

People & Places

Back to hazelnut fundamentals

Nik Wiman looks for methods to maximize growth of popular nut trees

By MATEUSZ PERKOWSKI
Capital Press

For a crop that's been grown in Oregon's Willamette Valley for over a century, there's still a lot to be learned about hazelnuts.

As hazelnut growers were preoccupied with defeating their mortal enemy — a fungal pathogen known as Eastern Filbert Blight — there wasn't as much energy devoted to studying basic production.

"Everybody's been chasing the Eastern Filbert Blight. We knew very little about the disease when it first came in," said Nik Wiman, Oregon State University's orchard specialist in Western Oregon.

Now that growers have developed ways to combat the pathogen and OSU has introduced several hazelnut cultivars resistant to the disease, Wiman can focus on the fundamentals: How to protect trees from insect invaders? What is the best mulch to use? How much water to apply?

"We're trying to maximize growth," he said.

While opinions on production methods are often based on anecdotes, Wiman is trying to develop recommendations grounded in data and science.

Much of OSU's research on nutrients has grown outdated as farmers have replaced traditional varieties, such as Barcelona, with new ones that spring from other parts of the globe.

As it turns out, nutrient demands can vary significantly among cultivars. Growers



Mateusz Perkowski/Capital Press

Nik Wiman, hazelnut orchard specialist at Oregon State University.

also have more flexibility these days with fertilizers that are applied to leaves or through irrigation lines.

Traditionally, growers only fertilized during spring because it was thought hazelnuts didn't take up nutrients in the summer. However, that's only the case if they're not irrigated.

Wiman is wrapping up a three-year study that aims to refine the timing of fertilizer applications and better understand their effects on tree and nut development.

The issue is complicated because the tree's response to nutrients depends on the accumulation of heat over the season, so timing will vary from year to year.

"There is so much change, even in a small time frame like a month," Wiman said.

Irrigation studies

Hazelnuts were historically grown as a dryland crop but the industry is increasingly turning to irrigation, especially to get young trees established.

Wiman has found that trees respond better to sprinklers than drip irrigation, since

there's better water penetration of the entire soil surface.

With drip irrigation, on the other hand, dry soil can pull water away from the tree's root mass.

Even so, drip lines are likely to remain the standard in hazelnut orchards, simply because many farms don't have access to ample irrigation water, Wiman said.

Over time, the industry will probably adopt automated irrigation controls that begin watering orchards as soon as soil moisture or tree sap sensors indicate it's necessary, he said.

"We want to promote responsible water use," he said.

Rows of hazelnut trees growing at Oregon State University's North Willamette Research and Extension Center in Aurora receive varying amounts of irrigation, with Wiman and his researchers carefully measuring the effects on each tree.

It's likely that releasing smaller amounts of water over time is more beneficial than irrigating all at once, since the water stays closer to the surface rather than seeping too deep for roots to absorb, he said.

Pest control

As an entomologist, Wiman also spends time on the pests that afflict hazelnut orchards.

Flathead borers, for example, are especially drawn to young trees, which is a problem for Oregon's burgeoning industry — more than half the acreage is non-bearing, he said.

Farmers who found the borers in their orchards brought branches to Wiman, who sealed them in wax to preserve moisture and observed their development.

Such observation yielded biological information about the insect that wasn't previously available. It also turns out the borers have a natural enemy: a wasp that lays eggs into their larvae, killing them.

Encouraging such beneficial predators is a matter of judicious pesticide use to avoid killing off these "biological controls," Wiman said.

That's a tough task with brown marmorated stink bugs, a recently introduced pest from Asia that difficult to treat without broad-spectrum chemicals that also kill helpful insects.



Western Innovator

Nik Wiman

Occupation: Orchard specialist at Oregon State University

Hometown: Corvallis, Ore.

Age: 42

Family: Wife, Michel, and two daughters

Education: Bachelor's degree in biology from Montana State University, Master's degree in entomology from Montana State University, Doctorate in entomology from Washington State University.

"They can actually feed right through the shell and damage the kernel inside," Wiman said.

Fortunately, another wasp species preys on stink bugs, which is how their population is limited in Asia. The insects are being bred at OSU's research center in Aurora and released at infested sites.

"It showed up on its own. It followed its host," Wiman said. "We think it's going to have a huge effect long term."

Wiman said it's an exciting time to work as a hazelnut researcher, since the industry is experiencing "incredible growth." He also appreciates the "culture of sharing" among hazelnut farmers.

"These growers feel like family almost," Wiman said. "There's a lot of innovation by the growers themselves."

Capital Press

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Clarification

Prior to the May 19 fatal mauling of a cyclist in Western Washington, the last human killed by a cougar in the U.S. was a 55-year-old man in New Mexico in 2008. A story in the July 27 edition of the Capital Press reported the last fatal attack was in 1924, and it was not clear that the reference was to attacks in Washington.

Ag groups seek donations for Oregon wildfire victims

Capital Press

Oregon agricultural groups are asking their members to aid farmers and ranchers who lost crops, livestock, equipment and feed to the wildfires that have swept across parts of the state. A fund has also been established for the family of the farmer who died while plowing a fire line to protect a neighbor's property.

Both the Oregon Farm Bureau and the Oregon Cattlemen's Association have efforts underway to raise money for the victims. The cattlemen's association is also collecting hay, equipment and supplies for the victims.

"Please, please, please consider donating to help out the farmers devastated by the Substation Fire," Kathy Freeborn Hadley of the Oregon Farm Bureau wrote in a Facebook post.



Associated Press File

A boy stands at an area damaged by the Substation Fire near Moro, Ore., on July 20.

"Rural Oregonians support their neighbors, as we saw by the immediate action taken by many heroic farmers who worked alongside first-responders to put out the Substation Fire," said Anne Marie Moss, Farm Bureau communications director, in a press release.

The wind-driven Substation Fire burned 123 square miles of north-central Ore-

gon — much of it farms and ranch land — before it was brought under control late last week. A farmer, 64-year-old John Ruby, died as he was plowing a fire line in an effort to protect his neighbor's property, and growers lost upwards of 2 million bushels of wheat to the flames. That's about 25 percent of the area's wheat crop.

"It is with heavy hearts

that we continue to witness the mass destruction and devastation caused by wildfires that continue to rage across Oregon, affecting ranching families," the cattlemen's association said in a press release. "Not only have these ranchers lost horses, feed and beef cattle, one farmer lost his life trying to prevent fire from spreading.

"We ask Oregon ranchers to come together and support their fellow ranching families in this time of need," the organization said.

To donate to wildfire relief, go to the OCA Stewardship Fund at <https://orcattle.com/donate/> and click on "Donation-Stewardship Fund." Under purpose, click "Fire Assistance Fund." Funds raised will be given to a wildfire relief fund.

"The surviving cattle and ranching families are in desperate need of essentials like hay and fencing," the OCA

said. To make a donation of fencing material, hay, trucking or time, email OCA Communications Director Robyn Smith at robyn.smith@orcattle.com.

"We are working hard to build a relief effort team and would appreciate any assistance we can get," the organization said.

Checks made out to the "Oregon Farm Bureau Fire Relief Fund" can be mailed to the Oregon Farm Bureau, c/o Patty Kuester, 1320 Capitol St. NE, Salem, OR 97301.

The OFB and Wasco County Farm Bureau will work together to decide where to best use funds that are received.

For those wanting to help the family of John Ruby, the farmer who died, Columbia Bank in The Dalles has set up a fund. Donations can be sent to Columbia Bank, 316 E Third St., The Dalles, OR 97058. Call 541-298-6647 for more information.

Calendar

8:30 a.m.-3 p.m. Lundberg Family Farms, 5311 Midway, Richvale, Calif. Topics include rice growth, water management, tillage, variety selection, fertility and weeds. Enrollment is limited to 75 people. Cost: \$100. Website: <http://ucanr.edu/rice2018>

Friday, Aug. 10

Stream Restoration Workshop. 8 a.m.-4:30 p.m. University of Idaho Extension Office, 1808 N. Third St., Coeur d'Alene, Idaho. The workshop will include a classroom session and a field trip showing stream restoration projects. Space is limited. For more information, call 208-446-1680. Cost: \$20. Website: <http://uidaho.edu/extension/forestry>

Saturday, Aug. 11

Yachats River Valley Farm Tour. 10 a.m.-4 p.m. Yachats Chamber of Commerce, 241 U.S. Highway 101, Yachats, Ore. Fun for all on the area's small farms. Go to the Yachats Chamber office for information and to download a map. Cost: Free. Contact: 541-547-4461

Monday-Tuesday

Aug. 13-14
FSMA Foreign Supplier Verification Workshop. College of Sequoias Tulare College Center, 4999

East Bardsley Ave., Tulare, Calif. New Food Safety Modernization Act regulations require that importers must have a program in place to verify that their foreign suppliers are producing food in a manner that provides the same level of public health protection as the preventive controls or produce safety regulations, as appropriate, and to ensure that the supplier's food is not adulterated or misbranded with respect to allergen labeling. Participants will receive an official FSVP certificate after the class. Cost: \$599. Website: <https://bit.ly/2uvR7Ez>

Wednesday, Aug. 15

Organic Hazelnuts Second Annual Summer Farm Tour. 9:30 a.m.-4:30 p.m. Cold Springs Farm, 35541 Cold Springs Road, Lebanon, Ore. Join the Organic Hazelnut Growers Association's summer tour at one certified organic farm and one transitioning farm. Cost: \$18 for members of Organic Hazelnut Growers Association. \$45 for non-members. Website: <http://www.pesticide.org/organichazelnuts>

Wednesday-Thursday

Aug. 15-16
Pastured Poultry Training. 8:30 a.m.-4 p.m. Oldfield Animal Teaching Facility, Oregon State University, 3521 SW Campus Way, Corval-

lis, Ore. The special guest speakers are Lauren Gwin of Niche Meat Processor Assistance Network and local pastured poultry farmer Laura Sage of Redbird Acres. Agriculture specialists from Oregon State University and the University of California will be present both days to talk with local producers. Cost: \$40. Website: <https://bit.ly/2n9hk7x>

Friday-Sunday

Aug. 17-26
Western Idaho Fair. Western Idaho Fairgrounds, 5610 Glenwood St., Boise, Idaho. Website: www.idahofair.com

Thursday, Aug. 23

Inaugural Washington FFA Foundation Golf Tournament. 1:30-6 p.m. Apple Tree Golf Course, 8804 Occidental Road, Yakima, Wash. To take part, contact FFA Foundation Executive Director Jesse Taylor at jesse@washingtongolf.org or 253-208-9071. A dinner and auction will follow the tournament.

Friday-Monday

Aug. 24-Sept. 3
Oregon State Fair. Oregon State Fair and Exposition Center, 2330 17th St. NE, Salem, Ore. <https://oregonstatefair.org/>

Friday-Saturday

Aug. 31-Sept. 8
Eastern Idaho State Fair. Eastern

Idaho State Fairgrounds, 97 Park St., Blackfoot, Idaho. Website: <https://funatthefair.com/>

Friday-Sunday

Aug. 31-Sept. 23
Washington State Fair. 110 Ninth Ave. SW, Puyallup, Wash. www.thefair.com/

Tuesday, Sept. 18

Oregon Farm Bureau Classic Golf Tourney. 1 p.m. Stone Creek Golf Club, 14603 S. Stoneridge Drive, Oregon City, Ore. Contact: tiffany@oregonfb.org

Saturday, Sept. 22

Hood River Hops Fest. Noon-8 p.m. Columbia Lot, Fifth and Columbia, Hood River, Ore. The Hood River Hops Fest is an annual celebration of beer's bitter friend, freshly harvested hops. Hood River County is surrounded by world-renowned hop growing regions, and since 2003 brewers have gathered each September in downtown Hood River to share their fresh-hop beer creations. The family-friendly event features more than 50 breweries with more than 60 fresh-hop beers, plus a variety of food vendors, live music, and an awesome collectible mug. Website: <http://hoodriver.org/hops-fest/>