

2023
Impact
Report

Tree Fruit ENDOWMENT



SINCE 2013

Tree Fruit Endowment: Source of our success

The WSU Tree Fruit Endowment is a perpetual source of funding for world-class research and faculty, orchard infrastructure, and industry-supporting outreach. Developed in partnership with the Washington Tree Fruit Research Commission, launched in 2013, and fully funded in 2020, the endowment is overseen by the industry-appointed Endowment Advisory Committee (EAC).

Total Endowment: \$32 Million

The largest gift in WSU history

\$8

Million

Research
Orchard and
Facilities

\$12

Million

Six Endowed
Chairs

\$12

Million

Information
and Technology
Transfer

Current EAC Members

- Sam Godwin, Chair, Godwin Family Orchard
- Sean Gilbert, Gilbert Orchards
- Teah Smith, Zirkle Fruit Company
- Alan Groff, Foreman Fruit Company
- Doug Gibson, Underwood Fruit and Warehouse Co.
- Jason Matson, Matson Fruit Company
- Robin Graham, Stemilt Ag Services

RESEARCH ORCHARDS AND FACILITIES

TFREC: Critical needs, useful upgrades

Enabling timely and efficient water supply to Sunrise Research Orchard, part of TFREC, Wenatchee, construction of a new \$1.5 million pond and pump system is expected this fall, with replacement of the aging main water line anticipated in 2024.

Addressing the center's biggest need for the future, ROF funds paid for design of a new Plant Growth Facility, replacing long-outmoded structures at Wenatchee. Funding for construction of this major project must now be secured.

Endowment funding built a bright new metal sign for the center, replacing a worn, decades-old wooden sign and improving visibility for programs.



Funds supported modernization of entomology and molecular research labs, graduate student offices, and new cold and controlled-atmosphere storage. Also upgraded are insect rearing rooms where teams of scientists raise populations of pests and predators for experiments in IPM and pear entomology.

IAREC: Technology for efficiency, safety

At Prosser, IAREC's 1950s-era West Building will be a hub for regional tree fruit research, education, and outreach. Endowment funds modernized space for

a \$325,000, state-of-the-art InVision2 optical cherry sorter, purchased with support from AgWest Farm Credit.



“This new equipment enables faculty to conduct more accurate and higher-throughput evaluation of cherry varieties for fruit quality attributes in a way that's well understood by our partners,” said Per McCord, associate professor for Stone Fruit Breeding & Genetics. “It also provides new educational and research opportunities for students and interns here at IAREC.”

Funds also upgraded labs for a future endowed chair in soil sciences and supported a new autoclave at Hamilton Hall, improving efficiency and safety.



WSU TREE FRUIT
ENDOWMENT

Information and Technology Transfer

Karen Lewis, Tianna DuPont, Gwen Hoheisel, Bernardita Sallato, Tory Schmidt, Marcella Galeni, Manoella Mendoza, and Ricardo Lima Pinto are members of the Tree Fruit Extension Team.

The team deploys timely, reliable, multiplatform communication to support Washington's tree fruit industry. Over the past year, roughly 250,000 users visited treefruit.wsu.edu nearly a half-million times. Newsletter and email subscriptions continue to grow.



Jodi Rinaldi is the team's new Tree Fruit Extension Communication Specialist. She is working to improve and reorganize the tree fruit website and is investigating how to best incorporate a new text notification system.

ENDOWED CHAIRS

Bacterial Diseases of Tree Fruits

Endowed Chair Frank Zhao; Ricardo Santander, Amit Kesharwani, Sheersa Manna, Harpreet Kaur, Katelyn Kiick, and Natali Hernandez



- **Discovered** for the first time existence of kasugamycin tolerant/resistant strains in both apple and pear orchards. This affects how growers use this antibiotic in the future.
- **Learned that copper resistance** is widespread in Pacific Northwest cherry orchards. Copper is the main chemical used to control bacterial canker disease in cherries and stone fruits.
- **Established** a rapid, sensitive new method for early detection of X-disease phytoplasma for field sample disease diagnosis and management in 2024.

Postharvest Systems in Pome and Stone Fruit



Endowed Chair Carolina Torres; Rene Mogollon, Hnin Phyu, DoSu Park, Manoella Mendoza, Sadat Amankona, Madeline Zwergel, Oswald Gonzales, Alondra Mendez, and Matthew Hamilton

- **Understanding** how climate and weather events affect fruit quality on apples, pears, and cherries helps develop postharvest systems to optimize fruit quality through the supply chain.
- **Spectral models** for texture in sweet cherries to improve correlation between the non-destructive firmness determination and eating quality throughout the cold chain.
- **System-based approach** to enhance quality, safety, and shelf life of Pacific Northwest organic apples.

Acknowledgments

Washington State University thanks the Washington Tree Fruit Research Commission for its commitment to service and discovery through the Tree Fruit Endowment.



- Ines Hanrahan, Executive Director
- Sam Godwin, Chair
- Perry Beale
- Jeff Cleveringa
- Jim Doornik
- Craig Harris
- Matt Miles
- Anne Morrell
- Gilbert Plath
- Teah Smith
- Keith Veselka

www.treefruitresearch.org



To learn more about supporting Tree Fruit at WSU, contact

- CAHNRS Alumni & Development
- 509-335-2243
- alumni.friends@wsu.edu



WASHINGTON STATE UNIVERSITY
College of Agricultural, Human,
and Natural Resource Sciences

Environmental Tree Fruit Physiology and Management

Endowed Chair Lee Kalcsits; Victor Blanco, Orlando Howe, Thiago Campbell, Noah Willsea, Schaefer Buchanan



- **WSU and USDA collaboration** to develop predictive models for sunburn and effectiveness of management practices; understanding the genetic control of sunburn susceptibility.
- **Management practices** for both heavy and light crop years to smooth out production cycles, improving yields and quality consistency.
- **Understanding the mechanisms of x-disease** in sweet cherries, part of a broader effort to mitigate its spread.

Tree Fruit Physiology and Management



Endowed Chair Stefano Musacchi; Sara Serra, Jebu Mia, Sheng-Yang Li, Zachary Chapman, Jill Dinius, Astrid Lima, Alex Goke, Ryan Sheick

- **Improved management practices** to optimize WA 38 production, increasing yield and minimizing blind wood.
- **Precision crop load management** for apples, including defining the optimal crop load under Washington environmental conditions for Gala and Honeycrisp, giving growers useful future tools.
- **National NC140 apple rootstock trials** to evaluate innovative genotypes worldwide.
- **New potential apple pollinizer genotypes** with improved resistance to quarantine-related diseases.
- **Evaluation of quince rootstocks** suitable for high-density pear orchards.