect the following distribution of work hours:

- 70% Assist in research projects. Duties include: study site establishment, treatment application, plant maintenance, and data collection.
- 20% Pursuit of student research/extension project. Select a project of interest and work with NWREC faculty to establish a study.
- 10% Visit nurseries to gain experience with a wide range of practices in the nursery industry.

Fall/Winter 2009. Review program and report accomplishments through appropriate literature and programs.

Status

During the summer of 2009 the nursery program at the North Willamette Research and Extension Center had 2 full time paid interns and 2 part time volunteer interns. Each of the interns had their own project that they focused on, however the two full time interns spent much of their time assisting the NWREC nursery faculty on their research projects. Some of the duties included plot maintenance, data collection, extension visits at nursery/field sites, experiment initiation and harvests. All of the students were able to gain hands on experience in a specific aspect of horticulture of their interest while gaining perspective into scientific research. In exchange, the nursery faculty and staff were able to complete their research more effectively and efficiently with the added assistance, leading to a successful research season. Intern research was highlighted in a presentation and tour of the NWREC facilities during Nursery Extension and Research Field Day in September of 2009, educating growers on the projects.

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- Brian Moore – Clackamas Community College, Horticulture. Paid intern, full time
 - Brian's two part project focused on lime rates for container production
 - The first objective is to follow different dolomitic lime formulations to observe their affect on substrate pH over time
 - The second objective is to evaluate two liming products for their ability to correct substrates that are at a detrimentally low pH
 - Brian helped design and set up the experiment as well as running all procedures to collect data during his 12 week internship
 - The experiment was written into a scientific style report
 - The experiment is ongoing and will continue to be monitored with data collected through the fall and winter by NWREC staff
 - At completion of the study, findings will be disseminated via a popular article for Digger magazine.

- Jackson Kowalski – University of Puget Sound, Biology. Paid intern, full time
 - Jackson's project was a water remediation wetland study consisting of two objectives
 - The study's first objective is to provide the Pacific Northwest nursery industry with information pertaining to remediation of irrigation runoff by using an installed wetland system to remove excess nutrients
 - The second objective is to determine the nutrient removal capabilities of various wetland vegetation zones
 - Jackson helped design, research and implement his experiment along with collecting and sending in samples for analysis
 - The research was written into a scientific style report
 - The experiment will be an ongoing display for the industry with NWREC staff continuing to monitor and collect data on the progress of the system
 - Research led to OSU partnership with SPROut and Chemeketa Community College for project investigating the use of floating wetlands in Oregon nurseries.

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- Imogene Hollis – Clackamas Community College, Horticulture. Volunteer intern, part time
 - Imogene worked with Ryan Contreras, a new Assistant Professor on campus to propagate seed material for his breeding program
 - Included in this project is an inquiry into the different propagation techniques and plant varieties along with obtaining necessary supplies, record keeping, seed preparation, propagating and growing of the plants
 - Worked independently to ensure seeds were cataloged and proper procedures were followed in the propagation of the different varieties
 - This project is ongoing with Imogene continuing to work with Ryan Contreras to care and grow the plant material

- Diana Colvin – Clackamas Community College, horticulture. Volunteer intern, part time
 - Diana assisted Neil Bell, OSU extension, with xeriscape variety trials for *Grevillea* and *Arctostaphylos*
 - Assisted in potting and field planting of the plant material
 - Worked independently to catalog and organize the plant material along with reviewing the literature on growth and habit of the different cultivars
 - Prepared summary article for Digger magazine.