Tony Fiore has been contending with spotted lanternflies in the vineyard at Fiore Winery in Pylesville. Lanternflies, seen below, feed on grapevines and other crops. **JERRY JACKSON/BALTIMORE SUN PHOTOS**

Lanternfly infestation expected to 'take off'

Entomologists believe residents will see more of the invasive bug, but it will be more nuisance than harm for the average homeowner

By Christine Condon

At Harford County's Fiore Winery, a plush toy version of the spotted lanternfly greets patrons entering the tasting room.

Its bright red, polka-dot wings are a beautiful display. But a flyer beneath it warns of the sinister truth about the invasive bug, which feeds on grapevines and other crops voraciously.

Located close to Pennsylvania, where the lanternfly began its U.S. invasion in 2014, Fiore has contended with them for a few years. And their incursion has taken a toll, said Tony Fiore, the vineyard's operations manager.

"Some of our vines this year aren't as strong as they normally would be," Fiore said. "It's probably going to take longer to ripen, because there's less leaves, and less fruit."

For some vineyards — and residents — in the Baltimore area, this season could be their first true battle with the insects native to eastern Asia, which are spreading south. They are known to feed on over 70 plant species, including black walnut, red maple and tree of heaven. And when they do pierce trunks and stems to sip on sap, they leave behind damage and stunt growth.

But many wineries are cautiously optimistic that preparations for the siege will lessen the blow.

Over the winter, the Maryland Department of Agriculture eliminated over 40,000 lanternfly egg masses close to vineyards, said Jessica Boyles, who coordinates field operations at the state agriculture department. Nearly half of those egg masses came from Baltimore County's Boordy Vineyards, which adds up to more than 600,000 eradicated insects.

"That was pretty shocking: To know that they were in there in much greater numbers than we really thought," said Phineas Deford, vice president of the winery in Hydes. "But we all knew that wouldn't be the end."

Local residents will likely start seeing adult spotted lanternflies with their telltale colors — the forewings are pinkish tan with black spots, and the hind wings are mainly red with black spots — in July.

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But the bugs are already out there in their nymph stage. Small and wingless, the nymphs are initially black with white dots before they molt, and turn red with white specks.

So far this year, the jurisdictions with the most sighting reports are Baltimore City and Baltimore County, followed by Washington County, said Kenton Sumpter, entomologist with the state agriculture department. There have been about 700 reports from around the state. Last year, the tally reached 11,500.

The sighting reports are far from scientific, since they're submitted voluntarily, but the reports indicate the bugs are likely present.

"The infestation was building in the county last year, and the city had some, but it wasn't awful," Sumpter said. "But this year ... they've really taken off."

The guidance is fairly simple: If you see one, smush one. But for the average homeowner, the bugs will be more nuisance than harm. There's no evidence of them killing trees and plants that populate yards, though they will certainly make themselves at home.

They've spread so widely because local predators are unfamiliar with them, but also because the adult bugs are talented hitchhikers, attaching themselves and their eggs to cars, trains and just about anything else they can find. They've been detected in states as distant as North Carolina, Ohio and Connecticut.

Scientists have found that praying mantises, birds, spiders and other predators are willing to feed on the lanternfly, and an array of pesticides kill them, though those chemicals also harm good insects, as well. Physical barriers like sticky traps and netting can protect vulnerable plants.

Ideally, as predators and humans attack the lanternfly, their numbers will ebb, similar to the population of invasive brown marmorated stink bugs in the early 2000s, said Mike Raupp, a University of Maryland entomologist who is conducting research on a naturally occurring fungi for use against lanternfly.

"I'm optimistic that Mother Nature has a plan here, as she does with many of these infestations," Raupp said. "Now, we have the knowledge and the tools. It's going to be manageable."

Invasive lanternflies were first spotted in Maryland's Cecil County in 2018.

In March, the Maryland Department of Agriculture extended the spotted lanternfly quarantine zone to include all but six of the state's 24 jurisdictions. Under the quarantine order, about 1,100 businesses that transport plants, yard waste, outdoor construction equipment and other items voluntarily had at least one employee to attend training to spot lanternflies and receive a permit.

The Baltimore metropolitan area has been included in the zone since early 2022, as the bugs expanded farther from Maryland's neighbor to the north.

"We should offer like a penny or two pennies or something, a bounty, " Sumpter joked. "Bring us left wings or something like that. It would really get the bugs getting murdered."

Though the bugs are becoming widespread, the state asks residents in most of the state to submit reports when they see lanternflies, Sumpter said. According to the agriculture department's website, residents in Cecil and Harford counties, where the insects are already numerous, don't need to report.

The agency requires a photo these days with a report, after one too many lengthy trips to the fringes of the state that turned up nothing — or native impostors such as giant leopard moths.

"It's still valuable," Sumpter said of the reports. "It's how we typically go and find outliers — we call them satellite populations — but any lanternflies that pop up in far-reaching areas."

The most dramatic example of a satellite so far, Sumpter said, was in the town of Tyaskin, about 20 miles southwest of Salisbury in Wicomico County during a prior season.

But Sumpter's small team of lanternfly trackers also works in less remote areas where the insects are spreading, like Prince George's County, which was added to the quarantine zone this spring. The goal is to investigate the bug's invasion into new territory, and try to hold the line against its continued march southward, Sumpter said. At the end of the day, it can feel like an endless game of whack-a-mole.

Fiore said he still tries to squish the insects when he finds them in the vineyard, though it's unlikely to stop their incursion. They can be a nuisance for customers, he said.

"We had a picnic table under a tree they were inhabiting," Fiore said. "And the table was just covered in this black, moldy, sticky substance." Known as "honeydew," that substance is the lanternflies' excrement, the byproduct of all the sugary sap they consume.

Aaron Garver, district manager for the Baltimore office of Ohio-based Davey Tree, said that at its worst, the honeydew can feel like a heavy rain. Hoping to prevent that for his customers, Garver said his team is applying carefully targeted amounts of insecticide by injecting it into trees, drenching the soil or spraying bark.

"We're not at a point where we can eradicate this insect," he said. "So what we're doing is we're treating specific trees that have been identified by us or by the customer as something they want to protect."

Often, that will be a tree over a driveway or a patio, Garver said, where honeydew residue is the most inconvenient.

The Maryland Department of Agriculture recommends that residents limit their use of pesticides, because the chemicals impact native bugs. If needed, the agency recommends applying a contact insecticide directly to lanternflies only when they appear in large numbers, and only applying pesticides to trees of heaven, one of the bugs' preferred hosts.

Garver, who frequently works in Roland Park, said he started seeing some lanternflies last year, but this year, they are far more apparent. His workers in places like Catonsville and Federal Hill are noticing large numbers, too, he said.

"The fact that we're seeing at least one on every property, when we start going through the bushes and stuff — then we know there's more up in the canopy that we can't even see," Garver said.

At Boordy, vineyard employees are seeing some young nymphs, though not an alarming amount, Deford said.

The vineyard on Long Green Pike saw its first round of adult lanternflies late last year, but it wasn't until the year's grape crop already had been harvested, Deford said.

Based on conversations with embattled vineyards in Pennsylvania and Harford County, the vineyard plans to use the same pesticide it already uses to fight Japanese beetles and grape berry moths.

Deford said he's also heard that the state is experimenting with a Ghostbusters-esque backpack vacuum, capable of sucking up the flies when they become more numerous. If the population of adult lanternflies at Boordy becomes overwhelming, it could be a next step.

"That's going to be our first call," Deford said.