



## **EPISODE 228 TRANSCRIPT**

### **Jamie**

Welcome to Two Bees in a Podcast brought to you by the Honey Bee Research Extension Laboratory at the University of Florida's Institute of Food and Agricultural Sciences. It is our goal to advance the understanding of honey bees and beekeeping, grow the beekeeping community and improve the health of honey bees everywhere.

In this podcast, you'll hear research updates, beekeeping management practices discussed and advice on beekeeping from our resident experts, beekeepers, scientists and other program guests. Join us for today's program. And thank you for listening to Two Bees in a Podcast.

### **Amy**

Hello, everybody, and welcome to this segment of Two Bees in a Podcast. Today, we are joined by two individuals to talk about the Apiary Inspection and Apiary Inspectors of America group. So, I'd like to introduce Brooke Decker, who's the President of the Apiary Inspectors of America, Pollinator Health Specialist and State Apiculturist with the Vermont Agency of Agriculture, Food and Markets.

And secondly, we have Ali Panasiak, the Vice President of the Apiary Inspectors of America, Lead Apiculture Inspector, Bee Health Assurance Team with the Alberta Agriculture and Irrigation. Thank you so much, Brooke and Ali, for joining us today.

### **Ali Panasiak**

Thank you. I'm excited to be here.

### **Brooke Decker**

Thank you so much for inviting us. We're happy to be here.

### **Amy**

We're super happy to have you here. And of course, with every single episode that we've had, we always ask our guests to tell us just a little bit about themselves and how they got into the beekeeping industry. So, what we'll do is, Brooke, why don't we start with you, and then after you, we'll move over to Ali.

### **Brooke Decker**

Yeah, so I got into beekeeping because I basically had a great, maybe, addiction to honey growing up. We had bees as a kid, and my mom learned beekeeping from her grandfather, so it's kind of a small-scale family tradition.

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And as an adult, I sought out local beekeepers, learned more about beekeeping, and then became the seasonal inspector for Vermont for three years before the full-time apiary inspector position became available.

It really joined well with my education, which is, I have a master's degree in environmental science. So, the combination of the love of bees and honey combined with environmental education and environmental studies just seems like a really great fit, and I'm really happy with how this has turned out.

**Amy**

Awesome. And what about you, Ali?

**Ali Panasiuk**

Yeah. So, my love of bees kind of fell naturally as I grew up on a farm. We had lots of different critters from cattle to chickens, goats, etc. And then when I graduated high school, I started as a summer student when the Bee Health Assurance team conducted research.

So, I kind of grew from there and built my way up as an inspector and then, yeah, became the Lead Inspector roughly 4 years ago. And I started in 2007, so it's been a long time. Yeah, I absolutely love it.

**Jamie**

Well, guys, you are very important, both, in the inspection programs in your respective areas as well as at the Apiary Inspectors of America level.

We're going to ask you questions related to both of those. Ali, you're in Alberta, Canada, you run the inspection program there. Brooke, you're in Vermont, you run the inspection program there. So, I'm curious if you could talk a little bit about apiary inspection's role in the industry. You can be very general, first, but then you could talk specifically about your areas. And, maybe, Ali, you first, and Brooke you can chime in after that.

**Ali Panasiuk**

Yeah. So, inspectors, if there's an emergency, we are there to respond quickly, and then any interprovincial or interstate movement, beekeepers should be inspected prior to movement to avoid disease spread. And many provinces have a Bee Act that falls under. So, inspections are administered with the Bee Act.

**Brooke Decker**



Yeah, I think Ali captured that perfectly. I think apiary inspection programs started when there was an American foulbrood, kind of, epidemic in this country. And each state and province has probably their own unique regulations regarding apiary inspection programs.

Some states don't have any regulatory laws on the books for the bee industry, but you know, other states have more regulation. So, we really try to work together as apiary inspection programs to ensure there is bee health throughout North America.

### **Amy**

So, another thing, Brooke and Ali, you know, I, in extension, work a lot with our Department of Ag here in Florida and we have a huge collaboration. And I think, you know, on top of what inspectors, apiary inspectors do in the state, they help with invasive risk, which we'll talk about in a little bit.

We talked about rules and regulations. Another thing that I think the Department of Ag does very well is that they're out there to also educate the beekeepers and kind of be like the middle person between beekeepers. If there are things going on in an area, you know, the apiary inspectors definitely can see things from a broader perspective. Instead of one apiary, they kind of know what's going on in their states.

And so, I think that what you all do is extremely important. So, I'm excited to talk to you a little bit about that. And we'll talk more in a bit about the beekeepers in your area.

But I wanted to move over to the Apiary Inspectors of America. So the AIA, you both are the President and the Vice President of the Apiary Inspectors of America. I know that you all meet yearly. You usually meet around the time that the American Beekeeping Federation meets.

So, I was wondering if you could tell us what the Apiary Inspectors of America is. What is it in general, what is the role in apiary inspection? And yeah, I'll just open up the floor to have you answer.

### **Brooke Decker**

Yes. So, Apiary Inspectors of America, our membership is comprised of the regulatory officials from states, provinces, and territories throughout North America. So, we currently have 69 members from 39 different states, provinces or territories.

So, we're kind of a small but mighty group. And our mission statement is to promote better beekeeping conditions in North America through mitigating honey bee pests and diseases through active communication and cooperation. And in practice, that means that we work together, closely together, collaborate with each other as regulatory officials, help each other



know what's going on around what we're seeing in hives around the country, and both countries around North America, really.

And we work really closely with researchers and other industry stakeholders to really support the beekeeping industry. So, while our membership is solely the regulatory officials, we do a great job of working together with our members, but also with other players in the industry to make sure that, you know, we're doing all we can to support the beekeeping industry.

### **Jamie**

So, I'd like to hear a little bit about what resources the Apiary Inspectors of America has for beekeepers.

### **Brooke Decker**

A lot of the resources that Apiary Inspectors of America has – well, we have a website [apiaryinspectors.org](http://apiaryinspectors.org) and we actually have an adjacent website that I think we'll get into a little bit more with a future question, but it's called [HoneyBeePests.com](http://HoneyBeePests.com).

And with both of those we provide a lot of resources for the latest research on pests and diseases. A lot of our regulatory authority is involving regulated pests or diseases and, basically, colony health. So, a lot of the resources that we have online for beekeepers would be found on our website involving pests and diseases, but also learning more about what apiary inspection programs are.

A lot of the resources that we've created for ourselves involve just standard operating procedure kind of tools that we use internally to help build a program or, you know, there might be a state that has a lot of resources and then a state that has very new program.

And so, there's a lot of resources internally that we use to help support other states and building programs. We also don't often have extension agents in states. So, you all are lucky in Florida that you have an amazing collaboration with the extension.

In the Northeast, we have, I think one extension personnel, you know, that is supposed to cover one state, but we often collaborate across state lines for those resources. So, we end up as apiary inspectors wearing the hat of the extension personnel.

So, we too love to work well with extension folks but often end up wearing that hat even if it's not specifically designated in our workload.

### **Amy**

Yeah. So, I want to talk a little bit more about how the group kind of works together. I know that AIA, for a while, you know, for example, *Tropilaelaps* is something that has been in the talks for

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a couple of years now. And I know that AIA was kind of at the forefront of working together to figure out, you know, a way to keep *Tropilaelaps* out. So how does the group work together on not just *Tropilaelaps*, but just new invasive risk and new invasive species in general?

**Brooke Decker**

Yeah. So, I think the latest work with this new emerging pest *Tropilaelaps* has really highlighted how you really work together across nations really to understand impacts to the beekeeping industry. So, this communication and collaboration is, I think, where we really shine.

We talk to each other a lot, very frequently. We do have an annual meeting once a year, but we meet, I'd say, every other month online just to keep each other updated on what's happening within our region. So, I think with anything, communication is key.

And so, if someone has attended a conference and they heard about a new emerging pest, we're immediately in the chat groups talking amongst ourselves to understand it more. And then we may call in that researcher to give a presentation to the inspector so that we understand our role and how we can help mitigate and understand any new pest or disease that's happening.

**Ali Panasiuk**

AIA will also hold workshop. I believe it was last November, so almost a year ago, we went to Auburn and had a workshop on *Tropilaelaps* and just kind of learnt in person, what does this mite look like, what is the best monitoring methods and just getting more familiar with *Tropilaelaps*.

For instance, some AIA members also went to Thailand to do hands-on work with *Tropilaelaps*, and then kind of made those members the trainers for the rest of our inspectors on being more familiar with *Tropilaelaps*.

**Jamie**

Well, guys, I think that's a great overview of what the Apiary Inspectors of America provide. I really appreciate what you guys do on behalf of Bee Health across, really, North America. So, thanks, in that regard. But now I want to drill down a little bit into your respective areas because you don't just serve this national level, very important group. You also lead inspection programs in your respective areas.

So, I'm curious about, maybe, any local requirements that you guys might have in your areas. For example, here in Florida, registration is mandatory. You know, if you keep bees, even one colony, you have to register with the state, you'll get inspected, etc. So, I'm curious how that runs in Vermont and Alberta.

**Ali Panasiuk**



Yeah. So, registration is mandatory in Alberta and it's a yearly registration and that's with used equipment as well. So, anything with frames that have been used in colonies, inspections are also mandatory. If anybody is leaving the province, they have to have an inspection done on their colonies and used equipment.

There's a lot of movement coming out of Alberta, so a lot of our beekeepers do pollination in British Columbia as well as all the way down east into New Brunswick and Nova Scotia. So, we have to ensure that the colonies leaving the province are healthy and no diseases are being spread.

### **Brooke Decker**

And Vermont has similar laws and some unique ones too. So, registration is required on an annual basis. An import permit is required. So, basically an inspection before coming into the state is required. AFB is regulated there, in, basically, kind of the overarching baseline of the regulations.

And along that line, any bees that are going to be sold, even given away or traded, have to be inspected prior to sale. The unique laws in Vermont are that we have a 2-mile radius buffer for apiaries that have 15 or more colonies.

So, basically, it gives the commercial beekeeper a little bit of a buffer so you can't pile on a bunch of bees and, you know, squeeze your neighbor out or something. So, our mapping system has to be very up to date for that to all work. The other really interesting part of our regulations is that we have a statute that says that we need to monitor for pollinator health following these seven criteria to establish pollinator health benchmarks.

So, we monitor for pests and pathogens, nutrition, genetics, colony strength, pesticides in the hive and try to pull that all together and come up with a big report that eventually established these benchmarks.

But, what, we're on year three, and each year the study is getting more robust. So, that's something I think really unique to Vermont. I think other states do surveys in certain senses, but ours are in our regulation. So, it's pretty unique in that regard.

### **Amy**

I'm going to transition a little bit over to the season. You know, I was kind of joking around with you before we pushed play here, before we pushed record, and you both were talking about how it was kind of hot right now. And I think hot for you is probably cold for me in Florida. So, I'm wondering about the season and what the season is like where you both are. Can you tell us a bit about the seasons and then also just a little bit more about beekeeping in your areas?



### **Ali Panasiuk**

Yeah. So, our season is quite short. Honey production is really from June to the end of August, and our main crops are canola, alfalfa, clover, and the first honey of the season starting in, you know, April, is Willow and dandelions. That just kind of gives the bees some feed coming out of winter.

We have approximately 2500 beekeepers, and 165 of those beekeepers are commercial with over 100 colonies. Honey production has been slowly getting replaced with pollination just because our seasons are short.

A lot of our province was in an emergency drought last year. So, there were about 25 counties in total that claimed agricultural disaster. So, pollination is kind of our focus for commercial beekeepers. And then go ahead, Brooke.

### **Brooke Decker**

Yeah. So, this season in Vermont is also quite short, I would say. We tend to get some maples blooming in late March, early April, into October, we could have some kind of nectar source. But really the main beekeeping season is from May through September, where you can really work bees.

In Vermont, we have close to about 800 beekeepers registered in the state, primarily those are backyard beekeepers, so fewer than 10 colonies. We have 10 commercial beekeepers in the state, and they manage more than 90% of the colonies.

So, a small number of beekeepers managing a majority of the colonies in the state. Five of those commercial beekeepers, which we'll say is 500 or more colonies, are migratory. Those migratory operations also, just those five operations, have three-quarters of the bees in the state.

So, those primarily, a lot of bees from Vermont that are here in the summer and they're mostly Vermont, you know, origin from Vermont, they'll go to Florida or Georgia for overwintering and maybe do some almond pollination, build up their nucs and then bring them back to Vermont for honey production.

And our honey production is quite varied and diverse. We don't have a huge landscape where it's all, like, one mono crop, for instance. So, we have a lot of different blooming trees, we have a lot of different flowers.

We have had a great black locust year this year, we had some great basswood honey this year. And then later in the fall, we have goldenrod, and then New England Astors produce a lot of honey and really can bulk up the hives in order for winter to come quickly. Winter is always on the horizon here.

**Jamie**

Well, it's funny you say that because that's exactly what I want to segue into. I mean, your places sound amazing, the honey sound amazing. Even the truncated seasons are interesting because, you know, I've only lived in warm climates. I work in Florida now. It seems like it's always warm enough to work bees down here. So that brings me to thinking about your respective areas of what you have that we don't.

And that's just super cold winters. And I'm curious, you could talk a little bit about overwintering bees in your area. You know, just broad thoughts. For example, do your beekeepers stay in the area or do they move their bees south? Do they overwinter outdoors or do they do the new thing, which is overwinter indoors? Could you talk a little bit about winter impacts and how beekeepers keep their bees alive during that period?

**Ali Panasiuk**

So, first and foremost, our beekeepers have to ensure that the colonies are healthy going into winter. So, Varroa mite treatments are number one, making sure they have enough feed. And then how they overwinter really varies across our province.

So, in the South, most of the beekeepers will overwinter outside and then as you go north, some beekeepers will start overwintering indoors. And then a lot of our beekeepers in the northern region of Alberta, the Peace region, they move their colonies to B.C. where they can then piggy back on to spring fruit pollination where there's blueberries, cherries, apples, etc.

Yeah, and then they'll bring their colonies back to Alberta for hybrid seed canola pollination. So, it really varies depending on the beekeeper and what area of Alberta they are in.

**Brooke Decker**

So, yeah, in Vermont, I touched on this earlier, most of the colonies leave Vermont for the winter. And there's a perspective when we think of the South in Canada versus the South in, you know, New England. So, our south is very far south in Florida, Georgia, South Carolina, where a majority of our colonies go for the winter.

But many beekeepers do still overwinter colonies in Vermont. And in order to do that, as Ali mentioned, mite mitigation is key. Year-round winter is always on the horizon. You know, what we say here is you're preparing for winter as soon as you open the colonies in the spring.

So, making sure that there's adequate food, even throughout the season with a drought we had this year, we had starving bees, which is not common. So, really preparing throughout the year to make sure that the colonies go into winter really healthy and robust and with as little pressure from, you know, pests and diseases as possible.



So, that key is always thinking that winter is coming. So, this time of year, we're really focusing on adequate food store. So, really, kind of feeding the colonies to ensure that they can get through the next six months without any nectar flow coming in.

**Amy**

So, as we kind of loop back around and bring this all together, if you're a beekeeper in North America, how would a beekeeper find their nearest apiary inspector?

**Ali Panasiuk**

So, on our AIA website we do have this lovely section where it says find your nearest inspector and that is quite up to date. So, we have almost every state and province listed there with the apiary inspector who they can call.

They can also, if it's not on there, you can also search your agricultural department in your state or province and that information would also be on there.

**Amy**

All right, as we end this episode, is there anything else that you'd like to add?

**Brooke Decker**

Yeah. Just thinking about apiary inspection programs throughout North America, but also around the world, how these apiary inspection programs have evolved over time and how they've grown in their role in the industry.

And how, whatever it is, if it's these large colony losses that we're seeing in the past years, these new pests and diseases, the apiary inspectors have this essential role within the industry to not only support the industry, but really work as this conduit of education and resources that is essential for kind of pulling us all together and working towards the common goal of healthy bees around the world.

**Ali Panasiuk**

Yeah, I just want to say too, like, I started in 2007, and I wasn't really aware of AIA until a couple of years ago. And I think that since I joined, there's been more Canadian representatives joining as well. And I think it's just so important that Canada and the US talk frequently.

We know what's going on down there. You guys know what's going on up here. We do have very different beekeeping management. So, it's kind of good to stay in the loop and work together on any new invasive pests, or risks, I should say. And it's just really good to have communication between the two countries.

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**Amy**

Absolutely. I totally agree. And I think, you know, a great take home message is that we can all work together to make the industry better. So, thank you both for joining us today. What we will do is I'm going to go ahead and link the AIA website to our additional notes and resources. And if any of the beekeepers have any questions for you all, hopefully they can reach out straight to you, if that's OK.

**Ali Panasiuk**

Absolutely. Thank you so much for having us. It has been a lot of fun.

**Brooke Decker**

Yeah, it's been great having this conversation. Thanks for highlighting AIA.

**Stump the Chump**

It's everybody's favorite game show, Stump the Chump.

All right, welcome back to the question-and-answer segment. Jamie, the first question we have is, does smoker fuel affect mites or honey bee health? Are there good and bad smoker fuels? I'm excited to hear what you say.

**Jamie**

I do like this question because it comes up from a couple perspectives. The first perspective here is, what about Varroa health? Well, there are folks who have believed that smoking colonies with different substrates, so the different substrates used in the smoker, a smoker fuel, would produce smoke that could be toxic to Varroa.

And there are research papers out there. In fact, if you go to Google Scholar and search “smoker fuel Varroa,” you're going to see a list of things that people have tried, tobacco leaves, things like that. However, I'm pretty underwhelmed by the data on smoker fuel and Varroa control, so I'm not really convinced that it's something worth pursuing.

So, I guess that's my full stop statement on Varroa mites and smoker fuel control. But I want to think secondly about honey bee health. That is an interesting question. People have been smoking bees for thousands of years, literally, thousands of years. And the question is, does this have any significant impact on bee health?

So, I would argue probably not, right? Because we don't drop our bees dead and they don't die from being smoked, those kinds of things. But I've never really seen people look at a study. Can bees be affected, anyway, physiologically by having to breathe smoke?



I think that's waiting to be studied. If you're out there listening to me and you want to look at something interesting from a bee health perspective, look at smoke impact on honey bees. But I'm going to take it to my third step, which is humans. So, I've gone from Varroa, probably nothing there. Bees, probably nothing there, but worth asking – all the way to beekeepers.

Think about it, Amy. Beekeepers are around smoke constantly, and depending on where they live, they may be using different smoker fuels. Pine straw, cut grass chips, wood pellets, all kinds of things that beekeepers around the world used to smoke bees.

And if you're a commercial beekeeper, and you're working colonies all day, every day, you get exposed to a lot of smoke. The question is, can smoker fuel impact beekeepers? And I'm not a medical doctor, so I'm not going to answer this question. I am actually using this as a plea.

If any of you out there are medical students and you're pursuing both a joint MD and PhD, this would be a fantastic longitudinal study that's just waiting to be done. The impact of smoker use on beekeeper health as well as what smoker fuels might be more or less impactful for beekeepers.

I've only got anecdotal experience, but people would need to look at things like, are there increased lung cancer rates in beekeepers compared to the general population? If so, what might that be traced to? So, again, Varroa, honey bees, people. Wouldn't pursue any different types of smoke for Varroa control.

I think you need to do it a different way. Honey bee health, interesting thing to think about. Maybe we need to look at it. Human health, very interesting thing to look at, and it's absolutely waiting to be studied. It needs to be studied, in fact, because maybe there are ways to make smoker use safer for beekeepers.

**Amy**

Yeah, the questioner actually was talking about using banana leaves and saying that it usually works well. So, I'm interested to know, Jamie, like we've both been around the world, worked with different types of beekeepers, you know, look at different fuels that they use, so what's the most interesting type of smoker fuel you've seen used?

**Jamie**

Yeah, so, in my experience, the most common smoker fuel around the world is actually dried animal dung, right? Any herbivores, any animals that eat plants, their feces is mostly just dried grass, you know, the nutrients that their digestive system could pull out of grass.

And then it's been clumped together into these feces that, once it dries, it's basically grass. And I've seen people around the world, every continent I've been to, people use dried animal dung as



smoke or fuel. So, that's probably the most interesting thing to me because, here in the US, we tend not to do that.

We'll do pine straw, cut grass, things like that. Maybe wood pellets, but it's very common all around the world to use dried animal dung.

**Amy**

Which animal? An elephant?

**Jamie**

Well, I've lived a lot of different places, so I've seen a lot of – well, I haven't lived a lot of different places.

I've visited a lot of different places. So yes, I've seen elephant dung used. I've seen cow dung used, horse dung. I've seen all kinds of things.

**Amy**

Yeah, Yeah, we've had Kaylin on before, our PhD student, and you know, she always talks about how she's going around and looking for animal dung so she can use it in her smoker.

**Jamie**

She's a pooper scooper, right? That was just right there. You just set me up. It was just right there waiting for me.

**Amy**

Oh my gosh. OK. The second question that we have, now that we're moving on from animal poo, can you talk a little bit about long-distance travel procedures for hive transportation?

Do the bees, I mean, I assume yes, but might they need some form of ventilation? And what could this look like?

**Jamie**

Yeah. I mean, there are a couple things to think about when you're moving bees. First of all, heat is a significant stressor to bees that are being moved. And when you think about heat management, you think about ventilation. I mean, the questioner said, what about ventilation? Yeah, you do need ventilation. So, let's think about it in this context.

Beekeepers typically pack their colonies or their hives onto the back of trucks at night time. That's for a couple of reasons. Number one, all the bees are in the nest rather than out foraging so



it's easier to do. Second, when you're working those colonies at night, you're getting fewer bees come out to get you, so you're losing fewer bees.

Plus, when you move bees at night time, it's dark and typically cooler. So, they're stacking bees on the back of the truck. Commercial beekeepers don't even close colonies up at all. They don't block the entrances of hives. Their colonies are kept on pallets. They use forklifts to put the pallets on the back of the truck.

And once they get the truck loaded, they'll just net the whole trailer so that technically the bees can come in and out of their nest, but they can't leave the truck because the whole structure is netted. And in that particular case, the entrances aren't blocked and there's a big net over all the hives.

And so, as that truck is moving down the road, you're getting a lot of ventilation. And if you do this at night time, it's cooler anyway. A lot of hobbyists, on the other hand, will stuff things in the nest entrance before they move hives. And if you're moving short distances, maybe a few kilometers or miles, that's not a big deal.

But if you're moving for hours, that's not something that I encourage you to do, stuff the nest entrance. I would say, instead, put some sort of screen on the nest so that the bees can get ventilation into the nest. Move them at night time so it's darker and cooler. I do know that there are commercial beekeepers, like if you're moving thousands of kilometers or thousands of miles, you're forced to have to drive during the day.

And I know some beekeepers who will stop and hose off the hives with water so that you get that kind of cool evapotranspiration while the bees are moving, so ventilation and keeping those bees cool is very important when moving bees long distances. And I know that from a hobbyist perspective, too, there are moving nets that can be used around the entire hive.

We used to use those all the time in my early days at the University of Florida. It's just this net that goes around the hive. Then you don't have to even close up the hive entrance. It pulls tight up underneath the nest and it just works really well.

So, keeping them cool, keeping them ventilated is important. The next thing you have to worry about is keeping them stable, right? And that's a logistics thing. You just don't want bee colonies coming apart or sliding apart while you're driving down the road. And so, if you're only moving a couple of colonies, I recommend strapping around the entire hive so that the box and the lid and the bottom board all stay together.

And then when you put those hives on the back of a truck, that you strap them and keep them from shifting around on the truck. And Amy, we have a fantastic video on moving bees in our Beekeeping Academy YouTube series that folks can check out and see more information about



moving bees. But stability and ventilation so that they don't overheat. All of those things are things that are very important when you're moving bees.

**Amy**

Definitely. So, we will put that Beekeeping Academy video on our additional notes and resources on our website. All right, so the third question that we have today is that the beekeeper is seeing bees packing a ton of pollen, just filling entire frames full of pollen. And this person says that they're familiar with the term bee bread, although their inspector calls it glazed pollen.

Anyway, these frames are so full that the queens can't lay in them and can't be used, essentially, for storage of anything else. Are you familiar with this phenomenon? And could you explain why the bees fill the frame up with pollen and not use it? What do you recommend that we do with these frames?

**Jamie**

Yeah, good questions. How do I explain this? Because the way the questioner is asking it, it's kind of got this negative connotation, right? The bees are storing too much pollen. And it's taking the space that the queen could lay eggs. It's taking the space where bees could store honey. Let's just start from the beginning.

Bees collect the resources that are available in the environment, and they collect them to use immediately, and they collect them to store for use later on a, quote, unquote, rainy day. That's the whole reason bees collect nectar.

They use it instantly or they convert it to honey. And honey is just that stored energy source that lasts a while. Well, bees do the same thing to pollen. While there's copious amounts of pollen available in the environment, bees collect it, they'll use it in real time, or they'll store it in combs, convert it to bee bread to have it available for use later when there is otherwise no pollen in the nest.

And I'm looking at when this question was asked, it was asked back in August. So, that's a pretty typical time of year for bees to be hoarding up on pollen. You often have significant pollen flows different times of the summer, and bees are just collecting it when it's available and they're storing it in the nest. Yes, it could be taking up space where bees would store honey or queens could lay eggs.

But honestly, if this is happening to you in August, and I'm assuming it is because that's when you're asking the question, it's not really a problem. You say the bees aren't using it, but the bees will use it. That's the whole reason that they're putting it in a nest. They may not be using it at this moment, but it's going to be available in the nest for them to use later.



And I'm answering this question, actually, in November, you know, a few months after you've asked it. So, you may not even have that pollen stored in the nest at all anymore. Maybe the bees have already used it. So, I do get questions from time to time about colonies becoming pollen bound, which simply means they've stored so much pollen that there are no places for honey storage or for laying eggs.

But that usually doesn't last long. If you're truly concerned, like there's, you know, 3 or 4 or 5 frames and it really is impacting where the queen can lay eggs, you can always shake the bees off the frames of some of those frames of pollen, put those frames in the freezer, and then have them available for use later when bees need pollen.

You could give those frames back to bees. But I've never seen it, Amy, at the level that I would be worried about it or do anything about it all. I just trust the bees are storing it for later use.

### **Amy**

Definitely. Very cool. All right, listeners, thank you so much for asking us your questions. Don't forget to send us more questions on our social media page or send us an e-mail.

Hey everyone, thanks for listening today. We would like to give an extra special thank you to our podcast coordinator, Jeffrey Carmichael. Without his hard work, Two Bees in a Podcast would not be possible.

### **Jamie**

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