Speaker 1: Welcome to Urban Plant Health Network's podcast series, The Good, The Bad, and The Bug-ly.

Drew Radford: They can destroy crops, kill native flora and fauna, wreck infrastructure, and to top it off, they're highly aggressive and have a very nasty sting. I'm describing Red Imported Fire Ants, and unfortunately, they're already causing a big problem in South-eastern Queensland. They're now the focus of the biggest eradication effort for an ant species anywhere in the world. To find out what is being done to rid us of this horrible pest and how we can each help, we're joined on this Urban Plant Health Network podcast by Kate Retzki from the National Fire Ant Eradication Program. Kate, thanks for your time.

Kate Retzki: Pleasure to be here. Thanks for having me.

Drew Radford: Kate, first of all, what is a fire ant?

Kate Retzki: So fire ants are absolutely fascinating. They're much smaller than you'd expect them to be. They're an invasive species here in Australia. So they originate from South America, where there are plenty of things that are going to gobble them up for lunch. But unfortunately, here in Australia, we have the perfect habitat, a gorgeous climate, and no predators. So, they've made their home in South-east Queensland here pretty easily. Now they might be small, but they can have absolutely devastating consequences. So if fire ants are left to thrive here in Australia, they could decimate 50 different types of crops. They can kill native animals, eat our native plants. They even injure livestock and damage infrastructure and really fun things like picnics and sport games on the weekends could become a thing of the past if fire ants are left to infest our land.

Drew Radford: Kate, that's a fairly scary list. And you said they're pretty small. What do they look like?

Kate Retzki: So, they're very small ants that are coppery brown in color. Now, essentially their bottom, is a darker brown compared to the rest of the ant. And a really identifying feature is when we look at a group of fire ants, because it's pretty rare you're going to see one fire ant. They usually come in a group or a swarm, and most other ants are all the same size in a nest. But what you find from fire ants is that when you look at a nest, they range in size from about six millimeters down to two millimeters in size. And that variation is really unique to the fire ant. Now, their nests are a little bit different as well. So most of your listeners would see an ant nest and see a really distinct entry or exit hole, but fire ant nests don't have that. They're a really loose mound of dirt. And usually the entrance or exit holes are metres away from where you actually see the nest. So they could look quite unassuming and it's not until yourself or your dog or your next door neighbor walks over a nest. And when they're disturbed, the fire ants just go crazy and swarm everywhere. Now, they won't necessarily bite you if there's just one ant, but what would happen is those ants will essentially call all their friends over. So they'll swarm you and then they'll all sting at once. So they're pretty nasty creatures.

Drew Radford: The swarming probably makes most people's skin crawl. It certainly does mine. And then they sting as well. And it sounds like they are in incredible numbers when they start to move about.

Kate Retzki: That's exactly right. So they have this fascinating element called “collective intelligence”. So they really can work as a team, which is just remarkable. So not only do they crawl along the ground or fly in the air to create new nests, but they can even raft on water. So if there's flood waters, they can gather up their colony and build a raft of fire ants, put the fire ant eggs and the queen on top and float down the river until they land on another fresh bank somewhere where they can create a new colony. So these things get around pretty quickly and pretty easily in a whole range of ways.

Drew Radford: You mentioned damage to infrastructure and crops. Why is that a concern? I mean, how do they do that?

Kate Retzki: So they could really make farmland unusable. Not only do they eat the delicious crops that we would prefer end up on our table, but it also makes it really difficult for fruit pickers to work in a field that's infested by fire ants because there's a real health and safety risk there. So not only are the stings painful, not just for a day, but potentially weeks, but they can cause anaphylaxis, which as we know can be fatal. And when it comes to infrastructure, fire ants are attracted to essentially electrical infrastructure, which they like to get up and cozy against. So they can really damage electricity boxes and other utilities, which costs a lot of money to maintain in areas that are infested with fire ants.

Drew Radford: Fortunately, they're not across Australia, but they are in South-eastern Queensland. What's the occurrence there?

Kate Retzki: Fire ants were first discovered in South-east Queensland in 2001, but they might've arrived one or even two decades before but remained undetected for all that time. We expect they arrived on a container ship. And as I said, we have a fantastic climate, so they decided to stay. There have been other incursions of fire ants in other parts of Australia, but authorities have been able to eradicate those because we got on top of them really quickly, though in places like Gladstone and even Port Botany in New South Wales. So we're pretty good at protecting our borders, but that initial infestation is still the most challenging. Our fire ant biosecurity zones are as far west as the Lockyer Valley up to Somerset, down to the Gold Coast and Scenic Rim and east to Brissie and the Redlands. So I'm talking many, many thousands of hectares that we're dealing with.

Drew Radford: Kate, you're saying many thousands of hectares. What's the eradication program doing to encourage industry and also the community to do their bit in terms of eradicating fire ants?

Kate Retzki: Since 2001, there's been a nationally cost shared effort to eradicate fire ants. So we're actually Australia's largest biosecurity eradication initiative. And in 2017, we started a new 10 year eradication plan. We have about $400 million to spend, which sounds like a lot, but it's actually not if you think that if fire ants are left to thrive, they would cost a billion or more dollars a year to manage the damage and risks. That's what we're seeing in other countries like the US, Taiwan, and China, but what's really been a game changer as part of this 10 year plan is that over the past year or so, we've started to empower others to treat for fire ants on their own property. Up until then, we've been telling people to simply look for and report fire ants to us and we'll come and take care of them. But now we're working with households, schools, sporting clubs, even farmers, to reduce fire ant populations in areas where our eradication treatment hasn't arrived yet. We're doing a rolling strategy from the west of the infestation to the east. So really we're working with communities and industries in those eastern areas of our fire ant biosecurity zones to take a front step and get proactive in treating fire ants on their properties.

Drew Radford: Kate, you mentioned there's being a different approach taken in the last 12, 18 months or so. Is that been key for Australia being considered a bit of a world leader in fire ant eradication or have there been other advances made since the program started back in 2001?

Kate Retzki: Look, we have learned a lot in the past 20 years and we continue to learn every single year. Our science and planning teams are always refining our processes to improve how we work and improve our treatments and surveillance activities. So we've been looking at improving technology, trying to find fire ants using remote sensing. That's cameras attached to helicopters. We look at different blends of fire ant bait, or we look at reducing impacts of treatment on cropping farmers, but it's really been that new whole of community approach to fire ant management that we think is taking this to the next level. We know people want to help. So we're giving them the tools to do so. So last treatment season, 3000 fire ant treatments were done by the public. This treatment season, which has just gotten underway, we're hoping to see double, if not more land treated than last year.

Drew Radford: Kate, is that the fundamental measure for success of the program, the number of treatments? Is there any other metrics to measure the success?

Kate Retzki: Quite simply success at the end of the day will be no more fire ants in Australia. That's ultimately eradication. And we really do believe that fire ants are eradicable, and we can take them out. But what we do know is that can only be done via a whole of community approach, meaning we need the help of communities and industries, even across levels of government to do their bit. Look, we're big advocates for proactive treatment. So that's about stopping infestation taking hold in the first place. But we also think the public can assist with responsive treatment as well. That means treating activeness on their property. So that's why we're running these pilots to essentially prove that what we believe can happen can indeed happen. We're providing free fire ant bait for people who want to work with us. At the moment that's in about 20 suburbs, but hopefully we can continue to expand the footprint of these projects in the future.

Drew Radford: Kate, you mentioned earlier on that they had been detected in other areas in Australia. I think Botany Bay was one of them. Why does Victoria need to be so concerned about red imported fire ants?

Kate Retzki: Oh, look, Victorians are really lucky that fire ants haven't arrived yet. What I suggest is that people make the effort in Victoria to know where your materials are coming from. So I don't know if you know this, but fire ants are fantastic hitchhikers. They can be carried many, many kilometers in organic materials like soil, turf, potted plants, or hay. So people dealing with these products need to follow particular rules to minimize the risk of the spread. So if people in Victoria are getting mulch or potted plants or hay from South-east Queensland, you really need to find out if your supplier is following the movement control requirements, including for interstate trade, because you do not want to be the person to invite to fire ants into your state. And of course, it's a good idea to know what they look like. So, you can be the first line of defense for your neighbourhood. And we have a ton of information on our website, which is fireants.org.au.

Drew Radford: Kate, all the best for keeping Australia free from this horrible pest. Kate Retzki from The National Fire Ant Eradication Program. Thank you for joining me in the Urban Plant Health Network studio today.

Kate Retzki: Thank you so much for having me.

Speaker 1: Thank you for listening to The Good, The Bad, and The Bug-ly. For more episodes in this series, find us and subscribe wherever you get your podcasts. We would love to hear your feedback, so please leave a comment or rating and share this series with your friends and family. All information is accurate at the time of release. This podcast was developed for the Urban Plant Health Network.