

# Episode 92 March Management Mixdown

## PROOFED

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### SPEAKERS

Jamie, Serra Sowers, Stump The Chump, Amy

#### **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** 00:51

Alright, everybody, so we were doing Five Minute Managements in the past and decided that what we wanted to do was really a longer version of the Five Minute Management in its own segment. We had received quite a bit of responses from our survey, and we're always looking for recommendations on how to make this podcast better. Something that people were mentioning was, could you give us management tips and make them relevant to the time of year? And so what we're going to do is this episode will be a segment. We are starting in March of 2022. But, I guess, better late than never, right? And so we're going to start in March. And so today, Jamie and I are just going to discuss general management practices for honey bee colonies during this time of year. So we'll try to release these a week before the month starts. And so you will all, hopefully, be on top of things in your colony. And let us know if you enjoy it. But Jamie, let's go ahead and get started in the segment.

#### **Jamie** 01:54

Amy, sounds good. And one thing I'll say as we kind of roll into this, Amy and I fully are aware that we are speaking to beekeepers all over the world. In fact, we know that as we talk about management for March, it's going to be the northern hemisphere because the southern hemisphere beekeepers, you guys out there completely reverse of us. You're not experiencing what we are experiencing in March at this moment. For the northern hemisphere folks, I want to try to keep it as broad as possible. Amy and I

live in Florida, we talk about stuff in Florida a lot. But Florida's got a warmer climate than a lot of folks in the more temperate climates or a cooler climate than the folks in the tropical climate. So I'm going to try to keep it broad, we'll try to broaden it. And for you folks, again, in the southern hemisphere listening to us, just kind of hold on to the idea that maybe it's not relevant to me this month but next spring or spring equivalent this is what I can think about when it rolls around.

**Amy 02:50**

Even, Jamie, in Florida, we've got North, Central, and South Florida, and they all have different climates. It's insane. Yes. All right. Okay. So, we're going into March 2022. What are we looking for in our colonies?

**Jamie 03:06**

Well, I'm just going to start by saying, number one, and I say this a lot, usually when I give this talk on honey bee biology, folks seem to really like it, and every time I give this talk on honey bee biology, one of my first slides is why would you want to even know this as a beekeeper? Why should you care about honeybee biology? And the answer is the best beekeepers are those who know what bees are trying to do at any given time, number one. And number two, you know what you're trying to do as a beekeeper. And number three, you work in a way to harmonize those two things. You're trying to harmonize what you do with what the bees want to do to take advantage of optimizing colony health and productivity. So when we think broadly about what one might do in March, it's important to ask, well, what are bees doing this time of year? So if you just use the calendar, the calendar says, in the northern hemisphere, spring starts in the early March 20s, right? It varies a little bit, a few days 20, 21, 22, somewhere in there. But it starts in the early March 20s. So in theory, in March, the first two-thirds of March is technically still winter. And by the last third of March, you're technically in spring. So really March represents this time of year in many bee colonies around the northern hemisphere, then again, it's like winter-spring because in the southern hemisphere, it represents the time that bee colonies are starting to come out of winter and move into spring. And it's this period of the year that you'll see a lot of floral resources begin to become available, so flowers are starting to bloom, pollen starts being available, nectar starts being available, all of those things. It's warmer, the daylights are lengthening, all of these things collectively start to trigger the colony to grow. They're bringing in resources, they're relaxing their cluster, the queen is laying eggs, they're rearing brood, and it's just that time of growth. If you think about an exponential growth curve, where at the front of that curve, it's kind of flat and just inches up a little bit, that's the period that we're in this time of year with bees. It's just starting to inch up a little bit right before spring hits full force and the populations rocket up. So that's what's happening in our colonies right now.

**Amy 05:42**

So you're talking about them building up and going out and finding nectar and pollen sources. What about feeding? Is this the time of year that beekeepers should start feeding if they haven't been feeding already?

**Jamie 05:54**

Yeah, it's so important to think about this, right? So you've got the biology of this beast that's coming out of hibernation as it were, like a bear that's coming out hungry. It wants to grow, it wants to put on

weight. Well, a lot of folks will say, "Hey, we're coming out of winter, we're going into spring, they should have all the floral resources available to them." But that's not necessarily true. You can, in late winter or early spring, get abundant pollen resources. So the bees are wanting to make more offspring, but you don't get abundant nectar resources, so there's not enough energy to drive that. Furthermore, they spent all winter consuming the stored resources they have. That's why bees store honey in the first place so they have enough energy to power their warmth through winter. Well, if it's been a particularly harsh and cold winter, and it's now March, maybe the bees have used those resources, maybe they are hungry, and you're weeks away from any significant amount of nectar so it might be a time of year that you need to check weight of colonies. So in early March, especially, I start telling beekeepers, "Hey, just go hoist up your colonies from behind." Are they easy to rock forward? And if they're easy to rock forward, do they have enough stores? And if it's warm enough for you to actually go into that colony, you rock it up forward and it's easy to rock forward, and you're worried that they have enough food, go and look and see what are their stores. And if they don't have enough stores and if there's not enough incoming nectar, and you don't foresee for another three or four weeks that there's going to be enough incoming nectar, a lot of colonies can starve as a result. So don't put feeding on the back burner in late winter or early spring because that may just happen to be the time your bees need it most. So consider going and assessing the amount of food that they have, the stores that they have, and if they need it, be ready to feed it. Gosh, Amy, that should be a t-shirt.

#### **Stump The Chump 07:52**

If they need it, be ready to feed it.

#### **Jamie 07:55**

If you're a listener out there and you want that t-shirt, please let Amy know.

#### **Amy 07:59**

Okay, I'll put my face on it because honestly, I was just thinking like, if I'm going to bed, even if I eat before I go to bed, I still wake up hungry. You know what I mean?

#### **Jamie 08:09**

Hungry? Hangry? Which one?

#### **Amy 08:11**

Both, whatever. Okay, so the other thing that I was thinking about was equipment. That was something, I guess, that by this point, during the winter, you're going through, you're making sure equipment is good to go, you're trying to be ready so that you've got all the extra equipment that you need as the bees start getting more active. And so what are your recommendations for equipment, whether that's repair, whether that's how much extra equipment do you actually need, because that's something when I first became a beekeeper, did not realize that I needed extra supers just available at all times.

#### **Jamie 08:45**

Yeah, very important point, Amy. So usually what I tell beekeepers, again, I'm kind of working on the December, January, and February are the coldest months of the year. So if you're in the southern hemisphere, that would be June, July, August. So when you're in those coldest months of the year, it's

a great time to repair equipment, paint equipment, buy new equipment, and have it ready to go into spring. So I would argue, by the time March comes rolling around, that late winter, early spring, you really need to have your equipment, ducks in a row so to speak, you've got everything together, you're ready to go. Because in the beekeeping world, things are going to start happening so fast at this point that it'll be hard to take a break and make equipment and get stuff ready. It's interesting because I'm speaking as if colonies are coming alive here in late winter or early spring. In reality, in a lot of North America or the United States, for example, there are a lot of colonies that have already been awake for two months, and they're out pollinating almonds in late January and February. So for those folks who aren't going to crops like that, you should have your equipment ready. It's time to be ready to accommodate that waking giant.

**Amy** 09:54

Yeah, there were some beekeepers that I had just recently had a conversation with and they were talking about how some of the best beekeepers out there are the ones who can basically read the future, right? You know what's happening in the future, so to be prepared for it is very good. So Jamie, what about any diseases or pests that we have to worry about? What should we be looking out for?

**Jamie** 10:15

Yeah, so you're coming out of winter, and your colonies are starting to bring in those resources and grow. Generally speaking, this is an overgeneralization, but generally speaking, a lot of the parasite and other arthropod populations should still be in check at this point. So usually, you're not coming out of winter, in most of the temperate climates, with a high Varroa population. If you're living in areas where small hive beetles are present, you probably don't have a lot of small hive beetles at this period of time. But on the other hand, there are some things that tend to be worse coming out of winter. If you think about it, from a very practical standpoint, winter is a time of year that all the bees are crowded in hives, super duper close to one another. And all of this facilitates the transmission of things such as Nosema, or the expanding infestation of things like tracheal mites, or perhaps, viral pathogens. So coming out of winter, and heading into spring, a lot of beekeepers are really worried about things like Nosema loads. What are the spore counts of Nosema? Is it out of control? Do I see evidence of Nosema infection? And do I need to do something about it? At least where we're at in Florida, we don't see a lot of tracheal mites. We used to tell people all the time, you need to be worried coming out of winter and going into spring about tracheal mites. But where we are, I haven't seen tracheal mites in bees during my 15 years here at the University of Florida. But I do know that some other viral loads can be high, and so you have to be ready to fix these problems because as you come out of winter, those colonies are going to start hitting the ground running, right? It's early spring. There are floral resources available. They're going to grow, grow, grow, grow, grow, and you don't want anything to hamper that. And like I said, the biggest threat probably coming out of winter for most folks is going to be Nosema. But usually, I will tell you, this too, Amy, is an overgeneralization, but usually, coming out of winter and heading into spring when that colony starts to hit that growth phase, they tend to be able to outpace many of the diseases and pests that they would encounter. I would give one warning though, which is the universal warning that we need to make probably every month: You do not want unchecked Varroa populations. So give them a check, sample to determine things are okay, if they're not, treat if necessary. If they are okay, sample them the next month and the next month and the next month just to make sure their populations aren't reaching those damaging levels.

**Amy 12:47**

What I think it's really amazing is that we have so many resources, actually, well be sure to put them in our additional notes and resources on our website. But we have resources on how to monitor for Varroa, even how to check Nosema spores, and what to do with foulbroods if you have them. And so, I really hope that our listeners go to our website and check out our resources. Okay, let's move on to the next thing. So I guess the other thing I wanted to think about was just queens. So checking the queen status, any queen-related thing. So I mean queen-related swarm control, splits, I mean, should we be thinking about that right now? Do we wait, what do we do?

**Jamie 13:28**

I love this question. The reason I love it because this is just, to Jamie, I'm speaking as Jamie the beekeeper here, not Jamie, the scientist, but in my official opinion, you are far more likely to encounter a queen event this time of year than maybe some of these other things. So usually my biggest issue coming out of winter going into spring is do I have a queen? Okay, she's there, check. Is she good? Well, what am I looking for? Is she good? Well, is she building up adequately, the brood pattern, solid versus spotty? Are the workers that she produced docile and productive and disease and pest resistant? So is she there? And is she doing a good job? The reason I think queen management this time of year is so key is actually for a couple of reasons. Number one, this is the time of year that colonies start preparing to swarm. Coming out of winter and going into spring, nectar flows picking up, where we live in Florida colonies swarm with regularity in March. Maybe for some other folks, the swarm season starts in April, maybe even as late as May but where we live, it's March. So swarming produces a queenless colony. Think about it. The old queen is the one who leaves with the swarm. Let's just say for the sake of argument, 50% of the bees fly away, they take the old queen with them. So that means the parent colony, the one that you're keeping and hoping to manage to be as strong as possible, the one that you're keeping and hoping to make as much honey from as possible or maybe make splits from, is now queenless. And yeah, there are queen cells. And yeah, there's a virgin queen who will emerge but sometimes that process fails. So swarm season brings with it queenless and queen problems. You lose your queen in the production, or your colony is slow to make a new queen, lots of things can happen to queens coming out of winter and going into that early spring, so make sure she is present. And since it's March, this is what we're talking about, some of you, us included, are going to have to start practicing swarm control, if you want to keep as many bees as possible. And that hive, if you want to maximize honey production, you've got to keep those bees put in that hive, and swarming will reduce the amount of honey that colony mace makes. So, for people in, for example, North Central Florida, or maybe southern Texas, you've got to actually start swarm control measurements in spring. Maybe if you're in the Northern US or Northern Europe, or other places, for example, in Australia or Asia, you may not have to start swarm control this early, but you need to start looking in your colonies in March for evidence that your colony is preparing to swarm. They're producing lots of drones, there's little space for queens to lay eggs, there's tons of bees relative to the size of the hive in which they live, they're starting to make queen cells, all of these are good indications that the bees have swarming on the brain, even if you don't.

**Amy 16:46**

And so then what would you do to prevent the swarm?

**Jamie 16:49**

Yeah, there's a handful of things I do. Me, as a hobbyist, I like to keep my queens clipped. If it's the old queen who flies, if she can't fly, then the colony can't swarm. Coupled with that, I'll add space as needed to relieve congestion. And then even on top of that, I will go into my colonies once every week and remove all of the swarm cells that they are producing, those queen cells that they're producing for the purpose of swarming. But a lot of commercial beekeepers just don't have the time to do that. They can't be that involved at every colony, every frame, every week. So a lot of folks' chief swarm control mechanism is actually making splits. So in many areas in the northern hemisphere, March represents a great time to consider making splits. In the southern hemisphere that equivalent for you might be somewhere around late August or September. With this idea that resources are coming in and a split is essentially a controlled swarm, right? When you're removing bees and brood from a hive, you're basically swarming that colony for them. And the benefit of making splits maybe in March is, number one, it's a good swarm control practice, but it's not foolproof, in other words, your colony can still swarm. This was one of the ways to get on top of it. But number two, it's a great time of year to just make splits, just so you can sell splits. Maybe you've hit that number of colonies that you want, 10, 15, 100, 1,000, whatever, and it's March and you got bees everywhere but the honey flow is still a month and a half away and you know if you don't do something, the bees are going to hit the trees. Man, just go in and make some splits. It helps alleviate, not eliminate but helps alleviate those swarming tendencies. Gosh, it gives you nucs galore where you can increase your numbers or sell your bees to that huge population of folks who just want a hive.

**Amy 18:47**

Yeah, and back to what you're saying about just checking the queen status and having a queen, this would be, honestly, the best time to start meeting your local queen breeders or finding a reputable queen breeder and that way you have a resource because sometimes, especially today, it's hard to find queens. So, join your local association, meet with other beekeepers around your area and hopefully, you all can work together to find a good place to find quality queens.

**Jamie 19:18**

Amy, I think all that's wise advice. You saying that reminded me of one thing. I've kind of set the stage with this queen issue and said queen issues are so bad in March for two reasons. Number one, colonies just create situations of queenlessness by wanting to swarm, but number two, and equally important is it's hard to get queens in March. So if you have to solve a problem, it's a tough time a year to solve that problem. When I think about management in March, is she there, is she good, and what's my backup plan if she's not either one of those? Do I have queens on hand? You had mentioned just now this idea of having other beekeepers, being a part of a local bee club so that maybe you can get queens from them. Because like I said, March is just a tough time of year. It's just a tough time of year.

**Amy 19:43**

Yeah. And I think honestly, queen breeders like to sell their queens as a bulk instead of just one or two here and there. Alright, Jamie. So we just went through getting ready for your colonies, feeding, if necessary, different pest control that we should be looking at, and then queen and queen-related issues. And so is there anything else that you have, as far as getting ready for March management?

**Jamie** 20:37

Yeah, absolutely. So for most folks, again, in the northern hemisphere, March represents a time that's leading up to the major nectar flow. It's like a slow, steady increase of that wave until the wave is just gigantic when bees are going to make all the honey that they make for the year. So March is a good time to scout out potential apiary sites where you can move your bees in advance of the major nectar flow. Maybe you're blessed to live in an area that's just full of copious amounts of pollen and nectar, and you don't have to move your bees at all because you're going to make tons of honey where you are. Or you might be like Jamie Ellis who lives in an area that's the exact opposite. If I wanted to make honey, I'd have to move my bees in advance of the major nectar flow, so March. This kind of late winter/early spring represents a time that you can scout out potential apiary sites to be ready to move your bees to those sites, so that when the honey flow starts, you can maximize honey production. Again, this time of year, you're trying to facilitate the bees coming out of winter, making sure their diseases and pests are under control, that the queen's looking good, and that they are growing adequately to prepare for the coming nectar flow or even if you don't want to produce honey, that they're growing adequately for making splits or for being ready to move to pollination contracts.

**Amy** 21:58

Yep, I think those all sound great. And so listeners, I hope you enjoyed this March management calendar. We plan to do this every month for the rest of the year to get you prepared for what to do in the upcoming month. And so let us know, we'd love to hear your feedback, send us an email, send us a direct message on Facebook, Instagram, or Twitter, but until then, we look forward to continuing the monthly management segments.

**Serra Sowers** 22:25

Enjoy enjoying our episodes? Support our programming and the UF Honey Bee Lab by adopting a honey bee, queen, or hive. Your monthly gift can help support research and programming and help more people learn about honey bees. Check out our website at [UFHoneyBeeLab.com](http://UFHoneyBeeLab.com) for more information.

**Stump The Chump** 22:53

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

**Amy** 23:06

Alright. Welcome back to the question and answer segment. Jamie, the first question we have, actually, this is a reoccurring question that I've been seeing a lot this past week. So one person placed some hive moth-infested frames in the freezer for two weeks. So after they took these frames out of the freezer, they bagged the frame and then left it on a workbench for another two weeks. So apparently, it looks like the larva, the pupa, it seemed like that was all dead but the egg seemed to survive. Is this something that happens? Why would they survive? And do you think that they actually survived? I guess, how would you know?

**Jamie** 23:43

There are a couple of factors at play here, Amy. And one of those is just related to how long you freeze. The second of those is what temperature you're actually achieving in your freezers. Freezing from the Fahrenheit perspective is just 32 degrees. So a lot of freezers will drop the temperature slightly below that, maybe in the 20 to 25-degree temperature range. Now, just because it's set at that temperature doesn't mean that it reaches that temperature quickly, especially if you're freezing, for example, a lot of combs at one time, or if you go in and out of that freezer multiple times throughout the day. So in theory, if you freeze at 20-degrees Fahrenheit for four and a half hours, you're going to kill all the life stages of wax moths. Obviously, if you can freeze at a lower temperature, for example, 10 degrees Fahrenheit or 5 degrees Fahrenheit, it will take fewer and fewer hours. A lot of folks, if you look it up online, they'll recommend freezing combs for about 24 hours. I usually tell people to leave them in the freezer, a good freezer for a solid week. In this particular case, the individual mentioned that they had it in the freezer for two weeks, then bagged it, and then left it on the workbench for another two weeks before they went back and noticed that there are some presumably active wax moths in the combs. So I would have said, two weeks is more than enough. So a couple of things go through my mind. Number one, were you reaching the freezer temperatures that you thought you were reaching? And again, I want to point out that if you're moving stuff into and out of our freezer a lot, that can raise the temperature on the freezer and delay the time that it takes to freeze everything thoroughly. Number two, the egg stage may be a little bit more resistant in wax moths to freezing than some of the other stages. But number three, you could also have reinfestation. Wax moths are really, really, really good at getting into places and laying eggs. So I can imagine a situation, for example, where those frames came out of the freezer, and indeed, everything was frozen. And maybe there was a day before the beekeeper bagged it, or they only loosely bagged it. In either case, wax moths could get in there in a very short period of time and lay eggs. Even if you feel like you might have tightly bagged it, if there was a delay between the time you took them out of the freezer and bagging or some opening somewhere in the bag that the moth could have gotten in there and laid eggs. So in general, what you did should have been sufficient. So hopefully, it's just kind of a one-time occurrence for you. Again, freezing for two weeks should be more than sufficient, especially if you're getting out of the 20 to 25-degree range. But do check it. You don't want to just bring them out of that freezer, bag them up, and assume that everything's good and come back a little bit later and find that wax moths have destroyed the combs in that bag. But in that case, it's more often less likely that the freezing did work, and maybe more likely that moths got in there another way.

**Amy 26:36**

Alright, Jamie. So the second question has to do with combining colonies. And so this person was asking us what do we use? What methods do we use to combine colonies? There are different ways to do this. So I guess the first part is two colonies that maybe were originally part of the same colony but maybe split at some point. And so if you had to bring them back together at some point, what would you do? Do you have to use newspaper to separate it? And, I guess, what are your recommendations on that?

**Jamie 27:07**

Yeah, so the good news is my answer will not vary, even if the colonies were related before needing to recombine them or not. So I'll kind of explain that in a little bit more detail shortly. But first, I'll just go over some common combining methods. When I first started keeping bees, 30 some-odd-years ago, I'd



read all the books, and even my mentor told me if you needed to combine two hives, let's just say for the sake of argument, you've got hive A and B. So colonies living in both of those hives, let's just say colony B is queenless. And so you want to combine hives A and B to unite those two colonies, rather than trying to figure out how to requeen colony B. What the books would often say is that you would take apart colony A, so hive A where the colony's living, you put a sheet of newspaper over its brood box, then you would take the brood box from colony B and sit on top of that newspaper, and then finish putting the hive back together. And so the premise was that as the bees from both colonies eat through that newspaper, they slowly get introduced to one another. And as they slowly get introduced to one another, they're more likely to accept each other. And then by the time there are openings in the newspaper where the bees can traverse, the bees are united, and life is good. First of all, I've even done that myself. In fact, I did it many times when I was a younger beekeeper, again, because that's what the books say to do and that's what I did. On top of that, a lot of people will spray bees from both colonies with sugar water so that if they get through the newspaper quickly, or if they don't even use newspaper at all, they'll just spray the bees with sugar water under the premise that they're far more interested in getting the sugar water off of themselves and other bees than they are in fighting so that by the time all the sugar water mess is cleaned up, they're all happy, they've all licked each other and they're all accepting life is good. So I've done that before a lot as well when I was young. When I started as an undergraduate at the University of Georgia and worked in the laboratory of Keith Delaplane, we ended up working with commercial beekeepers, who I was, again, at the time, quite surprised to find would readily combine colonies without any newspaper, without any sugar syrup at all. They go into their apiary, see a weak colony B, maybe it was queenless, maybe it was queened right but just weak, and rather than rehabilitate it, they'd kill the queen and simply throw the combs and bees and all that stuff together with another stronger hive or maybe another weaker hive to combine two weaker hives. They'd mix-match boxes, they'd interchange frames, and they wouldn't even think twice about it. So that kind of started my understanding that bees don't necessarily need newspaper between boxes, they don't need to be sprayed with sugar water to be combined, they can just be combined.

**Amy 29:51**

So now, you're explaining putting a super on another super and you also just mentioned equalizing. So that process of pulling frames from one colony and putting it in one hive and putting it into another and so, I thought that was a standard practice. So can you tell us a little bit more about equalizing?

**Jamie 30:12**

Yeah, so equalizing, like the name implies, is just trying to equalize out, usually, the population and/or the resources between two colonies or multiple colonies. So for example, let's just say you've got hive one that's got 10 frames of bees and brood hive two has five frames of bees or brood. So you take some frames of bees and brood from hive one and put it into hive two so that now you both have 7.5 frames of bees and brood. So you're equalizing and you're making them similar strengths. And so just like my discussion of combining, most commercial beekeepers I know would just move bees and brood, I say willy-nilly, I guess that's a Georgia term, but they would move bees and brood around willy-nilly and not think twice about the fact that they're mixing bees and brood. The questioner was asking also, would you do something different if the two colonies were related? And I can envision a scenario where you've got one colony, you make a split from it, that split fails to recreate itself, so it's hopelessly queenless. And so maybe a week later, you'd want to recombine them. But again, like I said, at the very

beginning of all this, I really wouldn't take a unique strategy, whether the bees were related or not, whether they were strong or weak or not. I would just combine them. For equalization purposes, I also move bees and brood around without thinking twice about it. I would say, I suppose, if you're a little bit nervous about post-sale combining of colonies or equalization of colonies, when you're worried about what the bees moved into the new hive will do to that hive's queen, you can always cage the queen for a few days, and then go back and manually release her. I don't do that. I don't worry about it. Usually, in most cases, when you're either equalizing or combining, one of the two colonies is weak and there'd be no reason for it to take over the hive and replace the queen and things like that. So ultimately, moving bees and brood around is a little bit more permissible than what the books would hint at.

**Amy 32:11**

Sure. So that leads me into the third question of today. And you had mentioned splitting. What are some of your favorite ways to split a hive? And what goals are you trying to accomplish?

**Jamie 32:22**

Oh, that's a tough question because you've heard me say on this podcast before, there's more than one way to skin a cat right? That's a common saying that we all probably used in the past.

**Amy 32:32**

Never heard it. I'm just kidding.

**Jamie 32:34**

I don't believe that. I don't believe that. Anyway, a split is basically you moving bees and brood out of one colony to create a second colony. So let's just go the easiest possible route to understand at this moment. Let's just say that you're keeping a full-size Langstroth-style hive that's got 10 frames of bees and brood in it and one queen. The easiest way to think about this, you could remove five frames of bees and brood and put it into a new hive. And now you've got two colonies in two hives. You've got the original colony with its original queen, and five frames of bees and brood, and then you've got the second colony with no queen and five frames of bees and brood. So let's go back to the original colony first. It just lost five frames of bees and brood. You could put in five frames of foundation or five drone combs and wish the colony well and on its way. So the split, then, would be the one moved out of the full-sized hive. And it's queenless so you can either allow it to requeen itself or you could add a cell or you can add a purchased queen. Regardless of what strategy you use to get it requeened, you had one colony, and you now have two. But maybe you don't want to split your hive in half. Maybe you've got a really strong 10-frame hive, maybe you only want to take out three frames of brood and bees and put them into that second box, it's usually a nuc if you're doing fewer than five frames. So you'd split out three frames of bees and brood, put into that nuc, you might give that nuc two frames of foundation or two frames of drone comb. You could requeen that nuc, etc. And back at the parent hive, since you took three frames out of it, it would need a couple of frames of drone comb or three frames or so of pulled comb to make up that deficiency. But the reason I say there's more than one way to skin a cat is, in certain times of the year you can make a nuc just from one frame that you split out of a production colony. As long as you got an ample amount of bees and an ample amount of brood and it's the right time of year, you might make a split from one frame or two frames. Maybe you want to take that 10-frame hive and make five two-frame nucs or two three-frame nucs and one four-frame nuc. So, there

are just so many ways to do it. Usually, if I'm making a split for the purpose of starting some nucs for sale, or starting some nucs to have on hand, or starting some nucs to grow, I will use a five-frame nuc box and I will remove from the parental colony, the full-size colony, I'll usually take out three frames. Usually, a frame of honey and pollen, and two frames of brood, and I might even go into that parental colony and shake a couple of frames of bees into that nuc as well. So the nuc is getting three frames of bees and brood and maybe two additional shakes of frames of bees into that nuc. And so now I've got that nuc that I can grow. But again, I could do any ratio of anything with regard to the split. Like I said, there are just so many ways to accomplish it. It really all depends on what your goals are, as well as resource availability. Can you purchase queens and put in those new splits? Or is there enough available nectar in the environment to where you can have ample amounts of honey being produced so that they can draw their combs? There are just so many ways to do it. So many ways to skin that cat.

**Amy 36:12**

Alright, well thank you everyone for your questions. We look forward to hearing more questions and receiving more questions for you. Don't forget to send us a message on Facebook, Instagram, or Twitter, send us an email or just give us a call. Thank you so much for listening to this question and answer segment.

**Serra Sowers 36:31**

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. If you have questions you want answered on air, email them to us at 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.