



Growing minds  
**PART 3**

# The grass roots of research

The nursery industry plays an important role funding and vetting beneficial research projects

BY CURT KIPP

**U**NIVERSITIES AND COLLEGES, in Oregon and elsewhere, don't merely provide nurseries and greenhouses with well-trained, knowledgeable and conversant employees.

They also provide research-proven knowledge and best practices, so growers can produce a better crop and run a more profitable business.

These institutions of higher learning work hand-in-hand with growers to solve production problems, learn about market behaviors, and even develop new plant varieties that perform better in the landscape, resist pests or diseases, or solve other troublesome issues.

Dr. Ryan Contreras, a professor of ornamental plant breeding at **Oregon State University (OSU)**, takes his cues on what to work on, directly from the industry. "I don't breed plants for me," he said. "I breed plants for the nursery industry. I try to be responsive to what they ask for."

Each year, he convenes an Ornamental Crop Advisory Committee to talk about the industry's research needs. It's comprised of four OSU scientists and four nursery industry members, and Contreras gets additional feedback at an annual field day, held every June.

Norway maple (*Acer platanoides*) is one of the priorities that his group identified. It is a strong alternative to trees like

American elm and ash that have experienced disease/pest issues and can't be used as much anymore. It tolerates air pollution, heat and drought, and grows well in a variety of soils

The problem is, it's been deemed invasive in New England, and states such as Connecticut and Delaware have banned it as a result. Enter Contreras, and his research team's efforts to breed sterile Norway maple triploids. They're hoping to come up with a sturdy street tree that looks great, performs well in the environment, and won't be deemed invasive.

But of course, that takes time and money,

"Developing a sterile Norway maple doesn't happen overnight — it takes decades," he said. "The commitment to keep funding (research) is commendable."

## Funding the research

The work of university researchers and others is supported by a loose amalgam of state and national funding mechanisms, which are both public and private. Together, they provide close to \$10 million worth of funding for nursery and greenhouse research funding at various institutions across the United States.

Ken McVicker works at **Woodburn Nursery and Azaleas Inc.** (Woodburn, Oregon) and serves as president of the Horticultural Research Institute (HRI), which funds nursery



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**Previous page:** The new agricultural hub at Chemeketa Community College is currently under construction.

PHOTO COURTESY OF SWINERTON

and greenhouse research projects nationally. He believes the mission is important.

“We are a powerful industry,” he said. “We want to stay relevant and robust, and provide members with the resources they need to move forward and be profitable.”

HRI is an affiliate of AmericanHort, the national nursery and greenhouse trade association. It draws upon an \$11 million endowment provided by individuals, corporations and associations to fund industry research. For 2021 alone, HRI awarded \$364,000 in funding for 12 projects being conducted at various research universities across the country.

Each grant application that HRI receives is evaluated against a set of four research priorities, or “pillars,” as McVicker calls them. One is quantifying the benefits of plants. A second is creating innovative production solutions to increase profits. The third is giving insight into consumer preferences and marketing. And a fourth is providing practical and actionable solutions.

“When we evaluate research grant requests, we measure those research projects against these four criteria,” McVicker said.

In addition to national research funding, Oregon has its own war chest for industry research. The Oregon Department of Agriculture (ODA) funds



*Acer platanoides* at the Lewis-Brown Horticulture Farm was used in rooting studies to evaluate stock plant handling techniques and cutting propagation.

PHOTO BY RYAN CONTRERAS

“We identify, prioritize and communicate the research needs of our industry to encourage the research community to address these needs, and we support and develop funding methods for worthy projects,” he said.

For 2021, ODA grant program funded \$260,360 to 12 different projects taking place in Oregon. The money comes from a research assessment that is charged to every licensed nursery in Oregon, as part of ODA’s annual nursery license fee. Thus, the industry is paying for the research that moves it forward.

In addition to the ODA money, OAN administers the Shade Tree Disease Fund, which supports research into exactly that. All the funding comes from individual and corporate donations.

Federally, the USDA Floriculture and Nursery Research Initiative (FNRI), part of the agency’s Agricultural Research Service, was created by Congress in 1999

a portfolio of nursery and greenhouse research grants annually through its Nursery Research Grant Program.

The Oregon Association of Nurseries plays an important role reviewing the grant proposals and recommending which to fund. The OAN’s Research Subcommittee, which is part of the association’s Government Relations Committee, is made up of members and chaired by Chris Lee of **Eshraghi Nursery** (Hillsboro, Oregon).

after lobbying from the American Nursery and Landscape Association (which became AmericanHort) and the Society of American Florists (SAF). For 2019, the FNRI allocated \$2.8 million in funding for 29 different ornamental horticultural research projects.

According to McVicker, HRI plays an important role in reviewing the grant requests and making recommendations for FNRI funding.

“They look to us, and if HRI validates

### RESOURCES

**OAN Research Committee:** [www.oan.org/page/nurseryresearch](http://www.oan.org/page/nurseryresearch)  
Chris Lee, chair [chris@eshraghinursery.com](mailto:chris@eshraghinursery.com)

**Oregon Department of Agriculture  
Nursery Research Grant Program:** <https://www.oregon.gov/ODA/programs/NurseryChristmasTree/Pages/Grants.aspx>

**Horticultural Research Institute:** [www.HRIResearch.org](http://www.HRIResearch.org)  
Ken McVicker, president [ken@woodburnnursery.com](mailto:ken@woodburnnursery.com)

**2021 HRI Awards:** [www.HRIResearch.org/2021-funded-projects](http://www.HRIResearch.org/2021-funded-projects)

**USDA Floriculture and Nursery  
Research Initiative:** <https://endowment.org/fnri/>

**2019 FNRI Awards:** <https://endowment.org/wp-content/uploads/2021/03/FNRI-FY2019-ANNUAL-REPORTS-1.pdf>

**USDA Specialty Crop Research Initiative:** <https://nifa.usda.gov/funding-opportunity/specialty-crop-research-initiative-scri>

Half an acre of the Chemeketa Community College ag hub will serve as a Woody Ornamental Demonstration and Learning Lab.

PHOTO COURTESY OF SWINERTON



it, which is made up from members throughout the country, they pay attention to that,” McVicker said.

Finally, there’s the USDA Specialty Crop Research Initiative (SCRI), which is funded by USDA as part of the Farm Bill. It funds close to \$80 million per year in projects across all of agriculture.

For much of its history, SCRI funding did not include anything in the nursery or floriculture sectors, but that changed in the 1990s, when ANLA and SAF lobbied successfully for federal specialty crop recognition. It was a significant step that continues to bear fruit for the nursery industry. In 2020, the various SCRI awards included \$4 million for research into boxwood blight, \$3.5 million for research into the flatheaded borer (a nursery and orchard pest), and \$50,000 for research into automation to solve labor scarcity issues.

Some growers, such as **J. Frank Schmidt & Son Co.** (Boring, Oregon), also fund research privately, with their own foundations.

The OAN works hard to ensure that the state’s nursery has a strong voice in grant funding decisions. As a result, four Oregon growers sit on the HRI Board of Trustees. In addition to McVicker, Leigh Geschwill of **F & B Farms and Nursery** (Woodburn, Oregon), a past OAN president, also serves on HRI’s Executive Committee. Mark Krautmann of **Heritage Seedlings and Liners** (Salem, Oregon) and Matt Kramer of **Fall Creek Farm and Nursery Inc.** (Lowell, Oregon) serve as board representatives for the region that includes Oregon.

“It’s important for our members to engage with OAN research and with HRI,” McVicker said. “It’s vitally important for us as an industry moving forward to be supporting the research.”

Geschwill sees ongoing nursery research as a political asset. It enables the industry to say it is taking ownership of problems and cares about finding solutions through research.

“I think regulators are more likely to listen to us and to be supportive of us if they know that we are also working on a problem,” she said.

#### Success stories

Industry-funded, industry-led



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research has resulted in a number of success stories, which have made a positive impact on the industry. “There are too many successes to list,” Lee said.

Dr. Robin Rosetta, now retired, worked with various collaborators to develop the intelligent sprayer, which reduce chemical use

and drift by spraying only where plant material is detected along a row of production.

Dr. James Altland and Dr. Jim Owen, both formerly with Oregon State, did significant research on soilless substrates, and how to integrate fertilizers into the mix.

Contreras continues to work on numer-

ous plant breeding projects.

And these are just a few.

“All of the funded projects are valued,” Lee said. “Pointing to one of my interest would only distract importance from others beneficial to supplementary sects of the broad industry. However, the continual push and encouragement of new technologies, new methods, superior plant cultivars, new modes of actions and better practices are always driving the committee and researchers.”

In a recent and positive development, industry research isn’t necessarily limited to four-year colleges and universities.

**Chemeketa Community College** in Salem, Oregon, is dedicating one half acre of its new agricultural hub to creating a Woody Ornamental Demonstration and Learning Lab. There, students will explore different production methods (B&B, bare root, pot-in-pot), conduct new variety trials, and conduct workforce training.

“It’s kind of a big deal for community colleges to be involved in research, and we’re definitely getting into that realm,” said Larry Cheyne, interim director of Agricultural Sciences and Technology at Chemeketa.

Chemeketa is partnering with Woodburn Nursery and Azaleas Inc. to do some biochemical research trials in the greenhouse and fund a student intern. On its own, Chemeketa is also studying biocontrol in woody ornamentals.

“Work-based learning is really key to the program,” Cheyne said. “Every grant we have, or are applying for, we have built that in. And we have fantastic partners providing internship opportunities.”

Geschwill sees a double benefit to research funding at college and university hort programs.

“It not only helps with the research, but it also builds the program so that we can get some good quality graduates out of that program,” she said. “If you can find a grower that doesn’t need a new person on their staff, color me shocked. We all need more qualified people.” ☺

*Curt Kipp is the director of publications and communications at the Oregon Association of Nurseries, and the editor of Digger.*

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