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[music]

Maggie: Welcome to the Young Farmers Food Safety Focus Group series. I'm Maggie Kaiser, the produce safety training coordinator for the National Young Farmers Coalition. Throughout the summer of 2020, I, along with Bre Sliker, Billy Mitchell and Farmer Facilitators from across the country. Hosted a series of focus groups with farmers where we discussed the challenges and successes of implementing various on farm produce safety practices and we recorded them because we want these conversations to be a resource for you in every session we bring together farmers with similar experiences. For a discussion about a specific farm food safety topic, we begin each one with a farmer presentation followed by a roundtable discussion where farmers share problems and solutions with one another. We hope you enjoy them and bind some practical information for your farm.

[music]

[1:06]

Maggie: Hi everyone, welcome to our Food Safety Focus group. Today we will be talking about how to create a culture of produce safety on your farm with Roberto Mesa who is with Emerald Garden microgreens in Colorado and is also, a board member for National Young Farmers Coalition. My name is Maggie Kaiser. I'm the produce safety training coordinator for the National Young Farmers Coalition, and I'm also an urban farmer and nursery grower in New Orleans and I'm one of the organizers for our local chapter here of the coalition. So, I'd like to do some introductions now. I'd love to know your name, the name of your farm and where you're farming and why you are interested in this focus group. I'm going to start with Billy and Bre, who are two of the people that have helped organize these focus groups.

[2:02]

Billy: All right, thanks Maggie. Hey all, my name is Billy Mitchell. I live on the coast of Georgia in Brunswick, GA and work for the National Farmers Union, which is an organization that advocates for farmers across the US. I am currently the FSMA Food Safety Modernization Act training coordinator. My pronouns are he/him. I'd like to invite Bre next.

[2:25]

Bre: Hi everyone, my name is Bre Sliker and I use she/her pronouns. I am currently the business services intern at the National Young Farmers Coalition, working alongside Maggie and Billy all these focus groups. I am also currently a graduate student at NYU in the Food studies Department. I'll invite Mario next.

[2:51]

Mario: Thank you yeah, my name is Mario from El Paso, TX. I work for Messa immediate food center and currently I'm managing one of the programs. What do we do over there is marketing, technical support for farmers and also like food safety technical support for farmers. Also, I have my backyard farm. That's it!

[3:20]

Michael: OK, thank you, I am Michael Forman and I am the founder of Pure Love organic farms in the Bronx. We're a half acre flower and produce farm. I am definitely interested in learning more about produce handling safety and just getting some best practices and things we can bring back to our operation. How about Roberto?

[3:44]

Roberto: Hey everyone, my name is Robert Messa. My pronouns are he/him and I am the cofounder of Emerald Garden and also the recently developed Denver Food Hub. I'm a first-generation farmer and am really interested in using agriculture for systems change in our communities and to build a more food secure regional food systems here. I'm excited to share what I've learned and to make food safety a little bit more acceptable for farmers in our business and to look at it as more of a group of cultural ideas and beliefs that we contracted.

[4:31]

Lisa: I'm Lisa Welch. I own Vitality farms company. We are a mirco green farm in Florida. I believe that farmers should all work together because it's up to us to change the way the world needs vegetables and we can't do it alone. Has anybody not gone yet?

[4:42]

Maggie: Yeah, Annette is on the phone, Lisa.

[4:45]

Annette: Oh sorry! I'm out of order. I'm not on the zoom thing. I am up based out of the Chicago land area and I'm just interested to learn more about the young farming coalition in general and just what are the new trends?

[5:00]

Maggie: Cool thanks everyone. I'm really glad to know all of you. And again, I'm glad that you're here for this focus group. At this time, we're going to pass it to Roberto. He's going to tell us a little bit about Emerald Gardens and how he creates a culture of produce safety there.

[5:17]

Roberto: Thank you Maggie. We started our microgreen company in 2017 and we incubated it in a small 200 square foot greenhouse. At that time we didn't know how different Health Departments were categorizing microgreens. We got different answers from a lot of different municipalities and so we just wanted to make sure that we could operate safely that they were going to come and shut us down. That was kind of our biggest fear and we really tried to be proactive in terms of understanding the food safety protocols on other farms and we soon realized that a lot of those didn't apply to us because we didn't have acres or row crops. So, basically we just started off with some common sense. We took the approach of what would we do if we were preparing meals in a restaurant? What are the food safety things that we need in the kitchen? And that's what we decided to work on is really start with the highest level of requirements and then work our way down to make sure that we were covered. We had an answer for everything. I always played scenarios in my mind with my coworkers about what would happen if an auditor came and just showed up one day or the health department came. What kinds of questions would they ask us? How would we answer them? Kind of justifying the way we do things. What are our practices? Those conversations were very instrumental in taking us in the right direction, as to how we were going to develop this food safety program for a crop that was uncategorizable at that time. We decided to look to some of the farmers that were already in process of developing their food safety programs and got a lot of really wonderful feedback, which was mostly basic stuff because we were in a greenhouse and we weren't processing or washing, so everything is much more simple than what other farmers were engaged in. Then we had the opportunity to work with a local nonprofit farm that was offering a produce Safety Alliance course. So, we had somebody come from the USDA to give us a rundown and that was the best kind of exposure to food safety that I had ever gotten from a professional who had visited many different kinds of farms and really told us what to look for. That was the best primer that we got and actually became something that we really nerded out on in terms of how we make our facilities and practices is up to par in case there is an event where we needed to justify our practices. Or, in case there was an opportunity to scale, how do we do that? It became a great

opportunity for us to engage in that conversation and that became the foundation for the food safety culture that we at that time didn't know we were developing. We were so attuned to all the different things that were occurring on our farm and looking at them through the lens of food safety so that we became our own kind of like consultants in a way. So, when we would do something, we would question each other and when we would shift our practices, we would ask what possible points of contamination there are, and how does it deviate from protocols that were set. It wasn't until later that we actually developed a food safety manual, SOPs, protocols, or logs, but the foundation of it was really the belief that we're providing food for our community and we want to make sure that it's safe, which that ensures the safety and well-being of our customers and our community members. When a lot of customers were more interested in organic, it was interesting to have conversations with them to say we may not be certified organic, but we take great pride in how we grow our product, and we ensure the safety of our microgreens and yours as well. So, that really helped us define our foundation. Like I said, it wasn't explicit, but we just realized this is this is our foundation. This is what we want to develop everything from. Once we had that common feeling and everybody agreed to that, then it was much easier to actually stick to our food safety program that we eventually developed. We actually hired a consultant, and he came out to Colorado to meet with us and really share his experience developing food safety programs for microgreens. That really helped us out. We were too small to really be FISMA compliant or anything else, but we wanted to make sure that we had that foundation and he really helped us develop our program and our SOPs that we have in place now. We started to look at them as a template for how to develop our production capacity, but now after editing, revisiting, and revising them, it becomes a living document and a map to really help you expand your production. Now with COVID-19, we've had to adjust a lot of different things as well. So, viewing a food safety manual as a living document really helps to allow it to respond to different changes. That has now taken us to our second stage, where now at a 35 acre farm and we have a commercial greenhouse and it was so much easier to just transfer what we've learned and what we were building to accommodate now a new level of scale for our farm. Because we're in a controlled environment and we're not in the field, there's a lot less points of contamination that can happen in production. What we found is most of the requirements and food safety scrutiny falls on emphasizing the post harvest food handling part of it because that's when they're most prone to contamination, especially for microgreen. So early on, we realized that to keeping it simple was the best way for us to ensure that we had acquired a level of food safety that we could actually stick with. If we started to complicate our production too much, then we opened ourselves up to more potential hazards or contamination. So, really limiting the number of times we touch our product and the number of times we touch a tray not only ensures food safety but also helped in our efficiency as well. That gave us another perspective on food safety in terms of how it streamlines our efficiency and how do we create a lean operation? With a controlled environment, as long as the environment is already prepped you can really control a lot of the things that happen within that space. So, we're able to track everything which became super important when we started to understand the importance of trace ability and how that allows us to track if there is a problem since we have all of that log. So, the more we know of what's coming into our farm, whether it's an ingredient, our cost of goods sold, or you know whatever component comes into our farm, then we're able to trace it from where it comes from. It's interesting when we're talking with other farms that are a larger scale than us, are more industrial, and probably have a higher level of certification, their occurrence of food safety issues is higher because of the complex nature of their operation. When we started to work on our farm, the most challenging part was actually building our infrastructure in our operation while still maintaining our food safety protocols. Sometimes when you're getting into developing your production capacity you start to get in this mode of construction, temporariness, and bootstrapping, and so we kept referring to each other like is this still advancing the project of our farm and is it still keeping in line with ensuring the safety of our produce. If it's not, then we need to talk about that. At every point of expansion or addition, we have a checklist of does this deviate or does this go in line with what we're already having? The more eyes you have on a particular component of your farm operation, the better you'll be at catching different subtleties that may raise a red flag for an auditor or an investigator that comes to your property. When the opportunity came up to work with our food cooperative and get our gap certification through the

Group Gap program we were the first ones in line to say we're ready. We've been working on this for awhile. It's something that we do every day to practice. That allowed us to really hit the ground running when we started to engage in that program. It can be tedious at times, but if you really stick with it, then it becomes more of a habit. It's just part of the lifestyle of living on your farm. We saw the need to get our gap certification so that we could work with a distribution company and that was the main requirement. Another requirement was the need to engage with our community through institutional procurement. I was like, wait, that's really cool. We can take what we've learned our practices and values and channel that into a new layer of profitability. Interestingly enough, the day that there was the executive order for the shutdown was the day our auditor came to the farm and conducted the gap audit. That was so surreal because it was this moment of stand still for the rest of the nation, but our farm was being scrutinized By a USDA auditor. It was totally wild. We were so thankful for that, because as soon as we got it, we realized we had the key to really move beyond the initial phase that we were at. That opened up so many different opportunities for us, not just in terms of markets, but the trust and the transparency that customers really wanted when COVID-19 hit. So, that was another added benefit is that you do have that trust and relationship building component as well. The agreement with our food cooperatives was that if we were able to get gap certification that we would help other farmers get their gap certification and also develop their food safety measures, which really became a vital piece when we started to think of our food hub as a way to address the market challenges that farmers were facing when they started to lose their restaurants or grocery stores. How do we pull ourselves together to really be able to get through this? Then I started to see food safety as a way to democratize market access for smaller scale farmers. If we're able to do it on a cooperative basis, model of values, then we are able to kind of cover each others gaps if we wanted to reach the demand of a large purchaser or institution. Now with the food hub, that's what we're going through. What are the food safety protocols and measures that we need to take to be categorized as a distributor so that we can connect local farms to institutions to food pantries and other markets and purchasers that require those levels of certification. That's really why I wanted to partake in this conversation, to make it more accessible, because when we were starting out, it was this level of engagement that was way beyond our grasp. It was a little daunting and we didn't quite understand what the USDA would do. I always had this fear that we were operating outside the bounds of proper food safety handling. In an effort to calm those fears down, we really did our research to make sure that we were covered. The main thing that an auditor wants to know is why you do things the way you do them and if you're fully aware of all the potential contamination's or hazards that could pop up in your handling of your product. If you're able to answer them in a way that shows that you put some thought into it, then they are more willing to work with you. So, that really allowed us to calm down, really understand our procedures, and communicate to him on a level that they understand instead of worrying whether or not we're going to pass or fail. Again, that kind of goes back to the culture. You're not looking at it as a test that you have to take, you're looking at it as something that's part of your everyday lifestyle on the farm. Once you have it in you and you've developed the habit of looking at your production in your facility in a specific way beyond what you might imagine or project on a USDA auditor, then it's much easier to implement those things on your farm. So, in a nutshell where we are now. I'm more than happy to open it up anything. I see there is a question here from Mario. "Can you share your log and SOP? That would be very helpful." Yeah, of course. The one thing I want to say is that it's very customizable. Every farm has to define their own logs and procedures, but you can glean the importance or the crux of those things that you can adapt to your own farm. The log is something that we had a lot of questions about initially when we were developing the actual material. We thought what is the difference between a log in and SOP and how does that actually manifest in your program? What we saw was an SOP is just the instructions for how to do things and then the log is something that accounts for that activity by whoever is doing it. So, we have different logs that are filled out every day, some are filled out once a month, and some are filled out once a week. It all kind of depends on what aspect of your operation you're addressing.

Annette: I have a question. You mentioned that you had some financial backers. Was it Colorado State University that gave you a grant or was it the USDA that provided financing?

[21:28]

Roberto: Yeah, it wasn't a grant. The grant was a specialty crop grant that was given to our food cooperative to help farmers go through the gap certification process. So, we directly did not receive funding, but our costs were subsidized by the cooperative. I'm not sure what kind of reporting they have to do or what kind of metrics they have to follow, but that was the easiest way for us to get group gap certification besides going through Primus or another third party auditing service.

[22:03]

Annette: It's just inspiring to hear the work that you guys are doing. It's promising to hear that there's good news somewhere.

[22:10]

Roberto: Yeah, I mean there is good news and I think it's really up to us to define the news, depending on how proactive we are, right? I think we're on it at a time in our culture and our economy right now where there's a lot of opportunities to innovate and we shouldn't be scared to just dive in and say this is how I think things should be run, this is how I think we could build a better food system, and let's see how we can work together. So, my goal is to create more open source platforms, whether it's food safety, whether it's production capacity, or even just collaborating in terms of developing a more resilient food supply system. I think we're really good at solving problems on our farm, why can't we solve problems in our community.

[23:04]

Annette: OK, and one more question. Are there any partnerships with energy suppliers? Here in Chicago our energy person is Comed and so I know there's certain energy efficient programs. Have you, your operation, or Co-op partnered with anyone?

[23:23]

Roberto: We're always looking for different partners. I really believe that the future of our farm and the success of agriculture in Colorado depends on partnerships and collaboration. That was so evident when COVID hit. We activated those partnerships and relationships that we had in our network to help us pivot in a way that integrated a lot of different things that we were trying to do on our own at that time, in terms of food production, distribution, and aggregation. Allowing the need of us coming together to work on a project or a model that could potentially prove to be the model of the future allowed us to see those efficiencies. There wasn't a specific organization that we partnered with in terms of sustainability. There's a lot of opportunities to work with NRCS. I don't know if other states have organizations like that. They give funding to farmers that want to make their operations more environmentally sustainable or resilient, especially if you are doing regenerative agriculture. There's a lot of opportunities like that. There hasn't been the opportune time for us to develop something like that because we're just interested right now in growing food and getting it to people. Honestly, what we're looking to do is partnering with community members so that we can provide them access to some of the land and resources that we have so they could develop their own farming systems, food and farming models to really address the needs of their own community. We see partnerships happening both on an organizational high level, but also as a grassroots organization working with different communities and allowing us to develop a level of food sovereignty that we haven't quite seen in Colorado. We really are trying to shift away from competition and looking at it as a cooperation and focus on how do we do that and create viable businesses for everybody?

[25:45]

Maggie: This is like on a more practical level. I'm wondering if you could just walk us through the post-harvest handling of your food. I'm also curious about your growing medium and the nuts and bolts of it.

[26:00]

Roberto: Totally, yeah. So, we use jute fiber pads which are essentially the tight woven pads that fit in a 10 by 20 nursery tray and we seed them in a shipping container. That's also where we germinate them and then when they're ready to come out into growth about four days later, we take them out of our germination chamber into our greenhouse. We use these 12-foot-long channels that are about four feet wide, about a foot each, and we have these modules that are 5 levels high. It's not very common to see vertical farming in a greenhouse the way we're doing it, but because we're growing microgreens, it does work, and we don't have to use artificial lighting except in the wintertime. So, we only handle the pad when we put it into the tray and when we take it out to harvest. We harvest in the greenhouse so that we don't have to expose the tray or the living product to any environmental contaminant. Everything stays in the greenhouse, we harvest it, we put it in our bins, put the lid on it, and date it. The data is basically the critical piece that unites everything from the seed lot to when it was harvested, when it was seeded. Every seed lot is charted by date, so that we know what batch came from that seed. We can trace it back to a seed if it's contaminated, but once we have it in our containers, it actually goes into our walk in with the lid on control, safe. Then the next day we take it out of our walk-in and into our kitchen. Our kitchen is actually a trailer that we outfitted looking to the food trucks and what requirements they need. We put that into our trailer and that's where we pack every variety into clamshells. Then they go back into our walk in for distribution. So everything is dated, everything is sealed and logged. I mean that also just helps us understand our production numbers, our cash flow, everything. We don't wash our microgreens which keeps them in the category of raw agricultural product. So, we don't wash them and we treat them just like we would go out in the field and harvest with a knife some kale or spinach and that's how the Colorado Department of Agriculture and the USDA looks at our production.

[28:53]

Billy: Well, I'm not a microgreens expert for, but for folks growing more traditional produce crops, normally washing is not considered a processing step. I feel like the world does get more complicated when you go into the microgreen sprouts world, so everything you're talking about always double triple checking with your regulators and your buyers to really get that language in the same place. Yeah, y'all also just seem to have extra hurdles in a world full of hurdles.

[29:26]

Roberto: Yeah and you bring up a good point too. We test our water more than six times a year. We use well water and so it's not as if we're growing in an urban area where we can just go to the local water supply and get a test from them. We have to send it in and everything. Being a rural farmer does add another level of challenge because you kind of have to rely on your own test and can really be able to cover those. I mean the biggest issue with washing produce is, well, water quality. We use hydrogen peroxide as our main sterilizer and it's 35%. So, we're able to dilute it accordingly and it just is the best way for us to wash and clean all of our production or harvesting equipment. The microgreens are just a great way to understand all of these features because it's such a simpler way to farm and you're able to understand how everything fits in these protocols. I mean, we have both a physical binder that people have to sign in and we have a visitor log that's also part of food safety. It's not food handling it's handling people and so people have to sign in and really adhere to our procedures and policies for visitors. We also have a digital version of it that we're able to update on the fly if we need to, and so that really allows us to have some level of flexibility. A lot of the employee training logs have come directly from our food safety binder. That just allows us to speed up the process of training a new person.

[31:23]

Annette: Do you have volunteers that help you or is it just you, your operation and your employees?

[31:28]

Roberto: It's really hard honestly, to get people to come out to our rural farm. I think people see us as living in a totally different part of the world, but we're really not that far from Denver. Most of the people that come just want to see the operation and how we're doing things. We are definitely interested in working with community members. We have a few rural families and some families in a neighboring city that is predominantly African American, and we're trying to connect with them as much as we can so that they can begin to develop their own kind of food systems. Right now we're only growing about 8 different varieties of microgreens as opposed to other microgreen farms that are growing up to 30 or 40. I just think that's way too complex for the model that we've established but simplifying everything just allows you to perfect every single variety in every single component. It's just a lot easier to do it and to streamline. So, we have one employee that is helping us out and then we have some volunteers that come on Wednesday to mostly help in our food hub for aggregating and sorting orders and delivering them. We're trying to limit as much as we can for visitors right now.

[32:51]

Maggie: We're winding down in the time that we have left for the focus group, so I wanted to make sure everyone got their questions answered. I had one last question, but I don't want to be the last one to ask a question in the focus group.

[33:12]

Billy: Well Maggie so you can go last, I'll just say my biggest takeaway is simplicity is a really good way to reduce your food safety risk. If things are ever feeling too complex, they probably are. Yeah, simplicity just goes a long way towards happy employees and profitability too, so. Now you can go last Maggie.

[33:32]

Maggie: Yeah, Billy. Billy says keep it simple stupid to me a lot so. In the same vein though, you're much kinder about it. I am curious about how you developed your traceability program and if you're using lot codes, how you developed those?

[33:57]

Roberto: Yeah totally. I mean it's so important to have lot numbers because if we don't, we lose track of what's what, especially in germination when everything is in the same trays, and so when they're all just the same looking scraps back, we don't really know what there. So, our lot numbers actually correspond to a code that we have for each variety, and we we've numbered them. You know 01 starts with our peas, 02 are sunflowers, 03 is broccoli and so on and so forth. It's basically the variety number that is with the date and that's our traceability that allows us to know what's coming out, when it was seeded, when it's gonna get harvested and we have a log that allows us to map it out. The date is the most critical thing. Obviously, that's the identifying number. We actually have like a recall simulation spreadsheet of what would happen if we had to issue a recall right? That's where you get to practice your traceability. You're able to call like a grocery store, for example, and say all right all of the broccoli that's dated 8/10 needs to be recalled. That goes back to what feed lot does that date correspond to? When did we get that feed lot? Who was the supplier? Who was the distributor or the delivery person? Who accepted that shipment? Basically, traceability means, how far can you trace it forward and how far can you trace it back.

[35:42]

Maggie: The type in the date that makes a lot of sense, and I think that makes it accessible right?

[35:47]

Roberto: For us, we have our steady sheet that we're able to cross reference to date, and we know where everything is connected.

[35:55]

Maggie: Well, it's time to wrap up. Thanks again for being here. I really appreciate all of you

[36:01]

Everyone: Thank you.

[36:03]

Thanks for listening to our produce safety focus group series. For visuals from the presentations, more information on this series and other produce safety resources, visit youngfarmers.org/focusgroups. This podcast was edited by Hannah Beal and recorded in partnership with the National Farmers Union Foundation over the summer of 2020 as part of our FSOP produce safety programming.

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