
Living Homegrown Podcast – Episode 88 Attracting Beneficial Insects

Show Notes are at: www.LivingHomegrown.com/88

Theresa Loe: This is the Living Homegrown Podcast, episode number 88.

Announcer: Welcome to the Living Homegrown Podcast where it's all about how to live farm fresh without the farm. To help guide the way to a more flavorful and sustainable lifestyle is your host national PBS TV producer and canning expert Theresa Loe.

Theresa Loe: Hey, there everybody. Welcome to the Living Homegrown Podcast. I'm your host Theresa Loe, and this podcast is where we talk about living farm fresh without the farm. It's where we talk about canning, preserving, fermenting, small space food growing and just living a more sustainable lifestyle, all the different ways that you can live closer to your food even if you have little or no garden space at all. If you want to dive deeper into any of these topics or learn more about my online Canning Academy or any of the other things I have going on, just visit my website livinghomegrown.com.

Today's episode is all about attracting beneficials into our garden. I'm talking about beneficial insects and this is such, such an important topic because really a healthy population of beneficial insects will completely eliminate the need for any pesticides at all. Now, it might feel a little counterintuitive to want to attract bugs into your garden, but it's such an important component of organic gardening. Really, organic gardening is not just about shifting gears from a synthetic spray to an organic spray. If you really dive into organic gardening, it's about sustainability and creating an ecosystem in your backyard so that you never have to spray at all.

The thing is that if you can just lure in some of the good bugs, they take care of all the bad bugs for you. By bad bugs, I mean the ones that are eating your produce or actually hurting your plants. When a plant is getting attacked, its immune system is getting bombarded, and it's likely to get other diseases and other problems as well, but you don't want to just grab the spray off the shelf and run out there and attack it because you can end up doing a lot more to upset the ecosystem than you might realize. I wanted to talk about this whole concept of balance, and how it works with the good bugs and bad bugs in the backyard, and how we can balance this by just attracting more beneficials and being more careful with our

gardening practices. To talk about that, I brought on organic gardening expert Jessica Walliser to really dive deep into this topic.

Now, if you don't know Jessica, she co-hosts The Organic Gardeners radio show, which is an award-winning program on KDKA radio in Pittsburgh, Pennsylvania. She's a former contributing editor to Organic Gardening Magazine and a regular contributor now to Fine Gardening, Urban Farm, and Hobby Farm magazines. Jessica also serves on the editorial advisory board of the American Horticultural Society. Her two weekly garden columns for the Pittsburgh Tribune-Review have been enjoyed by readers for over 10 years, and she has numerous books out, but her fourth book is called *Attracting Beneficial Bugs to The Garden: A Natural Approach to Pest Control*. That's the one where going to really focus on today.

Now, Jessica also is a former owner of a 25 acre organic market farm so she knows her stuff. She's also received her degree in ornamental horticulture from Pennsylvania State University. She's taught a diverse array of gardening topics for over 20 years, but she also has just started a new company with her husband called Ironweed Apparel, which I ask her about in this interview, so you'll learn all about that. You might really be interested in what she's cooking up there.

Now, Jessica is also the author of another bestseller book called *Good Bug Bad Bug: Who's Who, What They Do, and How to Manage Them Organically*. We talk a little bit about that book as well, and you can also find Jessica blogging at savvygardening.com and hobbyfarms.com. Finally, Jessica lives and gardens northwest of Pittsburgh, Pennsylvania with her husband, son, two cats, six chickens, two hermit crabs and billions and billions of very, very good bugs. With all of that, I would love for you guys to listen to everything that Jessica has to say.

Just remember that, as always, I have all the links to everything mentioned in the show notes for this episode, including her books, her websites. Every place that you can get in touch with Jessica will be in the show notes. To get that, you just go to livinghomegrown.com/88 and everything will be right there for you.

Without further ado, let's dive into this. It's a fascinating topic and Jessica really knows her stuff. Without further ado, here is Jessica Walliser, the author of *Attracting Beneficial Bugs to Your Garden*.

Hey, Jessica. Thanks so much for joining me here today.

Jessica Walliser:

Well, thank you so much for the invitation. It's always great to get to talk about bugs.

Theresa Loe: Yes. Yes, that's not something I typically talk about every day, but it is very fun and I know you're fascinated by it. I'm really thrilled to go into this topic because what you have done with your books, your articles, everything is that you're teaching people that it's more than just switching from synthetic to organic practices. That bugs are such an important part of organic gardening. I'm very excited to dive into this. Before we do though, I would just love for you to tell everybody a little bit about what it is that you do.

Jessica Walliser: Well, I do a little bit of everything. Of course, it all comes back to my roots in horticulture. Horticulture is all I've ever done my whole life. I got my first job in a greenhouse at 15, and I haven't looked back since. What is recent, which pertains to the bugs of course, is my love and appreciation of insects. Though I've always loved gardening, I became an organic gardener in the early '90s. Then within about the past eight or nine years, I really started to understand the connection between insects and garden plants and really value the role that they play in the landscape. My current job, I would say, through writing, radio work and all the other things I do is to sing the praises of insects in the garden and really help home gardeners to appreciate the valuable role that they play in the ecosystem of the garden.

Theresa Loe: That's fantastic. I know you say in your book many times that you're not an entomologist, but you have interviewed so many in all of the research that you've done, and you work with them for all of the things that you're writing. I know even with your background in horticulture that you shifted gears, that you started out a little bit different, gardening a little bit different. I'd love for you to tell everybody how you made that shift from just being a, I guess, traditional gardener to more organic practices, but then going beyond that into the bug world.

Jessica Walliser: I guess I wouldn't even call myself a traditional gardener. I mean, I was a chemical dependent gardener and a professional one as well. I had a company that maintained about 40 gardens in and around the city of Pittsburgh. They were everything from postage stamp all the way up to 80 acres. As soon as I would see an insect in the garden ... I mean, I was taught in college with the degree in horticulture that insects are the enemy and we've got to nuke them when we see them to keep things in check, and so I would kept an arsenal in the car, and I would spray at the first sign of anything.

It wasn't really until I had a few years under my belt that I was in a crew truck with a guy that worked with me. He was this big burly landscaper guy. I had just sprayed Malathion for Japanese beetles on an ornamental plum tree in short sleeves and shorts. No eye protection. No respirator. No chemical-resistant gloves. I get in the truck with him and he looks over at me. He says, "You know, you really shouldn't be doing that," and goes into

this big talk. Basically, he pours his heart out to me about how his wife who was also a horticulturist and took care of a big public estate here in Pittsburgh, how she was having all kinds of health issues. They were having a lot of trouble conceiving a child and the doctor, a specialist that she saw directly tied it to an acute pesticide exposure, and so he looked at me dead in the eye and said, "I don't want that to be you someday."

Theresa Loe: Wow.

Jessica Walliser: It started my wheels turning. I thought, "This guy who is sitting in this truck with me pouring his heart out feels this way, then maybe I ought to think a little bit more about it." That started my journey into converting to organics. Within a few months of that, I just ... I'm a voracious reader of research. It's one of my favorite things. I'm such a nerd. I love to do it. I started reading all this research and I thought, "You know what? I don't want to be that in a couple of years." I was just in my mid-20s and I knew I wanted to have a family. I just started to learn everything I could about organics. Over the course of the next two years, I converted all 40 plus of those gardens that we took care of to organic maintenance.

In the year since ... I mean, if anybody ever doubts the power of organics and good insects in the garden, I can show them dozens of examples of beautiful gardens that are thriving without the use of any chemicals at all. To me, it's living proof. It was a long transition to wean myself off, wean all those gardens off of the chemicals. It was a learning process, but thankfully I had a great group of clients who were willing to go on the journey with me, and we all learned a lot as we went. We've all grown so much in the year since.

Theresa Loe: Yeah, you're educating them as well, which is so fantastic. I think the biggest point here that people may not have caught is that it's not just about going from synthetic to organic sprays. You don't spray at all.

Jessica Walliser: Yeah.

Theresa Loe: That is all about balance which is what we're going to talk about and dive into. I also have not sprayed my garden in so long. I don't know when I last sprayed, but it wasn't an intentional thing. I just found, as I worked on the balance, I didn't need to and eventually I was like, "Oh, huh. This is the whole thing here."

Jessica Walliser: Yes, that's exactly the essence of my book is really teaching gardeners to understand, and appreciate, and develop that balance, and have the patience for it, and to not panic and all that other good stuff. I know we're going to talk about all that. Yeah, I mean, that's the core essence of what that whole message is.

Theresa Loe: Yes, yes. Before we dive into that, there was one other thing that you didn't mention that I know you're doing now that I just had to ask you about before we dive into all the good bug stuff, and that is that you have started an apparel company with your husband. Can you tell us about that?

Jessica Walliser: Oh, thank you for bringing it up, Theresa. It's so exciting. It's a brand new world for me to get into the apparel world. It's called Ironweed Apparel. We decided that we were both a little tired of cheesy gardening shirts that were just, "Gardening, can you dig it?" All those things.

What we really wanted to do was we want to appeal to young and old but mostly young gardeners, urban gardeners, young farmers who they love growing, they love gardening, but they also love style and fashion. We wanted to come up with some really creative designs. We worked with a local artist here in Pittsburgh to create the designs. Then we worked with a local printer who hand prints via traditional silk screening methods all of our shirts onto really beautiful, soft, lightweight, breathable fabrics that you can wear in the garden or you can man your farmers' market table and just be really super comfortable in them. We just have a few designs available now, but there's more coming. We actually have a new one that will be coming out here in the next few weeks that is for folks who love trees and bees.

Theresa Loe: Oh, I love that. Well, the whole design is so, so cool. The ones that I've seen so far and I know you have more coming down the pike, but they were so cute. I just happened to see the feed on Facebook, and I was like, "Wait a minute. Jessica is doing these?" I was so excited to see that you did this. I will make sure to have in the show notes for the episode. I will link to your ... It's called Ironweed Apparel, correct?

Jessica Walliser: You got it.

Theresa Loe: Yup. Okay. We will link to that in the show notes if anyone is interested in actually seeing what they look like. They are just so cool. I really like that you're doing this. It's very exciting.

Jessica Walliser: Thank you.

Theresa Loe: Okay. We'll shift gears here. We'll go back to our bug topic. I really am inspired by how you are sharing this information with the people that you have been working with and that also with your writing, you're really getting the word out about the bugs.

In fact, I know one thing that has happened to you is when you're on your radio show, you have people call in that just want to get rid of bugs and so

it's kind of ... I think the first step is a mind shift, isn't it?

Jessica Walliser: It absolutely is. I mean, this is something that happens every week for the last 11 years that we've been doing the radio program. Someone calls in. I've got fill in the blank with an insect problem on my fill in the blank with a plant. They want to know immediately what can I spray to get rid of it? It took me a while to get to the point where I felt confident that I could just take a breath and say, "Okay. Let's look at why that's happening. Let's look at other things that we can do aside from reaching for a product to help keep that pest in control. Let's look for reasons why it happened in the first place because a lot of times it's just a matter of tweaking a little bit the way that we care for a plant that will make them less inviting and welcoming to pests and eliminate that problem."

We have to look at it almost, you might even say holistically, right? You're looking at the whole ecosystem of the garden and what sort of things can I put in place that will prevent me from having pest outbreaks in the first place so that you never have to call a radio show like mine and say, "Hey, this pest is attacking this plant. What do I do about it?" Instead, you have a balanced ecosystem where you don't have pest outbreaks like that.

Theresa Loe: One of the things I've noticed in my garden is that when I have a plant that gets stressed out, that's usually when I end up having a bug problem is I think the plant ... I guess the immune system is just weak and maybe the insects can detect that. Is that what you usually find?

Jessica Walliser: Absolutely. That goes back ... You used the term "immune system." A lot of people don't realize that plants do have a sort of immune system. Granted it's a lot different than ours but it functions in the same way as ours in that when the plant is stressed, when it's not getting what it needs, when it's not being fed properly, pruned properly, watered properly, that causes stress. Just like for a human being when you don't take good care of your body and you're under stress, that's when you're more prone to get a cold, or the flu, or whatever pathogens come down the pike because you're not able to fight them off. That's absolutely the case.

The healthier plants that we can grow, the more resistant to insects they will be, but there's also another situation that often causes outbreaks in a garden. It's a big one. It's when the pest is an introduced exotic species, one that doesn't belong here in North America. The reason that becomes so problematic is something I go into in the book where I talk about the cycle of predator and prey. Just like the lion eats the gazelles on the savanna, ladybugs eat aphids or other beneficial insects eat pests. When you introduce a pest from one continent to another, there are no predators that recognize that pest as a food source, and so the population explodes.

For example, here in the East, the emerald ash borer right now is just ... It's just devastating the ash trees here. It's spreading like wildfire. One of the reasons it's spreading so much is that none of the insects that are natural parasitoids and predators to the emerald ash borer live here in North America. Even the birds, at first, didn't recognize them as a food source. That is another case certainly where we can see this explosion of pest insects occurring in the garden because there's no natural predators to keep them in check.

Theresa Loe: Wow, then that's where it gets a little scary. When you have something like that that is maybe not a natural, native insect, what is something that we could do for that?

Jessica Walliser: That's the giant conundrum, isn't it?

Theresa Loe: Yes.

Jessica Walliser: I have talked to so many researchers and entomologists with the USDA and with universities around the country. The smartest people in the world can't figure this out. They're working so hard on it. I wished there was a simple answer to that. We can look at, for example, in the case of that emerald ash borer or here in the East, again, the brown marmorated stink bugs, which are another invasive insect that doesn't belong here but we can look at them. We can say, "Okay. Well, let's just release a parasitoid. Let's import a parasitoid from Asia where these pest insects are native to and it's a tiny fly or a parasitic wasp. We'll import it here to North America, and it'll take care of the problem."

Well, what they have to do before they do that is they have to look at all of our native stinkbug species, all of our native woodboring beetle. What other native insects are those parasitoids going to impact? The last thing we want to do is bring in another insect to help control the bad ones, and then that guy somehow causes more problems. I mean, the Asian multicolored lady beetle, that's a classic example that was brought in the 1800s to help control citrus scale. It has become such a huge nuisance pest in many parts of the country because it comes into our house over winter and collects on your windowsills and things like that. We don't want to create another problem in trying to control these introduced pests.

The answer in a lot of cases, sadly ... In the case of emerald ash borer, what they know now is if they inject the trees with a systemic chemical pesticide, they can halt or slow the decline of that tree due to emerald ash borer, but there's few other options, again, because there's no established predator for that particular introduced insect. We've got ourselves in quite the pickle.

I suspect that it's only going to get worse as goods get traded, as people move around the country. We are bringing insects to different climates, and different zones, and this is just going to be more and more of an issue. Here in Pennsylvania, the spotted lanternfly is brand new which is found here in Berks County, which is in Eastern PA just a few years ago. It could cause devastating losses to grape farmers. What do we do? We can't stop the trade of goods, but we have to somehow start really paying attention and focusing on this before it becomes just a massive tidal wave.

Theresa Loe: Yeah. Wow, that's exactly right because plants come from all over and we have no control over that. Really all we can control is what's going on in our own backyard. This really illustrates the whole dynamic between good bugs and bad bugs, which was your other book that came out. You did Good Bugs and Bad Bugs. Then you came out with this Attracting Beneficial Bugs. I guess Good Bugs and Bad Bugs was more like a field guide, right? Then with this next book, you actually are trying to get people to understand that ecosystem and how the predator and prey work together so that we can create a balance in our own backyard. I guess we really just have to start there.

Jessica Walliser: Absolutely. Yeah. Good Bug Bad Bug harkens back to that idea of what do I do to control this pest? What is the immediate spray, or preventative measure, or handpicking or whatever? What's the immediate response to that insect? Whereas Attracting Beneficial Bugs to Your Garden goes back to the whole philosophy of how did we get that problem insect in the first place and how do we keep it from becoming problematic? The two, they complement each other in a lot of ways. They build off of each other, but they come at it from a very different angle.

Theresa Loe: Yes, yes. I'm sure that when we say good bug, bad bug, there are some bugs that people automatically think are bad, but they do have a lot of benefits. Is there any insect that we might notoriously or that people might notoriously try to get rid of that are not as bad as they think?

Jessica Walliser: There's a lot of them. We hear from a lot of people that call into the radio show. I've got an ant mound in my garden. What do I do about it? How do I kill all the ants? The answer is you don't. They're one of those insects that they're everywhere, first of all. Second of all, they play a really valuable role in the ecosystem of the garden. There's so many insects like that. Yes, they might be icky. Maybe they give you the creepy crawlies, but they have a role to play. Maybe they're decomposers. Maybe they're food for the birds. Maybe they're playing some other really important role in the garden.

As long as they're not creating havoc and really causing harm beyond repair to your garden plants, there's really no need to do anything about them. In most cases, we can just sit back, and if we've done a good job of

encouraging beneficial insects in our garden, we can sit back and watch the good guys come and help us keep the bad insects in check. We just have to give them the time to do that.

Theresa Loe: Yeah, we have to have a little more of a zen attitude and not an arsenal coming at it like it's a battle. I think that's really good.

Jessica Walliser: It's patience. We're all about the instant satisfaction, aren't we humans?

Theresa Loe: Yes.

Jessica Walliser: We want everything immediately but mother nature, as we know, she takes her time. It's not just like the moment aphids show up on your roses. The ladybugs aren't going to show up right away. It takes time for the aphid population to build up to high enough levels to start to cause harm to the plant. In certain situations, what's really crazy incredible is that since the '80s we have known that certain plants when they're being attacked by a particular pest, will release a series of volatile chemicals called semio-chemicals into the air. These are what, in entomological community, they call herbivore-induced plant volatiles. When a plant is being attacked by a pest, they release a chemical odor or volatile chemical into the air that attracts the particular species of beneficial insects that's most likely to prey upon that pest. Essentially, in some cases, the plant is sending out an SOS to the beneficial insects to bring them in.

Now, that does not happen overnight. Sometimes the signal goes a couple of feet. Sometimes it can go a couple of hundred feet depending on the plant and a lot of other circumstances. It's crazy to think that is going to happen immediately. It's not going to. It takes time for the beneficial insects to hone in on their prey and to get that pest in check. Literally, sitting back, getting that zen attitude, having patience, knowing what to look for, watching for signs of beneficial insects and doing all that kind of stuff is going to help you achieve that balance. I got to tell you, it's some really cool stuff to see in the garden, too, because it's happening right under our noses, but we don't always pay attention to it.

Theresa Loe: Yeah. We have to take the time to notice. That is absolutely fascinating about like the SOS distress call that a plant would send out. That's so fascinating.

Jessica Walliser: Now, of course, we can't say that every plant across the planet does this because we can't test every plant across the planet but there's certainly a large number of tests that look at plants that do. In fact, one of the studies happened at my alma mater, Penn State University. They were looking at members of the cabbage family and what happens when they're attacked by those cabbage worms, the little green worms that get on your cabbage

and your broccoli. What they found was that the cabbage plant when it was being attacked by the imported cabbage worm was releasing that HIPV or semio-chemical into the air, and it attracted the species of parasitic wasps, and there's thousands of them. They're species that was most likely to prey upon that imported cabbage worm.

When it was a cabbage looper on the cabbage plant, which is a different species of pests, the chemical composition of the volatile chemical that the plant sent out was slightly different because it's a different parasitoid that is more likely to attack the cabbage looper. It's a subtle difference in the exact composition of the semio-chemical that the plant is releasing. Isn't that crazy? It's cool.

Theresa Loe: That is so weird.

Jessica Walliser: [This communication 00:26:17] system is going on right out ... We don't have antenna so we can't pick up on it, but it's happening everyday out there in our landscapes.

Theresa Loe: Wow, that is so cool.

Jessica Walliser: Here's the thing. We've known this since the '80s, right? The entomological community has known this since the late '80s. How come we gardeners don't know this? What's the disconnect? That's the bridge I wanted to make with this book. I wanted to say, "Listen, this stuff is not just important to the people who love and appreciate bugs. It's also important to people who love and appreciate plants." Right?

Theresa Loe: Mm-hmm (affirmative).

Jessica Walliser: We can use this stuff to grow a better garden. Why don't we know this? Why don't more gardeners ... Why aren't we aware of this communication system that's going on between plants, and insects, and the role that we have in it? Honestly, it makes me feel guilty when I go out in the garden if I've used like a drier sheet, or fragranced shampoo, or something, I wonder like, "Who am I messing up?" By distorting the signals ... I don't know that I am, but I think about that kind of stuff now and I never would have thought of that before.

Theresa Loe: Yeah, but that is such a good point. Oh, that is just absolutely fascinating. Well, I guess there are definitely some things that we can do as gardeners to try and encourage this balance and letting the ecosystem take over. What are some things that we can do aside from not grabbing the first thing to go out running out and spray it? What are some other things that we can do to attract beneficials and to get the balance going?

Jessica Walliser: Well, number one, aside from eliminating those chemicals, would be to plant plants that provide nectar and pollen for beneficial insects as well. One stage or certain stages in their life, they're going to need the protein that's available in the insects that they're eating, right? They also need the carbohydrates in nectar. In case of something like a ladybug, they actually need those carbohydrates in order to be able to reproduce. For that, we have to have particular kinds of plants available for them in our landscape. They're not like bees. They don't have specialized mouth parts for accessing nectar from, let's say, a deep tubular flower. Instead, they have to have a more, let's say, universal mouth part where they need to be able to eat an aphid, but they also need to be able to drink nectar.

In order to make sure that there's enough carbohydrates and nectar available for them, we want to plant plants with shallow exposed nectaries. For example, members of the carrot family which is anything with that umbrella-shaped flower on it. It could be dill, or fennel, or zizia, or Angelica, or any number of plants that have that cluster of tiny, little, shallow flowers. Those are great nectar sources.

The aster family is another great one for a lot of different beneficial insects like, let's say, for example, the syrphid or flower flies, they love members of the aster family. As adults, they feed only on pollen and nectar. It's actually their larva that are predaceous. They lay the eggs near a colony of pests and then the larva hatch and go out and eat all the pests. The aster family is another good one. The mustard family is a really good one. The mint family to some extent. We need to get lots of these types of plants in our landscape to encourage these insects to stick around.

The other really valuable thing that we need to be doing is creating year-round habitat. This is my message every fall. Stop cleaning up your garden in the autumn. So many of these beneficial insects and lots of our native pollinators over winter in dead stems, in the leaf litter, in the detritus of the top of the soil layer. Without all of this stuff in the garden, they have nowhere to spend the winter. We might as well spray them with something because we're still killing them. Leave your garden stand and do your clean up in the spring instead of doing it in the fall.

It's not just the pollinators and the predators that you're affecting, but it's also good bugs like the butterflies. A lot of our butterflies over winter as a pupa or a caterpillar rolled up into a leaf, or an adult butterfly tucked under a pile of leaves and if we clean everything up, we're getting rid of their overwintering sites as well. Year-round habitat is really important for these good insects as well.

Theresa Loe: That's a good one. That's a really good one. Now, with the parasitic type insects, if we are doing things to encourage having a place for them to

overwinter, do we have to also have areas of water sources and things like that like we do for the pollinators?

Jessica Walliser: Not so much. I mean, they get most of the liquid that they need in their diet from nectar or from the bodies of their victims, let's just say. You won't catch a lot of them drinking out of a water trough or something like that. There's certainly some of the parasitic wasps and there's tons of them here in North America. They are really amazing how they work. Some of them you'll sometimes catch on the edges of a bird feeder or something like that. For the most part, they really get the moisture that they need from the nectar that they drink and the insects that they eat.

Theresa Loe: It sounds like it's really pretty easy to encourage them. You're mostly just wanting to provide plant sources for them for the nectar.

Jessica Walliser: Right. Plant sources, definitely that year-round habitat is super important. Weeds, which sounds crazy, but weeds are really valuable, especially early season nectar source for many of these beneficial insects. If we look at so many of the common lawn weeds, they have those tiny shallow flowers that a lot of these beneficial insects need as an early season nectar source. Sometimes we think of the weedy areas on the side of the garden or on the side of a farmer's field as being junk spaces when in fact they're actually really valuable habitat for pollinators, and for predators, and parasitoids as well. All these beneficial insects, they'll take shelter in those areas. Then they'll also use the plants growing there for nectar and pollen as well.

Theresa Loe: You're saying that I can tell my husband that I'm not weeding because Jessica told me that it's good for the predatory insects.

Jessica Walliser: Well, I say some amount of weeds, right? We don't want those weeds to negatively impact the plants that we did plant on purpose to attract and support these insects. If you should happen to have a little weedy patch to the side and it's got weeds that have the right type of flower structure, then, yeah, I say you can tell them that.

Theresa Loe: Awesome, awesome. I'm just going to use that just in case things get bad out there.

Jessica Walliser: There you go. There you go.

Theresa Loe: Is there any particular plants that you recommend besides the ones that have the umbrels like the dill and anything else, any other ones that are good to plant?

Jessica Walliser: Yeah. One of my favorite plants to watch in the summertime, although I have a lot ... I just like to sit there. I actually hope that some of them end up

with pest problems because I like to see the good bugs coming and doing their thing. Of course, if you don't have pests, then you don't have the good bugs either, so I like to sit there and watch. The daisies are great. Whether it's a Shasta daisy or even something like a black-eyed Susan ... I mentioned the aster family which all those plants are in and sunflowers as well. Anything with that classic daisy shape of the central disk flowers surrounded by the petals or the ray flowers, that fill is constructed of all those teeny, tiny, little flowers at the center of the disk. Each one of those needs to be pollinated by a little insect.

It's fun in the evenings to go out and see the lacewings. Lacewings are a beautiful nocturnal beneficial insect and they love members with that daisy shape, plants with that daisy shape. I love to watch them on it. Same thing, the minute pirate bugs, which is the coolest name for a beneficial insect. They are minute. They're like a sixth of an inch long. They also love to ... I find them a lot of times on the backsides of Shasta daisies, and feverfew, and black-eyed Susans because they love to go after the little thrips and other little, tiny, teeny insects that live on the backsides of those petals. You'll find them clustered around the backs of the plant. It's pretty cool to watch them work, too.

Theresa Loe: Well, this is why it's so important even if you're growing food and only edibles to also include flowers. I do that in my own garden. I always tell people to do that to attract the pollinators, but I didn't realize the huge impact that the flowers were having on the prey and predator, whole ecosystem that was going on there. This is really good information.

Jessica Walliser: Yeah. In fact, a lot of farmers that grow lettuce, in particular out in California, they grow lettuce ... Organic farmers will interplant their lettuce crop with rows of sweet alyssum, just the annual flower sweet alyssum because sweet alyssum flowers are very, very attractive to the certain species of flower flies and also parasitic wasps that are most likely to prey upon those aphids that love succulent lettuce leaves. A lot of farmers are now starting to adapt these practices where they integrate beneficial insect habitat right into the fields so that they can naturally reduce their pest numbers.

Up in Oregon, there's a huge movement towards beetle banks. At OSU, they're doing some research on beetle banks, which is a raised berm that runs down the middle of a farmer's field and it's planted with native bunchgrasses, which is excellent habitat for ground beetles. Ground beetles are little, hard, black beetles that go out and scour the fields at night for slugs, and snails, and other ground-dwelling pests. In the day, they go back to those beetle banks and hide in the bunchgrasses. They're trying to make the connection, a direct connection between what kind of impact creating this habitat can have on the amount of pesticides that a farmer

has to use in their field. It's really, really fascinating stuff.

Theresa Loe: I just love the name beetle banks.

Jessica Walliser: Right? You can do it in your backyard but maybe you don't need a beetle bank. In your backyard, you would just make a beetle bump. You would make just a small circular raised area right near your vegetable garden. You plant it with bunchgrasses, native bunchgrasses. Then you leave it undisturbed. Then that becomes habitat for these predaceous ground beetles that go out to the garden at night and eat up all the slugs and asparagus beetle larva and all that kind of other stuff. It's good stuff.

Theresa Loe: I love that. Yeah. That's really good. I'm going to try that. That is excellent. I love that tip.

Jessica Walliser: Good. Actually you can read instructions on how to build a beetle bump. I blogged for a blog called Savvy Gardening and it's savvygardening.com. You can just go into the little search feature there and type in beetle bank or beetle bump, and you'll come up with step by step instructions on how to build one of those and also you can get ... It has a bunch of instructions up on their websites as well. They're doing some really incredible work with it.

Theresa Loe: Oh, fantastic. Well, I'll find that and I will put the link directly into the show notes, too, so if anyone can't find it, we'll have it there. We've talked about having a little bit of weeds in the garden. We've talked about having a year-round habitat and planting the right flowers. Is there anything else that we should do?

Jessica Walliser: There is one other thing that a lot of gardeners think they're doing the right thing when they do this, but they're actually really not. That is you should never import insects into your garden. This means those little containers of ladybugs that they sell at the garden center, please don't purchase them and move them into your garden. These are wild collected. They're typically the convergent ladybug, which is a common ladybug across most of North America, but they hibernate in mass. They're on a sunny mountain top in the Rockies. It's just by the millions. They actually go out and harvest them in vacuums. They suck them up and they package them in those little containers. Then they ship them around the country. Well, guess what? When they ship them around the country, they're possibly also shipping around pathogens and parasites that could affect our indigenous ladybugs as well. Not only that, but obviously they're impacting the population of those insects in the place where they're harvesting them from.

Try not to introduce any insects into your garden that you purchased from somewhere else. This is okay practice in a greenhouse, but it's not something that you really want to do in your garden. Instead, you want to

focus on encouraging the insects that already live there to stick around.

Theresa Loe: That's a really important tip. Thanks for that one.

Jessica Walliser: Yeah. You bet ya.

Theresa Loe: Jessica, I so appreciate you coming on today and talking about all of this. This is really, really important for people to understand the whole system that's going on without us even noticing it and how if we just take a little bit of time, it'll make a big difference if we just let nature do the work instead of pulling out the spray. Thank you very much for coming on the show today.

Jessica Walliser: Thank you. It's been my pleasure. It's been a lot of fun.

Theresa Loe: Wasn't that fascinating? I knew you would enjoy that and that you would learn a lot. Jessica is just a wealth of information. As always, I will have links to everything that she mentioned, including her books, and that article that she mentioned, and her T-shirt company, her apparel company with those really cool gardening T-shirts. It will all be in the show notes for this episode. To get that, just go to livinghomegrown.com/88 and it will be all there waiting for you.

I hope you found that interesting. It's all about being a little bit more patient, and a little more zen, and just relaxing with everything that's going out in the garden, and just let nature run its course. Until next time, just try to live a little more local, seasonal and homegrown. Take care.

Announcer: That's all for this episode of the Living Homegrown Podcast. Visit livinghomegrown.com to download Theresa's free canning resource guide and find more tips on how to live farm fresh without the farm. Be sure to join Theresa Loe next time on the Living Homegrown Podcast.