

Oregon

Web blight emerges as concern in Christmas trees

By MITCH LIES
For the Capital Press

A disease that infects Christmas trees erupted in some Pacific Northwest tree plantations last year, leading to tree loss and triggering a renewed round of research into better understanding the disease.

The disease, web blight, has been a sporadic, but relatively minor problem in Christmas trees since it was first identified in the Northwest in the late 1990s.

"I suspect that one of the reasons it was so severe this past year was because of all of the wet weather that we've had," said Washington State University plant pathologist Gary Chastagner. "That provides an environment that is super conducive for spread of the pathogen."

"You need cool, moist conditions for it to spread from needle to needle," he said.

The web blight pathogen is a type of Rhizoctonia, Chastagner said, but not the one that causes root rot or damping-off of seedlings. The disease primarily infects Douglas fir, but this past year also showed up on noble, grand, Nordmann and Turkish fir.

Outside of some research into web blight in forest situations conducted through Oregon State University, little research has been done on the disease since preliminary studies on Christmas trees were conducted at Washington State University in the late 1990s. Chastagner said he now is revisiting that work.

"We are looking at the optimum temperature for the growth of the pathogen and development of the disease and, in collaboration with (OSU Extension Christmas



Courtesy of Gary Chastagner

Web blight infection, such as this on a Douglas fir Christmas tree, tends to be most severe on sides of trees up against forested areas, or the north sides of the trees, where conditions typically are cooler.

Tree Specialist) Chal Landgren, we are looking at the ability of the pathogen to survive over the summer and cause problems again in the fall," he said. "We don't know whether those same trees that are damaged in a planting are likely to be damaged the next year, or whether new infections from the spread of inoculum from other sources, such as nearby forest trees, result in new infections."

"We don't fully understand the sources of inoculum, what the types of inoculum are and the optimal conditions for the develop-

ment of the problem," Chastagner said. "Nor do we fully understand the extent of the susceptibility of some of the species of Christmas trees that we are growing."

According to the Pacific Northwest Plant Disease Management Handbook, web blight first appears on trees as a browning of outer foliage in roughly circular areas. Chastagner described a typical symptom as volleyball- or basketball-sized patches of brown needles, often connected by a web that can hold infected needles in place.

"What happens is this pathogen is basically grow-

ing as a web of mycelia that you can see over the surface of the needle, and it just kind of spreads from one needle to the next," he said.

According to the handbook, under moist conditions, the fine fungal webbing may be visible. The disease, which can spread to affect as much as half the side of a tree, can be distinguished from Botrytis, or gray mold, in that the latter affects only current-year needles and shoots, and symptoms initially appear on the new growth in the spring.

In cases where trees are marginally infected, new shoots the next year will likely cover up the damage, and trees can still be brought to market. In more severe cases, growers tend to cut out trees.

"This past year there were some Douglas fir where I would say half the tree didn't have any needles on it anymore," Chastagner said. The infection tended to be directional, he added. "In other words, infection was most severe on sides of the tree that were up against a forested area, or the north sides of the trees, where you might expect it to be cooler and moist longer."

Among questions Chastagner is hoping to answer in his research is how the disease is spreading from tree to tree.

"If I have trees that have the disease and I was doing culture work on the trees, I could have some of those colonized needles transferred from one tree to the next on, Chastagner said, a shearing knife. Or, just by walking through a planting, sometimes the needles can fall off and get on your clothes, and the next time you walk by a tree, maybe you transfer the colonized needles to another tree.

"We don't have a good sense on how it is spreading, but there are a number of ways it could potentially spread, including the wind. If you had a windstorm, it could possibly blow needles from nearby timber into the edges of a Christmas tree planting," he said.

Researchers also don't know whether the pathogen survives over the summer on needles on the ground and produces a spore stage that re-enters trees, or whether it is the needles that get hung up in the tree that are able to cause infections the following year.

Chastagner and his team have collected foliage samples from several fields and are looking at the survival of the pathogen on different types of trees, including Douglas, Turkish, Nordmann, grand and noble firs.

"We want to see whether there is any difference (in survival of the pathogen on different hosts), so we are monitoring those (samples)," he said. "But this is the first year that we've done some of those types of studies."

Among past findings from research Chastagner conducted in the late 1990s, it was shown the pathogen is sensitive to some fungicides, including Bravo, or chlorothalonil. But, Chastagner said, sprays applied in the spring to control a disease such as Swiss needle cast are unlikely to affect web blight, which appears in the fall.

Among cultural control methods identified by Chastagner and the Pacific Northwest Plant Disease Management Handbook are to avoid planting trees in low-lying areas with poor air drainage and avoid planting near native stands of Douglas fir that appear to have the disease.

Craft beer sales slow, and industry changes may be on the way

By ERIC MORTENSON
Capital Press

A bubble in Oregon's revered craft beer industry? Sales have slowed and some breweries have closed, but the state Office of Economic Analysis isn't going on a bender about it.

Senior Economist Josh Lehner, who has written extensively about the economic impact of the state's "alcohol cluster," said it's likely the industry is maturing. Some shakeout is not unexpected.

In a post on the department website, Lehner said making good local beer, as breweries and brewpubs around the state do, is no longer enough to assure success.

"In a mature market, good business decisions and strategies matter more," Lehner wrote.

The economist reported that U.S. craft beer sales in a three-month period ending June 17 declined 0.7 percent compared to the same period in 2016.

Lehner said in-state beer sales have slowed or declined at many of Oregon's breweries. Some have closed, including Medford's Southern Oregon Brewing in 2016 and The Commons this year in Portland.

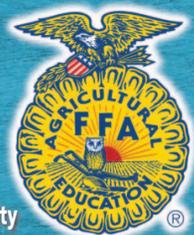
But Lehner said four or five Oregon breweries fold per year, a failure rate of about 2 percent. That's compared to an 8 percent failure rate for all Oregon industries combined. Leisure and hospitality closures nationally are about 9 percent, Lehner said.



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Ellie Higgins and her dairy goat show off their ribbons for Grand Champion Showman and Reserve Grand Champion Nubian.

Siera Horton, Reserve Grand Champion Dairy Cattle Showman, with her dairy heifer.

Cameron King, Grand Champion Dairy Cattle showman, with his dairy heifer and Mrs. Trish Stokes

County Fair A Ribbon Filled Rendezvous

By Ellie Higgins
Meridian, Idaho, FFA Chapter Reporter

FFA and 4-H showmen flock to Caldwell, Idaho, every July for an unforgettable fair. These talented kids find fun in spending nearly a week in the hot sun, and many go home with hard-earned awards to their name.

Meridian FFA members showed their livestock after months, or even years, of dedication at the annual Canyon County Fair, July 27-30, competing in multiple classes, including both showmanship, focused on the handler's ability to show their animal, and quality, focused on each animal's conformation. They had showmen competing in beef cattle, dairy cattle, dairy goats, market goats, sheep, and swine. All showmen who competed are listed below, with overall showmanship awards.

Beef Cattle: Siera Horton, Cameron King, Braxton Hiatt and Kayla Schubert.

Dairy Cattle: Cameron King, Grand Champion Showman; Siera Horton, Reserve Grand Champion Showman; Mollie Hiscox, Jordyn Bettercourt, Kayla Schubert, Courtney Marshall and Ashton Shaul.

Dairy Goat: Ellie Higgins, Grand Champion Showman.

Market Goat: Siera Horton.

Sheep: Cody Ball, Grand Champion Showman; Zach Ball, Reserve Grand Champion Showman; Joe Wieting; Olivia Sell; Loretta Lacy; Trinity Martin; Alexa Phillips; Braxton Hiatt; Ethan Rieker; Emily Pile; Kiara Wetzel; Kaitlin Muniz; Cameron King; Mollie Hiscox; John Muniz; Ellie Higgins; Isabelle Campbell and Elise Campbell

Swine: Abby McMillan, Grand Champion Showman and Reserve Grand Champion Round Robin Showman; Zach Davis, Reserve Grand Champion Showman; Kyleigh Davis and Chase Raskopf.

All of these incredible members stand as an example of hard work and persistence. The sweat, tears, and sometimes blood that go into raising livestock are one of the many joys of an agricultural life. With every ribbon won, water bucket filled, pen cleaned, animal clipped, sale finished, class won or lost, and two- or four-legged friend gained, these model FFA members are promoting the agricultural industry.



Meridian FFA sheep showmen Jon Muniz, Mollie Hiscox, Kaitlin Muniz, Alexa Phillips, Kiara Wetzel, Emily Pile, Cameron King (in back), Ethan Rieker, and Braxton Hiatt with Zach Putzier (a former showman, in back).

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