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University

**Mid-Columbia Agricultural  
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## **Preparing U.S. Pome Fruit Production for Extreme Temperatures in a Changing Climate**

**Project Description:** Temperature extremes have been responsible for some of the most devastating crop losses in apple and pear over the last two decades. Extreme temperature events that deviate from seasonal norms are increasing in frequency as a result of climate change. This project will address temperature-related risks during all four seasons that can affect pome fruit productivity and tree health. These include: a) cold acclimation in the fall; b) chilling and cold hardiness during the winter; c) deacclimation, budbreak, and bloom in the spring; and d) fruit sunburn during summer and harvest. This project will assemble a national team of researchers and extension specialists to prepare the U.S. pome fruit industry for extreme temperature events. We will reduce economic losses during these events by improving management practices, better characterizing physiological and genetic responses to adverse temperatures, and developing models that inform stakeholders on current and future risks to production and cost-effective management strategies that limit losses.

**Position Duties:** The Tree Fruit Horticulture Program at the Mid-Columbia Research and Extension Center (MCAREC) in Hood River, OR will be hiring a Postdoctoral Scholar to oversee the portions of this project related to pear.

### 75% Research

- Collect, prepare, and freeze vegetative and reproductive pear samples throughout fall, winter, and spring.
- Collect and force pear floral buds during the transition from endo- to eco-dormancy.
- Evaluate spray applications to increase frost tolerance in spring.
- Coordinate and collaborate with the USDA pear genetics lab in Wenatchee to perform transcriptomic analysis on pear floral buds.
- Assess pear fruit sunburn risk under high and low tree densities.

### 20% Scholarship

- Organize and analyze collected data.
- Write manuscripts and otherwise prepare results for dissemination.

### 5% Outreach

- Contribute to outreach activities, including grower surveys, extension meetings, field demonstrations, etc.

**Minimum Required Qualifications:**

- Recent (last five years) Ph.D. in Horticulture, Plant Physiology, Pomology or a related field.
- Experience publishing in refereed journals.
- Demonstrated ability to collaborate, cooperate and work within a team structure.
- Demonstrated ability to work independently.
- Must have or be able to obtain a valid OR driver's license.

**Preferred Qualifications:**

- Experience with perennial cold-hardiness research.
- Experience with tree fruit physiology.
- Experience presenting results to grower stakeholders.
- A demonstrable commitment to promoting and enhancing diversity.

**Working Conditions:**

Laboratory work and field work including work under field conditions (cold, heat, wet and dust).

Regular work schedule but may require some overnight travel and work outside of normal working hours (early morning, evening, weekends) if need arises.

Operate a motor vehicle to travel to research sites.

Ability to carry, lift, push, and pull items weighing up to 50 pounds.

**Application:** Send a single, combined PDF containing the following materials to Dr. Kelsey Galimba ([kelsey.galimba@oregonstate.edu](mailto:kelsey.galimba@oregonstate.edu)):

- 1) Cover letter outlining your interest, expertise, and technical skills relevant to this position.
- 2) Curriculum vitae.
- 3) Copies of transcripts (unofficial acceptable).
- 4) Contact information for at least three professional references including name, current position, email address, phone number, and relationship to you.

**Department:** Mid-Columbia Research and Extension Center, Department of Horticulture.

**Location:** Hood River, OR.

**Appointment:** 100%, 12 months.

**Position Start/End Date:** Position is available immediately and review of applications will occur until position is filled. Position is one year, but may be renewed annually for up to three years with satisfactory performance and availability of funds.

**Stipend and Benefits:** Stipends depend on years of postdoctoral experience. More details on stipends and benefits can be found [here](#).