Speaker 1:

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

Drew Radford:

Australia is the last major honey producing continent that's free of the Varroa destructor mite. Being free of this pest means we have some of the healthiest bees and cleanest honey and wax products in the world. How though, can we keep it that way? Well, if you are a beekeeper that lives within five kilometers of a shipping port in Victoria, you can help by becoming a honeybee pest warrior. To find out what's involved, I'm joined in the Urban Plant Health Network studio by Ally Driessen, Agriculture Victoria's Bee Biosecurity Officer. Ally, thanks for your time.

Ally Driessen:

Thanks for having me, Drew.

Drew Radford:

Ally, before we get into what a honeybee pest warrior is and how people can be involved, what's your role?

Ally Driessen:

Well, my role as Victoria's Bee Biosecurity Officer really involves raising awareness within the community on the importance of honeybee biosecurity, which kind of includes just management of honeybee pests and diseases. I'm a member of the Agriculture Victoria Statewide Apiary Team, and we are a pretty small team, but we play a pretty key role in just trying to help Australia's honeybee population stay really healthy, and mostly do that by preventing things like detections of exotic honeybee pests and diseases coming into Victoria.

Drew Radford:

So Ally, how do you then detect an exotic honeybee pest?

Ally Driessen:

Well, swarms of exotic bees can come in with mites on them, like the Varroa destructor, and other different pests and diseases as well, and they could really damage our colonies. So, cargo and freight that come into Australia, even though there's really stringent shipping requirements, they sometimes carry these kind of hitchhikers. So, our team has several preventative and I guess preparedness controls that we use to kind of manage the risks of these exotic honeybee pests and diseases coming into Victoria and becoming established.

I guess the first one is that we manage sentinel hives and swarm catch boxes, and they're at all the major Victorian ports and at our international airfields. We think of them like our first line of surveillance. The hives are tested really frequently for exotic pests that may have been caught from an exotic swarm, or even our swarm catch boxes can catch swarms as well.

Then we have about just under 200 members of the State Quarantine Response Team. We call them our SQRT members, and these are beekeepers who've been trained and are ready to help Agriculture Victoria when we have, or need in-hive surveillance, if an exotic bee pest is detected in Victoria. Many of these SQRT members, they're mentors already to new beekeepers and are often provide biosecurity advice. We're so lucky to have them onboard.

I think the third one is really early detection of these parasites and these pests that come into Australia. It's really important for us to try to limit the spread and the impact on beekeepers. And that's where my kind of honeybee pest warriors come in. Urban beekeepers who manage hives in areas around the ports, they would really be considered my second line of surveillance. Their hives are kind of like magnets, just like what our sentinel hives are for exotic bees. So, if we can engage all of those beekeepers and convince them to become honeybee pest warriors just like me, then they can become a real asset to our surveillance program. I think if you think the more that we are all looking for a pest or a disease, then the more chance that we've got of finding them really quickly.

Drew Radford:

Well Ally, I'd say you're doing a pretty good job of convincing people of the importance to be a honeybee pest warrior and I mean that sincerely, you tell the story well. So, I guess it's really important we find these honeybee pests and diseases when they first come into the country.

Ally Driessen:

Yeah, it's really, really important. That's one of the reasons why beekeepers should be really regularly looking for pests and diseases in their hive. Early detection is the single most important factor in any kind of successful eradication, newly established pests. In fact, the Australian honeybee industry, they knew this and they actually wrote it into their biosecurity code of practice. If you are not familiar with that Drew, it's a really great document. It has some simple steps that all beekeepers should be doing, that help them minimize the impact of pest and diseases in their hive now. It's not just a Victorian code, it's actually national. The best part about a national code is that if every single beekeeper in the whole of Australia was performing all these of the steps of the code, then our honeybees would remain the healthiest in the world.

Drew Radford:

It's a really important thing to know. Someone once said to me, "If you eat, you've got an interest in bees," because my understanding is that bees are responsible for pollinating about two thirds of the crops we have in Australian agricultural of production, they benefit from bee pollination. I think that's also on the Wheen Bee Foundation website. They are so important because they help pollinate most of the crops we eat. So, at the end of all that, I guess Ally, is it's crucial that beekeepers follow the steps in the code and keep an eye out for pests and diseases.

Ally Driessen:

Yeah, absolutely. Actually, one of the steps in the code is my favorite and that's that every beekeeper inspects one of their hives in each of their apiaries for the presence of these exotic pests, like the Varroa mite, and there's three tests that beekeepers can do. These are going to sound funny, but one's called a drone uncapping, a sugar shake and an alcohol wash.

Now, in Victoria, it's mandatory that we do the drone uncapping, and then we back it up with either a sugar shake or an alcohol wash. So, mites like the Varroa, they love the drone brood, and for any non-beekeepers, that's the baby boys. They take a little longer to develop, which gives the mites a warm home to live in undetected.

A drone uncapping is a really rapid method, it's very little equipment as needed. It can be carried out really easily as part of a routine hive inspection. You use this little tool that's called an uncapping tool. It's kind of like a wide fork. Some people call them capping scratches, and it allows a beekeeper to just remove that drone brood really quickly, easily. If any mites are present, you'll actually see these tiny reddish-brown mites scurrying around on the pearly white pupae. You could even use like a kitchen fork, so there's no excuse why a beekeeper doesn't do a drone uncapping as long as the drones are there and available.

The second test that we prefer in Victoria is called the sugar shake. Now, mostly because it's quick, it's simple and it doesn't kill the bees being sampled, that's my favorite part too. The process of shaking bees in pure icing sugar will dislodge any of those external parasites and then they can be collected and examined to see what they are.

It's really important that in Victoria, we realize we're actually only looking for one mite. That's all it's going to take to know if these exotic pests are here and that drone uncapping and a sugar shake, that's going to help us find them really quickly.

Drew Radford:

Ally, I'm learning some great new terms today. drone uncapping, and sugar shake. They sound like really interesting tests and you've explained them really, really well. Where do beekeepers get these forks, other than out of their cutlery cabinet and also the shakers?

Ally Driessen:

Well, a beekeeper can pick them up at any of their local beekeeping supply store. So, just do an internet search for your local retailer. As COVID restrictions are also easing, bee clubs are starting to meet again, which is wonderful. Some of them are even having a, make a sugar shake day. So, it's really good fun. Go along, make your own sugar shake kit, share your beekeeping stories with your friends and the pure icing sugar, well you can pick that up at any local supermarket or steal it out of mum's kitchen pantry.

Drew Radford:

You've painted a unique picture in my mind, Ally, of sugar coating bees. It's an unusual image, but a very important one. Bottom line to this, performing these tests sound pretty cheap and easy. So, I guess the early detection of these pests is really important if you and apiary team are going to be able to stop any spread and impact on Victorian beekeepers.

Ally Driessen:

Yeah, they really are easy to do, and it's a good habit to start getting into now, performing them. We always recommend doing these tests when the weather's really nice. So, around February, March, and then do one towards the end of the year in like October, November. I guess right now is a really timely reminder for beekeepers to get themselves organised. Get your equipment together now.

A bit of a hot tip. Get out there and eat a litre of yogurt or ice cream, anything that comes in a white bucket, I promise you you'll need a white bucket to shake that sugar shake in and the white or the light-colored buckets make it so much easier if there's any little mite floating around on the surface of the water, especially if you wear glasses. If you wear glasses like me, now, make sure that you wear them when you are doing your inspections. It makes it so much easier to see eggs and larvae and anything scurrying around on the water.

Drew Radford:

Well, who would've thought Ally, that eating ice cream or yogurt is an important part of the nation's biosecurity process? Is there anything else that beekeepers need to do?

Ally Driessen:

Well, warrior status is going to be reached when those performing these tests, let us know their results via the Bees online platform. Now, that link can be found on the Agriculture Victoria website. It's just really easy, it's bees.agriculture.vic.gov.au. But it's really important to remember that this is a national approach. So every state, and every territory, they promote this testing individually. And so you'll need to look up what your state or territories reporting platform is, and just make sure you log the results there. But for Victoria, it's just bees.agriculture.vic.gov.au.

You see, if every beekeeper tells us they're performing these tests and didn't find anything unusual, then we all have this level of confidence that these exotic honeybee pest diseases aren't here... yet. And if they are, then we've got a real opportunity to stop them in their tracks. In Victoria, there's nearly 15,000 beekeepers now. If you imagine 14,000 plus beekeepers performing, a drone uncapping and a sugar shake test and saying, "Hey Ally, nope, not here. I'm all clear." That's just such a relief. So, we want everyone, whether it's a positive or a negative, to just tell us that they're performing these types of tests.

Drew Radford:

So, that's the reporting platform, Ally, but what should a beekeeper do if they actually do see something suspicious or unusual in their hives?

Ally Driessen:

Yeah, good question. Look, if a beekeeper finds something suspicious, they have no idea what it is, it's really important that they stop their inspection immediately, close up the hive, make sure that they don't remove any bees or any hive components from their apiary. Collect whatever that is, whatever that little suspect mite or bug is, store it in a little container. If you've got methylated spirits, pop a bit in there, but if you don't, just put it straight into the freezer. If you can, it's a really great idea to take a photo of it, that might not be possible, but that's where that bucket comes in really handy because it can't escape from the bucket, so it might make it easier to take a photo.

Then we want you to call the Exotic Plant Pest Hotline immediately. Now, those guys are open to 24 hours a day, seven days a week, every single day of the year, their number's 1800 084 881. I would give them a buzz immediately. Even if in doubt, still call, because reports that don't turn out to be exotic pests still give us really useful information and it underpins this sort of pest-free status, that many areas of agriculture use. You know what? There's so many exotic pests and diseases out there. There's this really great manual called the Biosecurity Manual for Beekeepers and it will list all of the ones that we care about here in Australia.

There's actually a free PDF that people can download on the Bee Aware website, which is just B-E-E A-W-A-R-E. Actually, that's the main reason it's mandatory for all beekeepers to register in Victoria because in the event of an outbreak, if any of these pest diseases are found, we can actually contact beekeepers and let them know what's going on and say, "Hey, I need you to perform a sugar shake test now, can you do that?" That's really important that everyone registers.

Drew Radford:

Well, you mentioned registration there, Ally. Is it expensive to register to be a beekeeper?

Ally Driessen:

Actually for the beekeepers who have zero to five hives, it's actually free. That pretty much covers about 14,000 of my beekeepers. Now that we've gone digital, they can just do that online. It's just bees.agriculture.vic.gov.au and we even have a registration hotline that people can call. But if they log on to that, it's free for zero to five hives.

Drew Radford:

That's a remarkable number of people that are eligible for free registration. So get on board, it sounds simple. Ally, thanks for speaking to us and thanks to you and the apiary team for helping keep Victoria and Australia's honeybees free of these destructive exotic pests and diseases. I wish you and the team all the success ahead. If you're a beekeeper, especially within five kilometers of the port, get your drone uncapper and sugar shake ready and start looking.

Ally Driessen:

Thanks, Drew. It's been awesome talking to you and I just want to thank all the beekeepers out there who've already been performing these tests and letting us know their results for years now. You guys are already warriors in my eyes, and I really look forward to seeing the army of honeybee pest warriors grow in Victoria, so thanks.

Drew Radford:

Thanks, Ally.

Ally Driessen:

Thank you.

Speaker 1:

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