

# Episode 144 PROOFED

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## SPEAKERS

Stump The Chump, Amy, Jamie, Guest 2, Serra Sowers, Guest

### 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 00:43

Hello, everybody, and welcome to this episode of Two Bees in a Podcast. Today, I'm really excited to be joined by Mary Duane and Lou Naylor. They are part of the Eastern Apicultural Society, and they're about to have their annual conference here. We're recording this in July of 2023. They are about to have their conference July 31 to August 4, 2023. So I'm excited to have them here today. Thank you so much, Mary and Lou, for being on the call with us.

### Guest 01:17

Thank you for having us.

### Amy 01:19

All right. So before we get started to talk about the Eastern Apicultural Society, I'm really excited to hear about all you do, but before we get into that, I would love for you to go ahead and tell our audience just a little bit about yourselves and how you got into the beekeeping world. So Mary, we'll go ahead and start with you.

### Guest 01:36

Yeah, Amy, about 25 years ago, I was a high school biology teacher and a high school track coach. I was at a track meet chatting with the opposing coach during the middle of the events, and I asked him, "What are you doing this summer? What do you do for summer vacation?" And he said he was a

beekeeping inspector in the state of Massachusetts. And I responded, "Wow, that sounds fascinating." And he said to me, "I think you should get involved in beekeeping. Why don't you take this beekeeping class that's taking place?" So it was kind of serendipity for me. Everything fell into place. And then this gentleman, Ken Wachtel, took me under his wing as my mentor and got me involved in beekeeping just by accident, and it was 25 years ago. So very appreciative for that.

**Amy** 02:22

That sounds like the best accident you could have, I think.

**Guest** 02:25

Exactly.

**Amy** 02:27

What about you, Lou? How did you get yourself into the beekeeping world?

**Guest 2** 02:32

Well, my grandmother was a beekeeper. So I grew up eating a lot of honey, honeycomb for dessert sometimes. And then, in 2007, I had a gentleman move next door to me who had kept bees for many years down in Kentucky and West Virginia. He agreed to be my mentor, so I started then. It started with a big honey habit, so I can say.

**Jamie** 03:03

Lou, where did your grandmother keep bees?

**Guest 2** 03:05

She kept bees on her family's farm in Germany. They had apples. And then when she came to Pennsylvania, she kept bees for her friends who had farms.

**Jamie** 03:16

I love that, absolutely love it. So, Mary, you're the president of EAS, and Lou, you are the Chairman. Could you tell us a little bit about the history of the Eastern Apiculture Society?

**Guest 2** 03:28

Yes, the Eastern Apiculture Society of North America, EAS, is an international nonprofit educational organization, founded in 1955, for the promotion of bee culture, education of beekeepers, certification of master beekeepers, and excellence in bee research. EAS is the largest non-commercial beekeeping organization in the United States and one of the largest in the world. Our name has the word society in it, and we are a society. We know each other. We look forward to seeing each other every year. And that is long tradition. We are composed of states or provinces from Canada, all the way down to Florida, as you know, and we have people come from the islands, we have people come from around the world. We go west as far as the Mississippi River. But we have people coming from California this year and all over.

**Amy** 04:37

That's amazing. I don't think I realized that the Eastern Apicultural Society was an international organization. But I love that there are people from all over the world attending your events. So that's why we have you on, to talk a little bit more about the event. And Mary, I know that you are the President right now, and you had mentioned before we had started recording that it was because you were in charge of the conference this year. I know that the conference is in Massachusetts. Can you tell us a little bit more about the location of where it's at? And then also, for participants, what should someone expect before coming to the event or what should they know about the event?

**Guest** 05:21

Yes, Amy, the state of Massachusetts, the Massachusetts Beekeepers Association, we're just honored and thrilled to have the conference in our state this year. As Lou said before, it rotates through the member states. And we haven't had it in Massachusetts since 2001 when it was down in Cape Cod. This year, it is in the western part of Massachusetts at the University of Massachusetts at Amherst, which is the flagship college in the state of Massachusetts. It's a very rural, beautiful setting for it, very historic New England atmosphere. In fact, Lorenzo Langstroth lived in Greenfield which is about 20 minutes away from there. He was a pastor in the church when he discovered bee space while in residence in Greenville, Massachusetts. So we think we've chosen a world-class university and a very rural setting for a very, hopefully, very enjoyable conference.

**Amy** 06:21

That is so cool. So many fun facts that you just threw at us. Thank you for sharing that. So for the conference, I know it's a conference-style event, are you guys all going to have classes out in the apiary? Are they mostly indoor classes? What kind of sessions should people expect?

**Guest** 06:39

Well, EAS is structured every year with Monday and Tuesday known as a short course. And we have programs, literally four programs going on simultaneously all day from nine in the morning till five. Some of those programs are out in the yard. We will have 10 to 12 live beehives out there with, what we call, bee wranglers. We have two EAS folks who are bee wranglers and they will be out there teaching various hands-on aspects of managing your hives, and that is on Monday and Tuesday. So indoor and outdoor. Don't forget the evening. We've got social events, dining around activities for the lovely community of Amherst. Then on Wednesday, we transform into a conference. So Wednesday, Thursday and Friday is a conference. We still maintain indoor programs and classes going on. The apiary is still available out there. We have keynote speakers in the morning on Wednesday morning. We start with our theme, which is "Past, Present and Bee-yond." And on Wednesday, we start with Tammy Horn Potter who will talk about the history of beekeeping. And then on Thursday morning, our keynote speaker will be Judy Wu-Smart from Nebraska. She'll talk about the state of beekeeping now. And then on Friday, we have a keynote speaker, Sam Ramsey. Dr. Sam Ramsey will talk about where he sees beekeeping beyond in the future. And then after the keynote each day, we have current researchers that EAS has granted scholarships to do some of their presentations. Just a nationally recognized group of speakers all day long. Some of the speakers, in no particular order, I said Dr. Sam Ramsey, Dr. Judy Wu-Smart, UFlorida's own Dr. Cameron Jack will be up there as well. Dr. Tom Seeley will be there. Kurt Webster will be there. Bob Binnie will be there. Dave Burns will be there. And I could go on and on. Some very excellent speakers. So we're excited for the quality of the

presentations. So Mary, if someone wants to register for the event, how can they do that? Well, at this point, it would have to be done via the internet. They go to EasternApiculture.org. And click on that and you will come to our website. And on there, there's a box that says "Conference Information," and it will list Monday through Friday, all the speakers, all the events that are going on. And then there's another little box right after you know what this program is, you can click on to register. We tell folks you can register for a day, you can register for a short course, which is Monday and Tuesday. You can register just for the conference, which is Wednesday, Thursday and Friday. But honestly, a lot of us, as Lou said, we're a society. A lot of us come for the whole week and we enjoy each other's company all day long and into social events in the evening. UMass has a hotel right on site. They have dormitories right on site. So I think we're gonna have a lot of good times at UMass Amherst this year and we look forward to having everybody come for a day or more.

**Amy 09:53**

Well, that sounds like a total blast. I love apiculture conferences. I think it's just so fun to meet so many new beekeepers. Every single time beekeepers get together, we can talk about bees for days. Just to be in a room and be in a space with a lot of like-minded people, I think, is really fun and to hear some of the challenges that beekeepers have, or things that went really well. Beekeepers are just so creative in all the different ways that they keep bees. So I'm sure it's going to be a really, really fun time.

**Guest 10:26**

Amy, the question that you and Jamie ask all the time, how'd you get yourself into beekeeping? I'd love to pose that. Sit down at the conference next to somebody I don't know, whether it be in the hallway or at lunch and say, "How'd you get into beekeeping?" People love to talk about their strange stories. EAS is a perfect blend between rich content and social activities.

**Amy 10:50**

I know. I always call us just a bunch of bee nerds. We can just nerd out and talk about bees and anyone else who's not a beekeeper, when we start talking about bees, they're like, "These people are crazy."

**Guest 11:02**

And we are.

**Amy 11:03**

Just a little bit. All right, I'm really excited for you all to have your conference this year, but I also wanted to talk about EAS as a whole and everything that you do. So, Mary, you had mentioned the research scholars and the individuals that are coming to talk about research. This question is actually for Lou, asking what other beekeeping-related projects does EAS lead? What else do you all do?

**Guest 2 11:32**

Well, one of the things we are a part of is the Honey Bee Health Coalition. We have researchers that come from there, we have a representative on the board of the Honey Bee Health Coalition, and we get quarterly reports from them. We also have the EAS Foundation for Honey Bee Research, which is a competitive grant program developed from donations received from beekeepers and others interested

in funding research on topical problems and honey bees. We also have a Mann Lake scholar that comes every year and they are funded. But we really enjoy hearing from the researchers and many of them continue to come year after year after they've won because they just enjoy the conference so much themselves. So that's been great. I did want to say this, on Wednesday, the people who are at the short course, Wednesday is included in their conference fee so they can stay through Wednesday and get at least a day of the keynote speakers in those activities.

**Amy 12:50**

Sounds good. So I will be sure to link the Eastern Apicultural Society website and also the link for registration on our additional notes and on our social media pages. But before we end off, is there anything else that you would like to add, either Mary or Lou?

**Guest 13:07**

Oh, Amy, I just like to do two things. Beekeepers, besides being interesting, tend to be very competitive. We have an awesome honey show taking place every year at EAS. So, it's a full honey show, honey, comb honey, gadgets, cooking, and baking. I encourage all your listeners to come to EAS and enter the honey show. I just think what an honor it would be to have the best honey on the East Coast of the United States. And that's what's up for stake this year at the EAS conference. So I encourage your people to enter and I've gone around promoting the conference, I've challenged different states to see which state will have the best honey this year. Another really important reason why a lot of people come to EAS every year is to get their master beekeeper certification. EAS is an organization that certifies EAS master beekeepers. So at the conference, there will probably be 40 to 50 people going around taking various types of tests. There'll be a field test, there'll be a test lab practical, there will be a written exam that they will be taking and there will be an oral exam that they will be given along the way. So there will be a set group of people that is working towards their EAS master beekeeper certification. So I encourage your listeners to consider that to take their beekeeping to the next level. This year it's closed off because the deadline is June 1. But start studying now and get ready to take the EAS exam next year.

**Jamie 13:39**

So, Lou, I'm aware that the EAS also has an awards branch. You guys give out an award for Researcher of the Year or awards for Extension Teaching Specialist of the year, I believe, as well as graduate students, etc. Could you elaborate on that program? The reason I bring this up is it's the only organization I can think of in the United States that actually awards annually, the careers or the activities or the jobs that people do in these various categories of apiculture participation, extension research, etc. And so I think it's a really nice program, given a lot of other organizations don't offer this level of award to recognize, I guess, what we can see as industry excellence. So can you tell us a bit about this program?

**Guest 2 15:29**

Well, we solicit applications. The applications must be in by April 1 every year. Many times, it's just seed money to provide investigators the opportunity to collect the preliminary data, or add-on funds with other funding sources to continue present research. There are student projects, undergraduate summer employees, and graduate students for equipment supplies and separate proposals. As a nonprofit

organization, the EAS Foundation does not pay overhead or funded research grants. But we urge everyone that thinks they might be eligible to apply, and they just need to go to EasternApiculture.org and look under "Research" and the forms are in there and the requirements.

**Amy 16:31**

Yeah, I think that's great. I think another thing, for listeners, especially, even if you can't make it to this year in 2023's conference, because the society is so well established, you all are doing this yearly. Annually, people can submit for awards, annually, they can go to the conferences, they can consider entering into the honey shows, consider master beekeeper program exams, and all of the above. And so I think, outside of just promoting for this upcoming event, it's really good to get EAS on your radar to be able to move forward and consider some of the conferences in the future. So thank you so much, Mary and Lou, for being on the call with us today.

**Guest 2 17:16**

Thank you for having us.

**Guest 17:18**

Thank you for having us. Next year, it's in Maryland.

**Amy 17:21**

In Maryland. Great. So here's my last question, so it rotates every single year -- Is it a regular rotation? Or how does that work?

**Guest 2 17:30**

No, the states have to bid to hold the conference and Maryland has successfully bid for next year. And the following year, we plan on being in Michigan.

**Amy 17:43**

Sounds fun.

**Guest 17:45**

Maybe Florida one of these years.

**Amy 17:48**

Maybe Florida one of these years. We are on the East Coast.

**Guest 2 17:52**

And we would like to see that lab.

**Amy 17:54**

We're going to have you come here soon. All right, everybody that was Mary Duane and Lou Naylor with the Eastern Apicultural Society discussing their upcoming conference this month, and a little bit more about the projects that they lead for beekeepers and bee researchers everywhere. So thank you so much for listening to this segment. So I was happy to talk to Mary and Lou about EAS. Jamie, I know

that their conference is coming soon, so it's probably past the deadline. For some people, it may be a little too late. But, as I mentioned, there's always a conference every year and you brought up some of the awards and scholarships. I'm not as familiar with the awards and scholarships, and I know you are a little bit more than I am. So can you kind of discuss that a little bit?

**Jamie 18:58**

So EAS is an interesting organization, right? They're a really large group made up of member states. The big thing that's flashy that most people know about is their yearly meeting. And their yearly meeting is really great. Mary and Lou were talking about that during the interview, all the folks are going to come, but they also do a lot of other things on the side outside their yearly meeting. They run this really notable and well-known master beekeeper program. They also do the grants that Lou was talking about, small grants, good seed grants for research. But they also run this award program for faculty and graduate students, which is, I think, probably the only one of its kind, at least that I'm aware of, in the United States. I know the American Beekeeping Federation has some awards for graduate students and they do a Speaker of the Year Award at their meeting, but in the case of the EAS, they actually have awards that they hand out every year that are focused on research, extension teaching or graduate students. So the first is the Research Award, which is the James Hamilton Memorial Award, which is just recognized as research excellence. So research that the beekeepers who are part of the awards committee deem to be appropriate, a long career, someone who's done a lot for beekeepers over their term. The second is the Roger A. Morris Teaching Extension Award or Regulatory Award. So you can either be an instructor at a university, you can be an extension specialist at a university, or you can work in regulatory type thing. So bee inspectors. So this is named after Roger Morris, who, of course, is that very famous Cornell bee scientist for many, many, many decades. This award recognizes the teaching extension and regulatory services by faculty members around the US. They also have a Speaker of the Meeting Award, the Douglas Award. In other words, folks who have done a lot of work on behalf of the beekeeping industry, specifically, to non-beekeeping public. So this is awarded to folks who really go above and beyond with beekeeper education and, of course, they have the Student Award and other things like that, scholarships that are available to recognize graduate student excellence. So it's a really nice society that goes beyond their annual meeting to do a lot to recognize the contributions made by other professionals in the field. Yeah, absolutely. I love hearing about the different societies and what they offer to beekeepers and bee researchers. I just think it's really great to just be exposed and learn about all these different organizations that I don't think I would have had access to prior to speaking to some of the people. It's always fun to chat with them, see the different everything, all the different projects that they do and everything that they offer. Yeah, and I know that we have a lot of listeners from outside the United States. So maybe this sounds a little too specific to the US, but to kind of pitch it in a big framework, we have three regional societies within the US. Of course, we have national societies, the American Beekeeping Federation, the American Honey Producers Association, etc. We have state organizations: Florida State Beekeepers Association, California, etc. And within states, we have a lot of local bee clubs. Also, between the state and national levels, we have these three regions: the Eastern Apiculture Society, the Heartland Apiculture Society, which is made up of member states within the middle of the US, and the Western Apiculture Society, which is western states. I believe it also includes western provinces and Canada and other places, even all the way out to Hawaii. And these groups are very important. I think the real take-home message here is that beekeepers need to be aware of the beekeeping organizations that are available

to them, regardless of where you are on Planet Earth. You and I have been long-standing advocates of being involved in your local state provincial, regional, national, and international beekeeping clubs. Number one, it makes you a better beekeeper because you stay on the cutting edge of bee biology and behavior and bee management, which really just helps you in your operation. But it also helps you move the industry forward. You're not just involved to learn, you're involved to help other beekeepers who are walking alongside you, or even those beekeepers who may come after you. The Eastern Apicultural Society is a good model organization for that, where they don't just offer yearly meetings, but they offer so much more by training and grants and awards. It's really a nice society.

### **Stump The Chump 23:26**

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

### **Amy 23:36**

All right, everybody. Welcome back to the question and answer segment. Jamie, the first question we have is from someone named Marcus, and they're asking about different races of honey bees. They were looking at queen rearing, what it was all about, and realized that they were a little skeptical about calling their bees a specific race. So how realistic is it to preserve a race, especially with open mating? And then, can drone yards dramatically preserve a race? So I guess let's talk about the different races of honey bees, different subspecies of honey bees and how people call a honey bee a type of honey bee.

### **Jamie 24:21**

Yeah, Amy, these are actually really good questions. The questioner is very right and the implication behind the question that they're asking. So let me just start from the top. We tend to use, in the beekeeping world, terminology inconsistently. So what I would say is that within *Apis mellifera*, that's the genus and species of the Western honey bee, the bee that we keep, there are multiple subspecies, up to 30-35, depending on who you ask. Most beekeepers listening to this interview right now will know that, for example, *Apis mellifera ligustica* is the Italian honey bee, *Apis mellifera mellifera* is the dark honey bee/the black honey bee/the Northern European bee/the German bee, whatever you might want to call it, and so forth. That's at the subspecies level. In the United States, as an example, the Italian honey bee, *Apis mellifera ligustica* is a very commonly used bee. So some people use, then, the terms subspecies and race interchangeably. So the race would be the Italian honey bee. The problem with this boils down to how these bees are sold and marketed. The questioner is exactly right. Unless you do a genetic test, you can't easily prove that the queen breeders are selling exactly the race or subspecies that they say they are selling. Or you might have a bee breeder, say, that they are selling Italian queens, or selling Russian queens or selling whatever. It's really hard for them to know that with absolute certainty. I don't think it's safe to refer to the bees that we have in the US, and for that matter, in other parts of the world, as subspecies or races if they are in breeding programs, or are managed by beekeepers. So what do I mean by that? I don't know that there are actually any pure Italian honey bees in the United States. So when a bee breeder is saying that they're selling Italian honey bees, they are probably mostly Italian honey bees, but there is no doubt that those bees have been mixed with other subspecies or races of honey bees in the US. In my opinion, that's not the safest terminology. I much prefer the word stock. We have no pure races of honey bees in North America anymore. So really what we have is a Italian-derived stocks of honey bees, right? Russian-derived stocks of honey



bees, New World Carniolan-derived stocks of honey bees. I think that's the safest way to refer to it. The questioner also asked, "Can drone flooding a yard dramatically preserve a race?" Even if you have very carefully selected queen lines and very carefully selected drone lines, you can't guarantee that your virgin queens are mating with the drones that you're flooding the area with, so it's still safest to refer to these things as stocks. Now, bee breeders, of course, try to tilt the scales in their direction. They do try to tightly control the queen stock, they do try to tightly control the drone stock, but our bees open mate. Unless you instrumentally inseminate your queens, then it's really difficult to guarantee that you've got this and that as a subspecies. So I don't like to use the words race or subspecies anymore in the beekeeping industry. I much prefer stock. And if you want to be technical, I like to say, derived stock, Italian-derived stock, Russian-derived stock, because that's really all that we can know. To be a little bit more cynical about this, which I know is dangerous, a lot of bees are said to be one stock or another just because of their color. "Oh, it's yellow or light brown, it must be Italian honey bees. Oh, it's dark, it must be this." And that's simply not a safe way to designate a stock. So, at best, we've got these derived stocks and the questioner is right. We really don't have specific races of bees, and it's okay to be skeptical of what you're being told because queens are open-mating. You lose a lot of control when that happens. Yeah, definitely. It's a melting pot in the colony. Okay, so that said, if a beekeeper has bees from a certain stock, how would they get that tested if they wanted to get it tested? So I mean, it's not overly easy anymore because you basically have to have a research lab to provide that service. I know a lot of labs are capable of providing the service, but they're not set up to do it commercially. So, just off the top of my head, I know that at Purdue, there is a lab there that has looked at honey bee stocks on behalf of beekeepers before, and they can try to genetically type your stock. But I don't know if it's a commercial service that's offered. Of course, if you're outside the US, you'd have to go to your own local bee researchers. Amy, beekeepers might want to do this just out of curiosity, but I'm not sure it would help them from a management perspective. Honestly, though, Amy, I envision a time when something like 23AndMe or ancestry.com is available for bees, 23AndBee. I guess that's waiting to be up. Of course, bees don't have 23 chromosomes so that wouldn't be appropriate. But you get the drift. But the point is I think that service is imminent, but it's not something that's widescale available at the moment. So it's just one of those things that you kind of just have to trust the breeder. You could ask the breeder how they try to maintain certain stocks and ensure that they're derived, principally, from Italian honey bees or whatever it is that you're looking for. At the end of the day, there was some research out of Steve Sheppard's lab at Washington State University years and years ago where they tried to genetically type honey bees from across the US. They were quite homogenized. I mean, yeah, you do get very defined strains or stocks of bees. But frankly, a lot of the queens that he was typing had derived genes from a lot of different populations. For example, they might have been principally Italian-derived, but they might have a little bit of New World Carniolans or German black bees or whatever. Most of the stocks that he was looking at actually contain genes or markers from a lot of different populations. Each bee that you purchase really is a mix, even if they're predominantly one thing or the other.

**Amy** 30:49

You know when you hang out with someone for so long, and you get to know them, and they start telling the same jokes over and over again?

**Jamie** 30:57

Yeah.

**Amy 30:57**

I'm pretty sure we brought up 23AndBee many times, and I think our audience is like, okay, now we're actually getting to know Amy and Jamie. Now, we're starting to hear the same jokes over again. So here we go.

**Jamie 31:08**

But it's not time to stop listening as a result. We'll try to create better jokes in the future. Or more jokes. Different jokes.

**Amy 31:16**

Yeah, that's right. Okay, we'll do that. Okay, so for our second question, this is actually a pretty good question, and I have no idea, but the person is asking about the effects of smoke on beekeepers' health. Is it considered secondhand smoke? Are there any studies related to the smoke effects on beekeepers?

**Jamie 31:38**

Another really good question. I've actually been asked this a few times before and unfortunately, almost always give the same answer, which is just, as far as I know, there's not a lot known about this. I did a quick Google Scholar search about this before I answered this question. I did, for example, find one paper online, "Respiratory symptoms and pulmonary function tests in beekeepers exposed to biomass smoke inhalation," but they didn't find anything that was overwhelmingly impactful one way or the other. It's one of these things that's constantly on our minds. I'm very aware of this potential issue. But there's just not a lot of research done on the topic. I mean, it makes sense. Beekeepers are using smokers all day, every day, and they're breathing in smoke. It's a little different, admittedly, from smoking a cigarette, right? When you're smoking a cigarette, you are purposefully taking in the smoke. But I know, for example, when I keep bees and I'm using a smoker, I will try not to breathe a smoker if it walks back towards me because the wind blows it to my face. I'll hold my breath for five or 10 seconds. So beekeepers do try to limit the amount of smoke inhalation they have. But you could certainly imagine that after decades of smoking bees and breathing that every day, it could potentially be problematic. So I feel like the world is waiting for a really good longitudinal study looking at the impacts of smoker use on beekeeper health. And I will even throw in another monkey wrench to this whole thing, Amy. Beekeepers use a lot of different substances in their smokers. I remember, years ago when I answered a question like this for readers of the American Bee Journal, some forester had contacted me behind the scenes in response to my question and said that not all smoker fuels are created equally. Burning pine straw versus burning grass versus burning wood chips or wood pellets, all of those can expose the beekeeper to very different -- I don't know the word -- ingredients, adulterants, or whatever that's present in the different types of smoke. Probably, all smoker materials aren't created equally and can pose varying impacts on beekeepers. So to make a long story short, great questions that need to be investigated because my sneaky suspicion is that there's probably some impact of the smoker use to the beekeepers.

**Amy 34:07**

That's interesting. I did not even think, and it makes sense. I didn't even think that not all fuels are created equally. But it does make sense now that you say it. All right, for the third question that we have. So it's a little bit of a long question, but I'm going to try to summarize as best as I can. These beekeepers basically have two colonies. So they've got these two colonies sitting right next to each other. Colony one has a very, very, very high mite count. They did the alcohol wash, they did a sugar shake, and found just a ton of mites. So the colony right next to it, we'll call that one colony number two, this one didn't have as many. It had one mite. They were told that they should go ahead and treat both colonies. So they treated both colonies, then they went back and they wanted to do a mite count again. Hive number two, that colony two, the one that originally had one mite in it has basically nothing. So I guess there are two parts of this question. The first one is, if you have two colonies, one of them has a ton of mites, the other one doesn't have any, should you treat? And then the second question is, if you end up treating both of them, and you find zero mites in the second colony, should you take whatever you're using it, let's say you're using strips in there, should you take the strips out after seeing that there are no mites in there?

**Jamie 35:33**

Yeah, so I like this series of questions because a lot of beekeepers are struggling with this particular issue with their colonies. I will tell you what I would do if this were me, but it's a little bit counter to what I'm going to have to tell you in the second question. So the first question is, if you have a colony with a lot of mites in one but hardly any mites, well below the threshold in the other, would you treat them both? I would not have treated them both. I would have treated the one that had the mites, the high mite loads over that threshold. And incidentally, if this is kind of a new conversation to you out there listening, we consider an economic threshold to be about three mites per 100 adult bees in something like an alcohol wash. So if you perform an alcohol wash, get over three mites per 100 adult bees, then you've reached the economic threshold and would treat. So I'm assuming that when they use "very high mite count," that they were at or well above three mites per 100 bees. So that colony, for sure, needed to be treated. That's not the problem. The other one, though, had one mite in the alcohol wash done this morning, it says, on almost 400 bees. So that's fewer than one mites per 100 bees. That's what you're looking for. That's like 1.25 mites per 100 bees, which is well below the economic thresholds. So I would not have treated that second one. Now, I differ from a lot of beekeepers on that point because a lot of beekeepers will say, "Well, you've got that one colony that's really high. You might as well go ahead and treat the second one, because you know that it's going to get spill over." If you've got 0.25 mites per 100 bees, you're so far below the economic threshold that I don't think that that spill over from the heavily infested colony is actually going to be that big of a problem. So I would argue, in this case, that you would have treated the one but not the other. The catch-22 is, the second question, but they've already treated the other one anyway. So should they just take out those strips? I would argue, at this point, once you've started treating them, you wouldn't take out the strips. Number one, because it would be contrary to the label. The label talks about a specified amount of time that the strips need to remain in the hive. So I would leave them in the hive that specified amount of time. Second of all, if you put strips in, and then take them out, well short of the labeled time, you run the risk of doing something like that over time, creating resistant populations, mites becoming resistant to the strip. So any use contrary to the label can promote resistance of mites to those compounds. So I would not have treated them both in the first place. But since they have both been treated, I would run the treatments out per the labeled rate.

**Amy** 36:40

All right, I think that's pretty good advice. So the questions that we've been receiving have been great. I hope that people are still sending us messages on social media and sending us an email. There are probably many people out there who have a very similar question. So thank you so much, and we'll see you next time.

**Serra Sowers** 38:50

Thank you for listening to Two Bees in a Podcast. For more information and resources on today's episode, check out the Honey Bee Research Lab website at [UFhoneybee.com](http://UFhoneybee.com). If you have questions you want answered on air, email them to us at [honeybee@ifas.ufl.edu](mailto:honeybee@ifas.ufl.edu) or message us on social media at UF honey bee lab on Instagram, Facebook and Twitter. This episode was hosted by Jamie Ellis and Amy Vu. This podcast is produced and edited by Amy Vu and Serra Sowers. Thanks for listening and see you next week.