

# **Integrated Pest Management 2019 Quarter 4 Newsletter**

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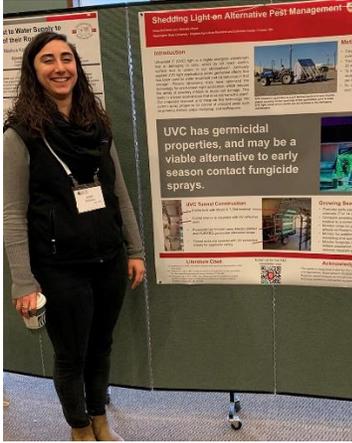


WERA-1017 members tour a hop drying and storage facility.

### Nationwide IPM Collaborations via WERA and IR-4

Washington State IPM Coordinator and Extension Entomologist [Doug Walsh](#) hosted representatives from 12 states for the annual [WERA-1017](#) (Coordination of IPM Research and Extension/Educational Programs in the Western States and Pacific Basin Territories) meeting on September 18-19. Participants from Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, and Wyoming joined the Washington State contingent to provide updates on **each state's outreach activities** and formulate **ideas for interstate collaboration**. A full day of meetings was followed by a full day of touring some of eastern Washington's agricultural highlights, including an **onion packing** plant, an overview of **Yakima Valley irrigated agriculture**, a **winery**, a **hop drying and storage** facility, and an **industrial hemp** field.

Walsh was also an active participant in the [IR-4 Project](#) meetings in Maryland from September 23-26. IR-4 is the primary entity in the United States to facilitate registrations of conventional pesticides and biopesticides on specialty food crops (fruits, vegetables, nuts, herbs, spices) and non-food environmental horticulture crops. The September [Week of Workshops](#) is a key venue for setting registration priorities for the coming year.



Graduate student Alexa McDaniel presents a poster at the Washington Grape Society meeting.

### Fall Viticulture Outreach Highlights

Extension Viticulturist [Michelle Moyer](#) had a busy fall outreach season, including the following slate of activities.

- Edited and published the [fall issue of \*Viticulture and Enology Extension News \(VEEN\)\*](#), which included information on scouting for Washington's newest pest of concern: phylloxera.
- Worked with graduate students **Margaret McCoy** and **Alexa McDaniel** as they presented a talk and a poster, respectively, at the [Washington State Grape Society](#) annual meeting and trade show November 14-15.
- Gave a presentation on **mildew management** and **fungicide resistance** at the [Sustainable Ag Expo](#) in San Luis Obispo, CA in November.
- Wrote an article, [Why some seasons are worse for powdery mildew](#), for [Good Fruit Grower](#) magazine.
- Delivered a grower workshop on **designing fungicide programs**, including **fungicide resistance management**, in Salem, Oregon, in December, with plans to present the material in several other locations around the country in 2020.



Some of the 600 attendees to the PNVA Conference.

### Pest Biology and Resistance Management in Vegetables

Regional Vegetable Specialist [Tim Waters](#) made two presentations at the [Pacific Northwest Vegetable Association Conference](#) in Kennewick on November 20-21. This popular conference was attended by ~600 growers, vendors, and industry stakeholders.

- *Avoiding Further Resistance Development and Insecticide Efficacy for **Onion Thrips*** was presented in cooperation with [Stuart Reitz of Oregon State University](#) during the Onion Session. Waters discussed recent resistance monitoring that revealed thrips populations resistant to methomyl (Lannate) and strategies to mitigate this.
- *Seedcorn Maggot Biology and Management* was presented during the Organic Session, highlighting how knowledge of **pest biology** and **degree day models** can be important non-chemical strategies for avoiding this vegetable pest.

This is also the time of year when Waters **meets with growers one-on-one** to develop their pest management strategies for the coming year. Together, they evaluate past tactics and integrate new tools and information prior to the upcoming season.



WSU Plant Diagnostician Rachel Bomberger indicates a point of interest on a stalk of wheat.

### Successful Wheat Academy Teaches IPM

Small Grains Extension Specialist [Drew Lyon](#) and his team conducted their annual [Wheat Academy](#) on December 10 and 11 in Pullman. The annual event provides in-depth information and training on a wide variety of [pest management and production topics](#). Topics and presenters specifically relating to IPM this year included:

- Diagnosing and Managing **Diseases of Wheat**, with [Tim Murray](#), WSU Plant Pathology Professor, and [Rachel Bomberger](#), WSU Plant Diagnostician.
- Identifying and Managing **Insect Pests** on the Farm, with [Dale Whaley](#), WSU Regional Extension Specialist, and [Sanford Eigenbrode](#), University of Idaho Entomology Professor.
- **Pulses Disease** Management, with [Lyndon Porter](#), USDA-ARS Research Plant Pathologist.
- **Herbicide Injury**, with [Ian Burke](#), WSU Crop and Soil Scientist, and [Rachel Zuger](#), WSU Research Associate.

Wheat Academy is held annually in December. Registration begins in October and attendance is limited. Additional information on **IPM in wheat and small grains**, including articles, podcasts, and a calendar of events, can be found on WSU's [Wheat and Small Grains website](#).



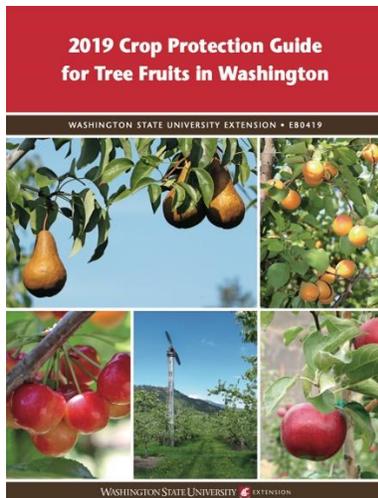
Agricultural workers graft plant seedlings onto heartier root stocks.

### Grafting Featured in Workshop, Classroom, Website, and Media

Vegetable Horticulture specialist [Carol Miles](#) and her team demonstrated their work with **vegetable grafting** as a **disease management strategy**.

- Miles presented *Extending Melon Production to the Northwest Region* to members of the [Skagit Men's Garden Club](#) on October 3 at the [WSU Mount Vernon Northwestern Washington Research and Extension Center](#) (NWREC).
- Graduate student [Pinki Devi](#) delivered a guest lecture on *Cultivation of Solanaceous Crops: Tomato, Eggplant, and Pepper* for [Travis Alexander's WSU HORT 320](#) Olericulture (vegetable growing) class on November 14.
- *Small Scale Propagation: en español* was added to the [WSU Grafting Vegetables](#) website. The new [Injerta Ilustrado \(pdf\)](#) uses line drawings and simplified text to demonstrate grafting of watermelon, eggplant, and tomatoes and is targeted to agricultural workers. It joins existing publications [Injerto de Verduras: Berenjenas y Tomates](#) (*Grafting Eggplant and Tomato*), and [Injertos Horticolas: Sandía](#) (*Grafting Watermelon*), which provide more detailed information and scientific content.

Graduate students Pinki Devi and Abigail Attavar were featured in [Grad students bring international perspective to local agriculture](#), an article in the **Skagit Valley Herald** that explained the connection between Miles' team's grafting work and improving disease resistance in Washington State crops.



Cover of the annually updated Crop Protection Guide.

### Tree Fruit Talks and Updated Crop Protection Guide

Tree Fruit IPM Extension Specialist [Betsy Beers](#) met with stakeholders in October to discuss revisions to the popular WSU Extension Bulletin [Crop Protection Guide for Tree Fruits in Washington](#) (EB0419). Revisions have been incorporated and submitted for inclusion in the updated version to be released in early 2020.

Also in October, Beers participated in **listening sessions** in Wenatchee and Omak for a variety of tree fruit pest, disease, and horticultural issues.

The [Washington State Tree Fruit Association Annual Meeting](#) (December 9-11) provided a venue to review and discuss the [Codling Moth Sterile Insect Release \(SIR\)](#) program with cooperators as well as present this year's results to a wide audience. Beers also participated in a panel discussion on how *Investing in IPM today will help protect crops for years to come.*



Top: Title slide from Foss's new video. Bottom: A properly planted tree.

### New Video Brings IPM to Urban Landscape Pros

Urban IPM Coordinator [Carrie Foss](#) released the new video *Landscape Maintenance: Healthy Plants While Minimizing Pesticides* this quarter. The video, produced by Foss in cooperation with WSU videographers and landscape science professionals, debuted at the [WSU Urban IPM and Pesticide Safety Education](#) recertification course held in Puyallup December 4-5. It was viewed by 115 licensed pesticide applicators who work primarily in public and residential landscape management. The course curriculum also included presentations on:

- plant **problem diagnosis**
- **pruning** for disease management
- **integrated vegetation management**
- **biological control** of weeds
- Pacific Northwest **pests and pollinators**

Foss worked with Environmental Toxicologist and Director of the [WSU Puyallup Research and Extension Center](#), [John Stark](#), to produce a narrated presentation for the [Washington Stormwater Center](#) Research Update. The event was held at the Center. Foss's presentation focused on the effects of pesticides and other **stormwater contaminants** on salmon.



Building slated to house WSU's world-renowned bee program.

### New Digs for Bees and their Scientists

Honey Bee Health Specialist [Brandon Hopkins](#) and his colleagues in the [Honey Bee and Pollinator Research and Education](#) program took steps toward a new home this quarter. The university entered into a purchasing agreement on a nearly 50-acre tract of land and buildings near Othello, with the finalization of the sale pending a full environmental inspection of the former vegetable growing operation. The facility would be a giant step forward for the WSU bee program, which has been operating out of temporary and scattered facilities for nearly two decades. The facility will provide enough space for the team to **conduct commercial-scale experiments** and as well as offering **classes and workshops** for beekeepers. The central Washington location will benefit agriculture, being closer to pollinator-dependent crops than the previous Pullman facilities. It will also **facilitate collaboration**, since more team members will be in a single location.