

Changes to the Midwest Fruit Pest Management Guide - Part 4

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SPEAKERS

Dr. Lina Rodriguez Salamanca, Iowa State University Extension and Outreach, Christa Hartsook, Joe Hannan

C Christa Hartsook 00:15
Hello, and welcome to the small farms podcast, a production of the small farms program at Iowa State University Extension and Outreach. Our podcast covers the opportunities and challenges associated with real life.

J Joe Hannan 00:29
I am Joe Hannon, commercial horticulture field specialist with Iowa State University Extension and Outreach and welcome to today's episode of the small farms sustainability podcast. This podcast is part four of a part four series discussing changes to the Midwest root Pest Management Guide. Be sure to check out part one, part two and part three as we kind of dove into a lot of details on what what these changes were to the guide. With me today, once again is Dr. Lena Rodriguez, Salamanca, diagnostician and extension plant pathologist with the plant and insect diagnostic clinic at Iowa State University. Welcome, Lina, how are you doing today?

D Dr. Lina Rodriguez Salamanca 01:07
Pretty good joe.

J Joe Hannan 01:10
I'm doing okay, working from home looks like you're working from home.

D Dr. Lina Rodriguez Salamanca 01:13

Yes, yes.

J Joe Hannan 01:14

So later today, we're talking Midwest Pest Management Guide. But we're gonna do something a little bit different and really talk about building a pest management plan that focuses on being effective today. And being an effective tomorrow. And the way I kind of have this conversation setup as each of us to kind of dive into how we start building our pest management plan. So that's kind of my focus for today, you ready to get rolling?

D Dr. Lina Rodriguez Salamanca 01:40

let's do it!

J Joe Hannan 01:42

Perfect. A lot of the products that we use in the spring are also products that we use in the summer are also products that we use in in the fall. And so we run into limitations, especially with a lot of these new products that are on the market as we're looking at products becoming more and more targeted towards a pest. But we run into limitations with how many applications or how much actual products we can apply. We run into challenges with product harvests intervals or reentry intervals for going back out and working in the field. And so it really behooves a farmer to have a pest management program or pest management plan in place. So they know what they're spraying. And when they are spraying. That's a lot of words, gotta introduce this. So I guess Lina, I thought I might ask you, what are some of the things that you look at? Or some of the strategies or just even in general, what are the things some of the things that you start doing when you are trying to build a layout a pest management plan for the season?

D Dr. Lina Rodriguez Salamanca 02:44

Yeah, Joe, that's a really good question. So So first, as you all know, the label of a pesticide is the law. And so we need to keep that in mind. And I know you all do, the thing is some of those pesticides labeled are very, very difficult to, you know, come by, like us, you read them, you may be confused. And there's so many details here, the PHI, the REI, all those different things. So when you're looking at building a pest management plan, there's a few things that we have tried to summarize and the guide, one pass in these diseases do vary by crop stage. And so that's why we had put crop stages on our guide. The other part is, okay, you know, what is the crop stage, then what are the diseases or insect pests that are important to manage on that particular stage? That is really, really important. And then the third thing will be, there's so many products, but not all products, efficacy on a particular insect pests or disease are equal, may not have the same effect on a particular pathogen that cost the C's for insect pest.

J Joe Hannan 03:58

So you're looking at, what do you have? When does it occur? What actually works for managing that pest?

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Dr. Lina Rodriguez Salamanca 04:06

And then I guess what I didn't mention is, then you have some restrictions, right? When can you after you spray, when can you reentry, that field or that orchard? And when you're getting close to harvesting, you then need to start looking into that PHI how many hours or days sometimes you need to not apply that product anymore.

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Joe Hannan 04:27

And then you got to take all that information and start mapping it out really for your particular site. I that's that's kind of how I go about it as well. I look at what pests do I actually have. And so we talked a lot about major and minor pest in the last couple of episodes of the show. But again, a major pest you may not have all the major insect pests out there for a year to year like in my case, I know what pests I have my strawberries and raspberries and I don't have everything that occurs and then even at that, like on the disease side of things you still may not have every single disease out there, because you may have cultivars that have resistance to some of those diseases as well. So like when I look at with apples, you know, it's very easy that you could select fireblight resistant apple, cedar apple rust resistant, northsky resistant type apples. And so that kind of changes in what pests that you're actually looking at and going to have to manage. In my case, you know, with with growing strawberries, I've got anthracnose, and botrytis are my two major diseases that I see every year that I really want to hone in and focus in on insect wise, I'm looking at clippers, I'm looking at Japanese beetles and a few others. And I'm looking at just really those particular pests in my situation. So I'm narrowing down what pest them I really focusing on not not forgetting the other pests, because they still happen, but I'm narrowing down which pests I keep track of and see every year on my own particular place, then start to map out when they occur. And then I go into the efficacy table that we see at the end of the grape or Apple chapters or go into. Actually usually I'll use that bigger efficacy table first and start selecting what products cover the past that I have, you know, one of my goals is when I'm buying products is to buy as few products as possible. Simply because products are expensive. You know, it's it's nothing for me to spend \$1,000 on buying products, and I'm just a little guy much less. So somebody's got 50-60 acres out there where they need to buy products, and I don't want to overwinter products if I can help it. So that's kind of what I start start doing that kind of sounds like same way that you're looking at Lena?

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Dr. Lina Rodriguez Salamanca 06:38

Yeah, no. And you're absolutely right. I think that that efficacy tables that have side by side comparisons of all diseases, and minor and major insects that you know, for all we have updated those and this guide for 2021. And we want you to take full advantage of them. Because you'll have that side by side comparisons of efficacy of products, that you can see what history of diseases you had in your in your field and your farm, and what products to focus on, what do you have in your shed where you may need and so forth.

J

Joe Hannan 07:14

Right. And that's actually it's just occurred to me. And this is why I like having a printed copy of the book so much, because I can go under those fixed cables. And for me, I go in there with a highlighter and start highlighting products that I'm looking at. And then I start x'ing out things that I don't want to have on my shelf, or I kind of want to avoid or skip for some reason or another. And then once I get all that information, then I start going through and start laying out those crop stages and kind of start plugging in what products I'm going to use when again, because we have restrictions with max applications or max product per year, we have harvest interval restrictions, I'm gonna start mapping those things out throughout the course of the season and kind of having a little bit of a plan for each pest that I'm dealing with at each stage,

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Dr. Lina Rodriguez Salamanca 07:58

Joe, that sounds like a great way to go about it, just highlighting those. And for this, we have updated all the efficacy tables for all crops. Now to direct to your attention, we have put a column for the resistant action code FRAC for fungicides and IRAC for insecticides. So keep that in mind. Listen to her podcast, the first podcast in the series. First one, yep, we'll go over that. But the idea is that you want to then highlight and make sure that you have a variety of numbers on those codes in your shed Do you don't have you know, focus on only one code. So yeah, check that out on those tables.

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Joe Hannan 08:36

Right if you if all your fungicides are all FRAC code eleven and you got a problem or if all your insecticide IRAC code three, eight, you've got a problem, you're not going to be able to effectively manage the pest all year long, you're going to end up with resistance build up and you're gonna run out into application restrictions, or using too much of IRAC, FRAC code or too much of a product for the season. So I start writing things out again like as Lena suggested, you're talking about efficacy Lina one thing that I will do is only select things that are good or effective if it's only fairly effective if it's only some suppression waste of my time. I'm not using it against that pest I just don't find value in having products that aren't good or really good at their job. I mean it makes sense right? Like

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Dr. Lina Rodriguez Salamanca 09:23

yeah, it totally makes sense. And so you know, when you're using that table you can see side by side what works good for certain things and what may suppress only suppress that disease but if you don't have that problem, then you don't worry about you go with that product. So yes, most of full the full extent of what that efficacy table that we have improved can give you

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Joe Hannan 09:47

Yeah, so then once I started narrowing things like good and effective are my G and E's on the table. Then I start laying them out so that I can avoid using the same IRAC or FRAC multiple times in a row. So I'll give an example here because that's probably the best way for me to do

it. So and I'm going to use Japanese beetle because that's the one I'm preparing for a talk at the hour, especially producers conference coming up here. With Japanese beetle, I look at it, say like five or six weeks of emergence I need to deal with. So I'm going to come in and use something like maybe immidan for my first application. And immidan will have IRAC one, B. All right, so my next application a week later, 71-0 days later, I want to choose something that is both effective and not one B. So that means I can use something like a sale that's in four A I can use danatol or mustang max that are in three A or seven XLR plus, which is in one. A I'm going to choose something that is in a different IRAC family. Again, that's in order to prevent resistance to the past from spraying the same thing over and over and over again. And then as I go throughout my season, okay, let's say I used immidan first one B then I switched up and used mustang max three A. And then let's say I'm gonna go midseason Japanese beetle, I'm going to come in and hit it with four A sale product and then come back in after that, maybe I'm going to try to use danatol to kind of wrap up the Japanese beetle season. Again, that's an class three A. Well, that all sounds fine and dandy if I'm looking at just from the IRAC standpoint, but this is where you got to go back and look at that whole efficacy table or the whole crop stage table and see Ooh, danatol has a 21 day PHI. You know what, I probably need to switch that dantatol and the mustang max application, which are both three A. Use danatol first and use that mustang max application later in the season. But again, all that information is there for you. It's just kind of starting to piece and pull that information together. And you'll notice I'm using a lot of different products and a lot of different families there. And that's partly because I want to rotate IRAC families. But it's also want to make sure that I don't use my max applications on a product per year. So in this case, I use the sale wants in this example, which is four As, short, REI short PHI. But if I also go back and look at what else I might be using a sale for through that season, and using a sale, probably four or five blocks or control early in the season, and I only get to a sale applications and in a season again. So that's why I'm trying to map out my pest but trying to also map map out my applications a little bit over the course of the season, so they don't get to the end of the season and not having a sale application for Japanese beetle or a say all I have is the sale and mustang max on the shelf. Well, I'm going to run into application challenges trying to stay legal there. Not sure that that came through the most clearest but you know, it's kind of a rhyme or reason and how how I go through doing it. Lina, any comments on how you map out or tips and tricks on how you map things out?

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Dr. Lina Rodriguez Salamanca 12:56

Well, I think I want to point out a couple of new features through the stages chapter. So if you go for example to the grape or the Apple, you'll have those charts by stage and not all products are equal by no means and so definitely check out that FRAC code will be very important. But also for diseases not all pathogens that cause disease are the same. So if you're thinking about you know a particular product you want to use I would say on the efficacy rating on this new layout for state charts, we had put a lower R in square brackets, be on the look for that. So for example flint extra on the Apple chapter, we do have flint extra, we have resistance documented for powdery mildew, and therefore even though it is good flint extra is good for bitter rod, it's good for sooty blotch and fly speck or and is good for summer rot for powdery mildew. Do we do have a G and good with the little r and brackets. So if powdery mildew if you're an organic grower, for example, if powdery mildew is a very big problem for you. You gotta be on the lookout for those Rs and rotate that particular product and make sure that you know that follow with a product that is different from flint extra follow in FRAC code that is not 11. And again, listen to podcast one, we'll talk extensively about resistance then

J Joe Hannan 14:23

yeah, and clarify you don't mean organic or there because those products aren't going to be organic.

D Dr. Lina Rodriguez Salamanca 14:28

Right? You're right sorry, sorry. Yep. get too excited.

J Joe Hannan 14:32

You're an apple grower is what I think you probably meant to say there. Pay attention to those little our brackets. So you also kind of mentioned the PHI and REI within each of those crop stage tables. Again, that's a good way to double check to make sure that the product that you're selecting is appropriate at that time because like you go to the end of the late season Apple tables or late so using great tables danatol is probably not going to show up in those late tables, because we probably pulled it out due to the 21 day harvest interval. So that should also kind of key you off, if you're looking at the efficacy table, and then and you're seeing a product that you want to use, but then you're going to look at the crop stage table, a product may not show up. And it's likely because you're not going to be able to use it, due to the harvest interval, getting in your way from being able to actually use it and stay on label. So, again, going through using all those tables really does benefit, because there's a lot of work that happened in the background to kind of deal with some of those issues.

D Dr. Lina Rodriguez Salamanca 15:33

Yeah, and the max application, you know, if you only have for you can only use it four times during the season, then make the most out of those four applications for certain products. So that, you know, we have added that particular column to help you make those decisions throughout the season.

J Joe Hannan 15:49

Right. So if you've got a product that is got four applications per year, use it on those pests, where it's actually really effective that again, that good or that E effect of that don't use it for something that it's fair, or any factor or suppression only that, you know, this should seem simple. But again, we've changed a lot of information on those fix the table. So hopefully that'll kind of clear some of that. Oh, I don't know. Lina, I guess, as I'm looking at putting together a pest management plan. The key take home is always to stay flexible as well, you know, plan for the worst, and hope for the best. You know, as I'm mapping out my Japanese beetle example here, you know, I listed out a lot of the different applications there. But the reality is, I plan for six, but maybe only need to make two or three or four, you can always drop out and not make applications if you don't, don't need to in the same on the disease side of things. If that disease doesn't have the correct conditions for it to form. stay flexible, don't spray.

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Dr. Lina Rodriguez Salamanca 16:47

Yeah, yeah, no, I think we will definitely be preaching to the crowd continue your good work monitoring and scouting, not all insects happen all the time, you remember those minor ones especially may or may not come along, diseases may bury, if we have a really dry year, you may not have a lot of a particular problem. So you can save a little bit on applications. And so definitely a lot about flexibility. Try and take a look at all this new charts before the season starts. Get familiar with them. And more than anything, give us some good feedback on what you're thinking after you check out the chapter even as early as the next morning

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Joe Hannan 17:27

as you're buying products and mapping out your season. Right?

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Dr. Lina Rodriguez Salamanca 17:29

Right, right as soon as you know, before you're starting to think about sprays, look at it. See when it's in your shed let us know we look forward to have your feedback. And then as the season goes by, and you learn to use more this charts, let us know what worked and what didn't we look forward to hear what you think of the new layout. But also we want to hear from you. Because there's changes that we can do in the future.

J

Joe Hannan 17:55

Nothing's set in stone. So we can we can stay flexible.

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Dr. Lina Rodriguez Salamanca 17:59

Yes. And this guide is made for you. We're trying our best to imagine and rethink the guide. But we need to know what do you think of it? So remember that?

J

Joe Hannan 18:10

Yes, so lean on the guide. We can find it in the show notes below here. I've got copies of it. And where else can we find it?

D

Dr. Lina Rodriguez Salamanca 18:17

If you look on your browser online, and you just type Midwest fruit guide 2021 it is the first hit that will come and you can download it right then.

J

Joe Hannan 18:28

Right. All right. Well, this has been a great discussion on building a pest management plan

right. All right. Well, this has been a great discussion on building a pest management plan, kind of at a fairly basic level. This is something that's, you know, really best done on paper and pencil during the wintertime. But thanks for joining the conversation today and talking about the Midwest fruit production guide really for the last three episodes or four episodes that we've recorded here. Much appreciate you coming on today.

D Dr. Lina Rodriguez Salamanca 18:50

Thank you for having invited me.

J Joe Hannan 18:52

Yeah, hopefully we can come in and talk about something other than Midwest group production, guides, when we get into the spring.

D Dr. Lina Rodriguez Salamanca 18:58

That's right.

J Joe Hannan 18:59

So all your listeners that tuned in for all four episodes, we really appreciate it. Again, let us know what you think in the New Guide Layout and apple and grape chapters and the changes are coming for for the other crops here soon. Huge thanks to Christa Hartsook and Olivia Hanlon at ISU small farms sustainability program for editing and hosting all these podcasts and and with that, take care everybody.

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