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SPEAKERS

Amy, Stump The Chump, Jamie, Guest, Serra Sowers

Jamie 00:10

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 00:46

Hi, everyone, welcome to this segment of Two Bees in a Podcast. Today, I'm really excited because we have someone very special on the podcast and that very special person is Sierra Malnove with Creamed Honey Company, and Seirra's Bees, LLC. And she's out of Palm Beach Gardens, Florida. And I really wanted to reach out to Sierra because she's got just a fascinating business operation. Sierra, you do a fantastic job with your business. You know how to promote it, you know how to market it, and you are rocking what you're doing, so I am excited to have you on to kind of talk about this private beekeeping service that you offer. Thanks so much for joining us today.

Guest 01:25

Thank you for having me. I've been an admirer of your podcast for a long time. I think you and Jamie do an awesome job, and I love listening to it myself. I appreciate you reaching out and having me on.

Amy 01:38

Yeah. So we always love to introduce our guests with the beekeepers around the world. And so can you just quickly introduce yourself and maybe tell everyone how you got into beekeeping?

Guest 01:49

Yeah, so I have kind of a funny story. I got into beekeeping because I actually really wanted to have chickens. When I moved to South Florida, I was a stay-at-home mom homeschooling my kids and I really wanted to have chickens. I had garden beds in my front yard. But in the city of Boca Raton, you're not allowed to have chickens. So I started doing a little research and in the back of my head, I knew that my dad had been a beekeeper when I was a baby. And so I thought, "Well, I wonder if I could keep bees." And, of course, in the state of Florida, we have the right to keep bees and so that's really how I got into beekeeping. I mean, I've been obsessed with honey. I bought a lot of honey at farmer's markets while my kids were young and it just kind of seemed like a natural progression for me to start keeping bees.

Jamie 02:45

I love that. It's like, "You can't keep chickens." "I'll show you, I'll keep bees." That's like a really good strategy.

Guest 02:54

Yeah, right? Chickens are so easy and they don't bother anybody. So instead, we'll keep boxes of stinging insects on lot lines in the city.

Jamie 03:07

But that's how it started. So you got your bee colonies. How long ago was that? And then how did it segue into your idea for your private beekeeping services, all the different things that you do as a beekeeper?

Guest 03:21

So I got my first colony, I think, probably about 10 years ago. I fell in love with the bees. I actually set my first hive up outside of my bedroom window, and I would sit in the chair inside and watch the bees coming and going and I just completely fell in love. I was going through some big life changes, I was going through a divorce, and I knew that I would need to go back to work. I knew my kids were going to be put into school, and I have a degree in biology. I went to UC San Diego and I did research when I was in college on medicinal leeches, actually. I knew that I didn't want to go back to doing something like that. I wanted flexibility because I had three young children. At that point in time, about a year or two into my beekeeping, that one hive turned into 10 turned into 20. And I thought, "Oh, well, I could raise queens or do something like that." And so I had this vision that I would start raising queens, and I actually put up 100 swarm boxes all over my county and I caught freebies and reclaimed everything and started my business in that way. But during that time, Al, who's now my partner, and he's actually the one that gave me my first beehive, he had done a talk at a country club in Boca to their garden club. And after his talk, the ladies there begged him, they said, "Oh my gosh, we loved your talk. We would love to keep bees here at our country club." And he said, "Oh, well, I don't do that sort of thing. But I know this lady who lives in Boca, and she would probably do it for you." And that was August of 2014. That was actually my first country club. We put in two colonies. And I don't know if any of you are familiar with country club life, but when one country club has something, all the country clubs want it, or a version of it. I mean, those people are truly living their best lives. I mean, it's like they're living at Disney World every day. There's lots to do. There's lots of exciting things, and they do really love to get

into things that give back that feel good. My business has just turned into something that makes people feel good. And of course, it's become a great business for me.

Amy 06:03

Yeah, so I had actually heard it described as concierge beekeeping. And I know that you call it private beekeeping services. So can you just tell our listeners, what is that? What does that mean? Is this common? Do you know of others that do this type of business as well?

Guest 06:20

I think there are a few other people that do it. I love your name, concierge beekeeping services. It sounds way fancier than what I've been calling it. But basically, when I tell people about what I do, I kind of describe it as I'm like the pool guy, except I'm the bee lady. I bring bees to the country club, we choose a spot to put them that works for everyone, and I come every month, I take care of the bees, and then we small batch private label each club's honey for sale or for giveaway to their members. So it really is a service-based customer service, a lot of interaction with people. It's actually a lot of fun.

Jamie 07:09

Gosh, there are so many questions going through my head about this. I just want to ask, what's the revenue stream for you? Do the country clubs pay you to do the service? Do they pay you for the honey? How does that work? How does the business structure work?

Guest 07:24

Yeah, good question. So they do pay me a monthly service, just like you'd pay a pool guy. Then, everything else is sort of a la carte. So there's a monthly service for me to come check the bees. Typically, I'm there at least once a month, sometimes twice a month, to take care of the bees, to monitor, to make sure they have food, to make sure that they're healthy, to make sure they're queenright, to try and minimize swarming because, of course, we don't want that happening in those locations. So I'm there at least once a month, but it's a monthly service fee. When there are honey harvests, they pay me, basically, per pound to extract their honey. They pay me per jar, per label. I tell them that this is their program, and it should be exactly how they want it, if I don't stock a jar that they want, please tell me and we'll get it for you. We'll make what comes back to you exactly what you want it to be.

Jamie 08:31

Sierra, I think this is just brilliant. It's really cool and exciting to hear you talk about this. So I want to ask a little bit more about the kind of work involved. So you've got these revenue streams, but it's also work on your end. Work always translates into time. So what's the time commitment associated with this? Like you mentioned, you go once a month or once every other month? How many business partners or clients, maybe, can a single individual have? At what point do you branch out and hire additional people? Or what's the threshold for space, etc? Could you tell us a little bit about your input into this job?

Guest 09:15

Yeah, so I started with one, which quickly, very quickly, grew to, I think, three in my first year, and I'm up to 28 clubs now, I think, in private clients.

Amy 09:26

That's crazy.

Guest 09:27

It's a lot. I am going to be honest, a lot of my time is actually spent driving from location to location because most of my clubs will just have four hives. I have a four-hive minimum. I have a couple of clubs that have over 20, but for the most part, each club or resort or private client has four colonies. So I spend a lot of time driving, and then when I get there, I spend a lot of time talking to people, like, "This is what we're going to do today because I have to go to golf maintenance to get a golf cart." It's amazing. I've never hit a golf ball in my life. But I drive around in golf carts on beautiful golf courses, like almost every day.

Jamie 10:09

In a bee suit

Guest 10:10

In a bee suit, yeah. So I go and get my golf cart. And when I get my golf cart, I'm talking, I'm interacting with the people who work there, and then I'm checking the bees. To check four colonies, sometimes, takes only a few minutes. But then again, I'm on a golf course. So I've had to learn golf course etiquette. So sometimes I'm stuck behind a group of people golfing, and I just enjoy and look for birds and look for what flowers are in bloom. And if I see something in bloom, I'll get off the cart and take a picture because I do report back. I send pictures, I send health updates, or what's going on in the colony if we're in a honey flow. So a lot of my time is spent driving around and doing the customer service aspect of it. But, last year, I did hire someone because 28 is a lot for me to do on my own. As you know, in beekeeping, there's so much that goes on behind the scenes, right? We're in South Florida so wax moths are a huge problem. You cannot leave your comb sitting out. So we have a huge walk-in freezer that we keep all of our combs in. And this year, we've pretty much run out of space. So we have a huge chest freezer, and now we're rotating combs in and out of the freezer in order to keep everything clean and ready to use when it's time to put them back on. Then, we have the honey house. We have a kosher-certified food facility for bottling honey because a lot of these clubs want to -- or all of them really -- want to be able to sell their honey in their pro shop, or some of them even sell in local markets. So we do have a certified facility so we've got to keep that maintained. But really, what's the threshold for one person, I don't know. It was pretty hard for me, especially now that we've started Creamed Honey Company, it's been really difficult for me to keep up with the clubs on my own. So hiring Chris last year has really been a huge help. He works with me three days a week and it's awesome.

Amy 12:32

That's amazing. I have so many thoughts and so many comments about what you've just said. I mean, first of all, if I were going to a golf course, I would definitely be that crazy person in a suit just like driving

through games, and people would not be very happy with me. So I'm glad you follow golf course etiquette while you're going through.

Guest 12:53

It's definitely something that's learned. While I've been training Chris, there's so much that I do automatically that I don't even think about. So it's actually been a huge learning experience for me to try and teach somebody what I do because it's the human aspect, right? The interacting with people, the golf etiquette, but then it's also the beekeeping, right? You've got to know bees, but not just knowing bees, because you're not in a location where you can just go through the hives like a bear or go through quickly and efficiently, like you would do if you're a commercial beekeeper. You really have to keep the energy in the air controlled and maintained and that's a huge, huge part of what I do.

Amy 13:44

Yeah, and something else that you just brought up, I mean, I've been to your honey house before and it's beautiful. You've got this facility, and I remember just seeing all of the five-gallon buckets of honeys for all the different programs that you have. And as you mentioned, a lot of it is working with the public or working with people who may or may not understand the beekeeping world. So that kind of leads me into my next question. Do you see yourself as beekeeper or educator or both? And what do you think that your business really means to the industry?

Guest 14:16

So I consider myself to be a beekeeper. I mean, we do raise our own bees, commercially. This is actually the first year we're not sending a load of bees to California almond pollination. So, number one, I'm a beekeeper I would say. Educator, I don't I don't really put myself up that high. But I really feel like I'm a steward to the industry. My goal is to give people who would not otherwise have positive interactions with bees, a positive interaction with bees. That really is essential to my business. If one person has a bad experience, it really hurts my business and hurts the bees. I got into this because I'm in love with bees, I fell in love with bees. And I want everybody to have some sort of positive interaction with bees, whether it's looking at the hives on the golf course, or just having this beautiful jar of honey show up that came, literally, from their backyard, or from that golf course where they play golf.

Jamie 15:30

So Sierra, we've got beekeepers listening to us from literally all around the world. They're now listening to this interview going, "Oh, my gosh, I can do that. How brilliant is Sierra's idea and what she's doing in this business, an ambassador for bees everywhere?" But I want to ask a little bit about the business part of it. What are some things that people getting into this type of business need to be aware of? What are some recommendations that you have for folks who are interested in providing the service. I'll give you some leads. For example, how do you find clients? What are the rules and regulations that you had to look into and discover to make sure you're doing it right? Do you carry insurance for your business or liability insurance since it's bees on golf courses, etc? So what are some of the things, in those regards, that folks need to be aware of as they look to get into something similar?

Guest 16:22

Yeah, there's a lot of paperwork, because yes, when I got that first club, and they contacted me and asked me if I would be willing to do it, the first thing I had to do was get liability insurance, right? Everybody that I work with, before I'm even allowed to come on property, definitely before I get paid, they need to have my W-9, they need to have a copy of my insurance, they need my workman's comp information. There's a lot of information that they want you to have in place. A lot of them have a lot of concerns. Usually, the person that reaches out to me, and again, that is how I find clients, I've never advertised, all of my clients have reached out to me, just by word of mouth, but when they reach out to me, they're excited about the program. But there's always someone either on the board of the country club or a member at the country club who's going to freak out or be worried or not like the fact that they're bringing boxes of stinging insects to their club. That is a stumbling block that sometimes I come across. But usually, we can have some well-thought-out conversations or we can come in and do a talk like Al had done at that first country club, where we educate people about what it's like to live with bees in South Florida in country club and golf course situations. I've never cold-called or advertised to try and find any of my clients. They all call me. Sometimes, there's a lot of turnover in the golf industry. So a director of golf maintenance at one club will move to a different club, and they will bring my program with them. So now, I still have this club that he was at, but now I've got the next club that he's at, or his assistant will move up and become the superintendent and his own golf course, and he'll bring the program with him. So I've gotten a lot of clients that way. But it's really all word of mouth. And I would say for anyone wanting to start something like this, be thoughtful and be careful. The number one goal should always be to give everyone a safe and positive interaction with the bees. So I like to say, if you aren't comfortable working bees without gloves, without a veil, you should not be keeping bees in these scenarios because all of the people that will be around you will not have a veil or gloves. So if you can't control the energy in the air, if you are afraid to work the bees without gloves or without a veil, then it's probably not the right scenario for you because there is a lot of liability involved. One bad experience will really give a sour taste in the mouth of whoever that happens to. Just like all of my clients have come to me word of mouth, that word of mouth would travel even faster in the other direction if there was an issue. So, be thoughtful. Don't go and put 20 hives in one spot. It's pretty easy to control the energy in the air when you're working one hive or two hives. The more hives you work in one spot at one time, the more out of control the possibility for the energy in the air is. So just be really thoughtful about how you do it. Choose the right location. That's really the most important part of my program is choosing the right spot so that everyone has a good experience, including the bees.

Amy 20:22

Yeah, I mean, I think it's amazing. I definitely think your success helps with that reputation that you've created. You have been able to put bees on public, well, it's not public land, but --

Guest 20:34

Some of them are. I have two public golf courses.

Amy 20:36

Okay, so where the general public hangs out, though, just someone hanging out on the other side of a beehive. I think that also is very, very important with your success. So Sierra, you were talking about the location of the bees. I guess the follow-up question that I have is based on, when you're looking for

a location, are you trying to hide them from people so that they can't see them? Are you trying to make them visible so that people can kind of learn about the honey bees? Or how do you decide where to locate the bees on the properties that you work with?

Guest 21:12

Yeah, that's a great question and probably the most important one, right? So some of my clients want their bees front and center, they want everybody who's golfing on hole number three to see the bees when they're teeing off or when they are at the hole trying to hit their ball in. So when we have scenarios like that, we have to be really careful because the bees are visible, they're in areas of play. This is sort of where I've learned over time with the golfing etiquette and with how golf is played, you don't want bees in a typical landing zone. When somebody's hitting their ball from the tee and down the fairway, there's a typical zone where the ball will land before you hit it again to the next spot. So you don't want bees to be in those sections. You don't want bees on a cart path. So we're very strategic about where we place the bees, facing a hedge row, off to the side, maybe it's across a lake or something like that. I have some clients who don't want anybody to know they have bees until beautiful jars of honey show up. So I have some locations where the bees are not necessarily on the golf course, but in common area maintenance, like on a bat canal. I have a couple locations where the bees are located behind their golf maintenance shop. So I really take into account their goals. But again, keeping in mind the safety aspect because we don't want bees where they have to mow back and forth. Some of these golf courses mow three times a day. I know it sounds crazy. But if they're having to mow this area 1, 2, 3 times a day, don't want to have the bees there. So we choose areas that are low maintenance. That really helps keep everybody happy, the golfers, the maintenance staff, because I like to show up and be the happy lady, right? I don't want anybody to be mad at me when that bee lady shows up because I was mowing over there, I was trimming the bushes over there, and those bees suck. Right? That is not the role I want to be in. I want to be the happy lady. Beautiful sweet jars of honey show up and everybody has a good time. So location really, really is important.

Jamie 23:46

Sierra, I've so enjoyed this interview. It's really cool to hear how you approach your business. You mentioned something a little earlier, I want to circle back on and just ask you about. You mentioned offering a la carte services. So that implies to me that each club can choose from this list of services that you offer and create a unique experience for them. So I'm curious how unique all the clients are. You mentioned having 28 clients. So how unique are the packages that they choose? And then if you don't mind, you also mentioned that you not only do this for clubs, but you do this for private individuals. And I'm curious how those two different clients give you a different experience.

Guest 24:25

Yeah, it's so much fun working with the country clubs because they're always looking to do something new, something exciting. We have basic jars, right? At some of my locations, the program originates with the chef. And so a lot of the honey is either coming back in gallon jugs or in five-gallon buckets, which is not as exciting for me, but it's really exciting for the chef where they get to use something that's literally coming from their location, and they really highlight it on their menu. And then we have different size and style jars so that everybody can customize and have the look that they want from little tiny jars

that they're giving with tea service to larger jars for member golfing events or board meetings or weddings or galas. You have the jar aspect, and then you have the other exciting things. We just did custom-printed gift boxes. So having the knowledge to think outside the box and find something new and unique because I've found that it's really exciting the first year, and it's exciting the second year. But country club living is always about something new and exciting, right? It's like living at Disney World and being entertained every single day. They really want new and exciting things. I have some clubs that year after year, sometimes they're like, "Oh, we don't know what to do with the honey." And I'm like, "Oh my gosh, what do you mean? It's so amazing." So I've always got to kind of be on my toes and try and find new things that we can do. That's been really fun, right? They are always up for doing something new and exciting. A custom gift box, a custom trio, we've done custom creamed honey. And everybody's honey tastes totally different. I have some clubs up here in Jupiter that are two miles down the road from one another. Two miles, two miles, two miles, two miles. Everybody's honey tastes totally different. I mean, it's really, really fun and really incredible. And then with the private clients, it is a little bit different. But some of my private clients, we have bees on their home property, and they own three liquor stores, and we bottle it for them to sell in their liquor stores. So I have private clients like that. And then I have private clients that meet me in their backyard and want to learn about how to take care of their own bees, so it's like beekeeping lessons. Then, I have other clients who just want pollination in their yard, or they really love bees, and they want a hive. And so I'm literally like the pool guy. There's very little interaction. I show up, I take care of the bees, I text them a report. And then, honey, either I have one client that takes the box of honey from me and she extracts it herself. I have another client that doesn't really care about the honey at all. I have another client who wants it in five-gallon buckets. And then I have clients who want it in jars. My business is really tailored to the individual needs of each client. And some people tell me that I'm making too much work for myself. I've had other beekeepers tell me, "Why don't you just extract it all and then give them what their portion is?" And that's not what they want. They really want something tailored, something special. And everybody's honey is so different that it's not doing them a service to do it that way. So it really is service-based. Again, this is their program, and I'm just here to give them their vision.

Amy 28:26

Yeah, I think that is all amazing. So the last question that I have for you, and I'm going to ask this, and I'll tell the listeners why I'm asking this, but who was your favorite Florida Department of Agriculture and Consumer Services apiary inspector?

Guest 28:43

That's a terrible question. Because you know that one of them works for me now and I adore him. Of course, Chris Alonzo works for me. But I have to tell you, I have loved, genuinely loved every single inspector that we've had.

Jamie 28:44

Oh, my goodness, Amy. Perfect, Sierra.

Guest 29:03

No, I'm gonna tell you. The first inspector I ever had was Caitlin. And she's awesome. We all know that she's awesome. She was the very first one to inspect one of my clubs. And of course, my own home bees also. Then, we had Chris Alonzo, and then Chris Oster, who you guys have now. And now we're really without an inspector in my county, which is kind of a bummer. But I'm sure whoever comes, we'll love just as much.

Amy 29:35

I was totally joking because when I was putting your questions together for the podcast, Chris Oster, who is part of our lab, he used to be your inspector. So he comes into my office and I'm like, "Hey, what questions should I ask Sierra? I've got this list." And he was like, "You should ask her who her favorite inspector was." I'm like, "I bet it wasn't you."

Guest 29:57

He was awesome. Sometimes, I feel like the inspectors call me more often just because it's so much fun to go ride around on golf courses. And so I've gotten to spend a lot of time with Chris Oster. Actually, he's probably inspected the most number of clubs for me. But he's great. You can tell him I love him. I think he's awesome.

Amy 30:23

So Sierra, the next time I come visit you, I am super excited for you to take me around on a golf cart and I'm going to tell Jamie that I was working all day. Was there anything else that you wanted to add?

Guest 30:36

No, I think that's about it. I mean, I love my job. It's so much fun. We're so lucky in Florida, right? And especially South Florida. Beekeeping year-round. I mean, it's awesome. Doesn't get any better than this.

Amy 30:48

Absolutely. All right, Sierra. Well, thank you so much for joining us today. I know that our listeners have really found it intriguing and now they're going to aspire to be you one day.

Guest 31:00

Thank you for having me.

Amy 31:11

Jamie, I feel like this series of just bringing in people to talk about ways that they make money, it's just been so fun. It's been so much fun listening to people and their specialty and how they got into it and just all the creative ways I think people have been able to make money with honey bees.

Jamie 31:28

I'll tell you what, when we started this series, we were just thinking about ways to introduce beekeepers around the world, here's additional ways you can make money beyond simply producing honey or beeswax or pollinating crops. And I have absolutely enjoyed every interview. Sierra's is no different. I

love how much knowledge they have. I love how a lot of the folks we're interviewing for some of these niche markets are literally creating businesses that don't exist elsewhere. So they've had to do so much research, learn by trial and error, figure out about insurance and all that stuff. And one of my favorite quotes throughout all of Sierra's interview, she kept saying it, I love it, this idea of, I go to these clubs, and I manage the energy in the air. You and I get the benefit, we know Sierra personally. We've known her for many years now, and she's just that kind of person. Very positive, very happy, loves bees, and you can imagine how her vision for her business, when talking to prospective clients, is just infectious. And that's part of being successful in the honey bee world is having that love for honey bees that comes first having that love for the environment, the love for the business, and really wanting to share that in a very positive way, in an infectious way to do just what Sierra says, which has managed that energy in the air. I love that idea.

Amy 32:50

Jamie, the other thing, too, is a lot of these people coming in and talking to us about their businesses make it sound so easy. I think she's just like, "Oh, yeah, we just like go to golf courses, get on golf carts ride around and go take pictures of bees or flowers." But really, I mean, it's a lot of work, right? I mean, I can't even imagine the amount of work that it takes. And so I just totally respect everyone that is creative with their businesses and who is able to generate revenue in very unique ways.

Jamie 33:24

Amy, that's very true. And think about Sierra, specifically. I mean, she's working on golf courses where, she even mentioned herself, a liability risk is potentially high. These are the folks who are out there playing, the folks who are out there jogging or exercising or the grounds crew. But some clubs want bees visible, so she's got to be so knowledgeable. It's hard work, she's had to do a lot of research, you have to plant the colonies exactly where they need to be, to be in the background, but not close enough to be, potentially, a danger. She lives in South Florida, it's got that added issue, potentially, of having Africanized bees in the area and combating the messages associated with that. So there's just so much work that goes into something like that. Beyond the marketing and beyond the fun, there's all the physical work of beekeeping. Beekeeping doesn't change just because you're doing it on a golf club or at a private individual's house. It's still hard labor with a stinging insect. People who can manage that, keep that joy, keep that fervor, manage that energy in the air can really go on to be very successful business folks, even with a limited number of colonies. She never mentioned that she's keeping hundreds and hundreds and hundreds and hundreds and hundreds of colonies. She's saying, "I've got 28 clients that range from four colonies to 20 colonies." So you can be a very successful entrepreneur in the bee world with that kind of focus, but it will, like you said Amy, it will take work.

Amy 34:50

Absolutely. So this is kind of my call out to our listeners. We've highlighted some Florida beekeepers. If there are beekeepers out there who have a unique business or you think would be very good on the podcast, feel free to send us an email or message us on social media. We are on Facebook, Instagram, or Twitter.

Jamie 35:08

Great point, Amy. The reason we're highlighting the Florida beekeepers is we just happen to know them well because we run in their circles. But if you're out there anywhere on the globe, and you know someone who has a really niche, creative way to make money with honey bees and beekeeping, let us know. We'd love to have them on our podcast and open up that business opportunity to our listeners everywhere.

Stump The Chump 35:33

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

Amy 35:45

Welcome back to the question and answer time, Jamie. I'm excited because I haven't talked to you actually, our listeners don't know this, but I actually haven't spoken to you in probably a month now.

Jamie 35:54

Yeah. It's been a while. And there's a really good reason for that, right, Amy? We just don't like each other.

Amy 36:00

That's exactly right. No, you're in South Africa right now. You tried to get as far away from us as possible. So you're in South Africa. We won't do this for the Q&A, but I'm excited to interview both you and Kaylin, our PhD student, to talk about what you all are doing there.

Jamie 36:19

Yeah. So for our listeners, Kaylin, who, as you mentioned, Amy, is a PhD student doing some research in South Africa. And she's starting this year to set up her field sites. Since this is her first trip here, kind of under this research paradigm, my family and I actually traveled with her to South Africa. We're based here for two months. We're talking now, again, our listeners don't get the benefit of knowing the timeline when all this is recorded, but I've been here, we've been here almost a month now. We have about another month to go. You and I tried our best to record as many interviews as possible before I left, but we had a lot of Q&A that we still needed to do while I was gone. And this is one of those Q&As. So yeah, I'm joining from South Africa. Six hours ahead of you right now.

Amy 36:59

Very cool. So I was part of an at-home beekeeping series and that was in March of 2023. And during that series, Jeff Williams was talking about the Bee Informed Partnership, and some of the Varroa monitoring decision tools that BIP has, and so I basically just pulled questions from that chat. I thought that we could take some time to answer those. So those are the questions that people will be hearing for the next couple of months. So let's get started. The first question that we have, so this person was asking, does oxalic acid treatment need to be rotated? And they were under the understanding that it did not need to be rotated. We're always talking about rotating active ingredients with Varroa control, so what are your thoughts on that?

Jamie 37:47

Yeah, so this is a really good question. And it's really one that I think Dr. Cameron Jack from the lab would be a really good expert to answer because I'm going to paint myself in a corner with a comment that I'm about to say, but the shortest possible answer here is that the listener, the questioner, is in theory, correct. The mode of action of oxalic acid is different than what you would see from things like Amitraz, or some of the thymol-based products. So it kills Varroa a different way. Based on the way that it does, and how it ends up in the hives and all of that stuff, residue levels, etc., it is less likely for Varroa to develop resistance to it than to other compounds. Kind of under that umbrella answer, if that's the case, then one person could argue maybe we should just always use oxalic acid. If the level of resistance development is very low, or the likelihood is very low, why use anything else at all? And I would argue a couple of things as well. While the possibility of resistance develops low, it's not nothing, right? It's not negligible, because if enough people across the world are using oxalic acid and all the time it's happening, in theory, Varroa can develop resistance to it, even if the likelihood is low compared to some of these other compounds. That's number one. Number two, oxalic acid doesn't work at all times of the year in all settings. So for example, if you have a lot of brood present in the hive, it's not a good treatment option because a lot of your Varroa are in those brood cells. And so even though it is technically true that the likelihood of resistance development is low compared to some of these other compounds, that doesn't make it an ideal compound to use all the time. So yes, if you try to use oxalic acid, it should be included in a rotation with other Varroa treatments. And again, Amy, as you and I have said now a thousand times, you just go to the Honey Bee Health Coalition website, their Varroa control section, if you take their little Varroa control decision support tool, it'll tell you what oxalic acid is a really good option for you depending on where you are, the time of year, the condition of your colony, etc.

Amy 39:54

So Jamie, it sounds like, as far as resistance goes to oxalic acid, there probably needs to be more research that needs to go on with it. Is there a lot of research going on with OA resistance? Or is it just because of the mode of action, that it's not really needing to be studied?

Jamie 40:13

So I've not heard of any examples of Varroa development of resistance to OA. And again, the folks who study this closely look at the mode of action, argue that there's a very low likelihood of development of resistance. But I would say a low likelihood, again, doesn't equate to no chance of resistance development. With enough people using it all the time, it just seems inevitable, maybe, even, that this could happen. But again, I hesitate to say that because I know there are a lot of true diehard kind of OA believers out there. And I usually don't argue that we need to rotate it from a resistance standpoint, but more so argue that we need to rotate it from an efficacy standpoint. It's just simply not always efficacious in all settings, and all colony conditions at all times of the year. And so that's a good reason to need to use other compounds as well.

Amy 40:57

Yeah, absolutely. Okay. So for the second question, this individual is asking, do you think that using drone comb increases the number of drones produced? Or will the colony only produce more or less set percentage of drones as determined by the vigor of the colony?

Jamie 41:16

Yeah, that's an interesting question as well. I mean, in theory, worker bees are the ones that control the production of drones. Yes, queens will lay drone eggs, that's absolutely true. And maybe they indiscriminately lay drone eggs and don't know to stop laying drone eggs when it's not drone egg production season. But when workers don't want drones, they abort the eggs. And that's the simple truth. So, essentially, workers will rear through the number of drones they want to have at a given time of year. So, when you add drone comb, you could argue that workers will not produce any more drones than they want in the first place. Therefore, adding drone comb doesn't give you more drones. But I would argue that that's not true. And the reason it's not true is because in a wild colony, a colony that's not managed by a human, workers would produce proportionally more drones than we ordinarily allow them to at our colony. Think about it, if you've got a 10-frame box, you're giving 10 frames of foundation and that foundation is worker foundation. So the drones that the workers produce are from comb that they build on the bottom of the frame or sections of foundation that had been messed up. And rather than building it back worker comb, they'll build it back drone comb. So our colonies, you could argue, actually produce proportionately fewer drones than they ordinarily would, if allowed to build comb completely on their own. So giving them a frame of drone foundation allows them to make, probably, more drones along the lines of what they would actually do in a wild setting than in the managed settings we give them. So, in theory, they could max out their own drone production and not want to use that drone comb to produce more drones, but I think that is far less likely than the alternative, which is they will use that drone comb to produce more drones.

Amy 43:11

Right. All these questions are related to Varroa, and so far, new beekeepers out there. Do you want to talk about why a beekeeper would put a drone comb in a colony?

Jamie 43:24

Absolutely. Drone comb removal is a Varroa management technique. Now, I'm careful to say Varroa management rather than Varroa control because it doesn't completely control Varroa. The premise upon which it works is that Varroa are more attracted to drone brood than they are to worker brood. And there are lots of potential reasons for this to be the case. But the predominant reason seems to be that Varroa can simply produce more offspring. Drones take three more days to develop, on average, than do workers. And so Varroa have three extra days in a protected covered cell to produce more offspring when they're reproducing on drones than when they're reproducing on a worker. I forget the average, but I think it's one to one and a half more offspring they're able to produce on drones, on average, than they are workers. So it benefits Varroa to go into drone cells rather than worker cells. And so taking advantage of this biological phenomenon, beekeepers can use drone comb, and while the larvae are developing, Varroa will invade their cells, and when bees have fully capped over all of the drone cells on that comb, you'll have a disproportionately higher percentage of Varroa trapped in those drone cells than in the other worker cells in the nest. And then when that frame is capped over, you can simply remove it from the nest, freeze it for 24 to 48 hours, that kills all the developing drone pupae and all the Varroa in the cells, then you put that thawed out frame back into a hive, the worker bees will clean out the dead drones and clean out the dead Varroa, the queen will lay eggs in that

drone comb and the process starts all over again. So, taking these drone combs out and freezing them kills a good percentage of Varroa. It's very labor intensive, and it also takes up 10% of your brood nest. If you use a 10-frame brood nest and you're using one of those frames to be drone comb, you're reducing the worker production potential by 10%. But it may be worth it if you're reducing the Varroa production as well. So there are some pros and cons of using drone comb. Again, you can find out a lot more at the Honey Bee Health Coalition's Varroa control website where they talk about drone brood removal and its efficacy, and even have a video about how it works.

Amy 45:41

So for the second question that you just answered, you were talking about managed versus native honey bees. And so this kind of leads me into the third question. So the questioner was asking one of the reasons for low Varroa infestation in Africa and Asia is allowing high percentages of natural swarming. So my question is, is natural swarming good for Varroa control?

Jamie 46:06

It's funny that this question comes in because I'm sitting right now in Grahamstown, Makhanda, South Africa, where, Kaylin and I, of course, are looking for wild honey bee colonies and realize that they swarm and move around quite a bit. So, yes, in general, this is a gross generalization, but in general, African bees, especially in the area where we are, have a greater swarm tendency than do European-derived bees, which tend to be the honey bees that are used for production in many countries and continents around the world. Alright, so that means, to put it short, African bees tend to swarm more than European bees. I see it. I've known it for a long time. My colleagues here talk about it as well. Okay, so when a colony swarms, it creates a natural brood break because the old queen and half of the bees leave, and the new queen has to emerge from her cell, go out and mate, lay her first egg and then it takes that egg 21 days to go through all the developmental stages. So when a colony swarms, you can get a pretty significant brood break between the time the old queen leaves and the time the new queen's offspring is emerging from the cells. That natural brood break can reduce Varroa reproduction, therefore, reduce Varroa populations and colonies. So some people, especially folks who consider themselves natural beekeepers, this whole natural beekeeper movement right now, argue that we should allow colonies to swarm because allowing them to swarm is a natural way that they deal with Varroa. So I understand the logic and the biological relevance of all of that. The problem is that's not very useful in the world of honey bee production. Colonies swarm during our major honey flows, so when you lose swarms during that time of year, you lose significant honey production. If you're losing swarms that time of year, you're potentially losing the ability to make splits and have income other ways or to offer pollination services. So while it is technically true that swarming can help reduce Varroa populations and nests, from a production standpoint, swarming is still one of those things that's not advisable if you're into honey production or pollination or bee production or package production. So it all depends on what your beekeeping angle is. If you just want a little bit of honey that you can put on your biscuits or put in your tea, then, yes, allowing your colonies to swarm should be okay. Then you can collect the little bit of honey you produce, etc. No big deal. But if you're in production beekeeping, and you want to maximize honey production, colony health and fitness and all of these other parameters, then swarm control seems to be a very important piece of production apiculture. Now, we can get into the ethics of whether or not production apiculture is the way to go. But I would

argue that there are better and more efficient ways to control Varroa than simply allowing their colonies to swarm. Now, with that said, I will give the quick caveat that commercial beekeepers essentially create artificial swarms. They split their colonies. Well, number one to produce more colonies, to have more colonies or to sell colonies, but they also will do it as part of an integrated pest management strategy for Varroa. Swarming by itself and splitting by itself will not control Varroa. Even in the best of times, they would have to be coupled with other control measures. So you could argue that commercial beekeepers split colonies, which is simply a controlled swarm, and this can contribute to reduce Varroa populations. But allowing colonies to swarm gives you lots of other problems. For example, you've got unchecked populations of bees in the environment that cannot be treated for Varroa. So you've got a lot of Varroa in the environment around you. These feral colonies that you allow in the environment through swarming can be a disease or a parasite or a pest reservoir. So there are lots of reasons that I would argue that swarm control is better than no swarm control, and I think that maybe there are better strategies to control Varroa than allowing colonies to swarm. But I understand the question. I really appreciate this question. And I love the fact that it mingles biology with management, all in the same question.

Amy 50:09

Yeah, absolutely. All right. So those were the three questions for today. If you all have other questions, we have been receiving emails from beekeepers, so we're super excited about that, send us an email or send us a message on one of our social media pages.

Serra Sowers 50:26

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