

Changes to the Midwest Fruit Pest Management Guide - Part 2

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SPEAKERS

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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 rural life.

J Joe Hannan 00:29
Greetings. I'm Joe Hannan, Commercial Horticulture Field Specialist with Iowa State University Extension and Outreach and welcome to the Small Farms Sustainability Podcast. Today's podcast is part two of the four part series discussing changes to the Midwest Fruit Pest Management Guide. And once again with me today is Dr. Lina Rodriguez Salamanca, Diagnostician and Extension Plant Pathologist with the Plant and Insect Diagnostic Clinic at Iowa State. Hi, Lina, how's it going?

D Dr. Lina Rodriguez Salamanca 00:57
Well, pretty good, Joe, how about yourself?

J Joe Hannan 00:59
I'm doing good. Thanks for joining me for part two, talking about the Midwest Fruit and Pest Management Guide changes.

D Dr. Lina Rodriguez Salamanca 01:06

Well, my pleasure,

J Joe Hannan 01:08

So, today, Lina, we're going to jump in and really talk about changes to the apple chapter and kind of get into some of the nitty gritty details of the different tables and things out there. So just to kind of remind people, for folks that didn't tune in for part one, well, if you didn't, you should go back and and listen to it, it's somewhat entertaining. What is the Midwest Fruit Pest Management Guide, Lina?

D Dr. Lina Rodriguez Salamanca 01:31

Yeah, this is a book that you can get from the extension store, or Joe this year, or you can download it as a PDF and look at it in your computer or your phone. But this book is a compilation of recommendations for your crop on how to manage diseases and insects so that you have the best possible information available to you for you to develop an integrated pest management for your orchard or your berry patch.

J Joe Hannan 02:01

It's all about making smart decisions, and that's what this book is intended to do. I'll put the link in the show notes. You can also Google Midwest Fruit Pest Management Guide 2021. And Lina says it'll pop up. And if you're an Iowa Fruit Crop Grower, you can contact me for a free copy. Again, that's for commercial, people doing this for profit, one per farm, but I'll give you a copy free. And if you're not in Iowa, talk to your local Extension agents in your state, they should be able to help you get a copy, a printed copy there as well. So Lina, are you ready to talk about the apple chapter?

D Dr. Lina Rodriguez Salamanca 02:34

Yes, a lot of exciting changes.

J Joe Hannan 02:36

Yeah, there are, holy smokes there are. Alright, so when I open up the book, the first thing I see is a completely new chart that talks about insect pest by stage, do you want to tell me a little bit about what this is and why you included it?

D Dr. Lina Rodriguez Salamanca 02:53

Yeah, the entomologist in our group worked really hard to develop this chart. So when you see it, you'll see some shaded boxes and the columns will be the crop stages, and what is important is that whenever a box is placed is where that common pest will be active in our

region, or action like scouting or preventative sprays or prophylactics sprays may be necessary. Keep in mind that this appearance of pests will be weather and degree day dependent, and depending on where you're at in the Midwest.

J Joe Hannan 03:31

Yeah so it's, you know, the insects, that's the nice thing about insects is they're very growth stage dependent, and that's why this chart works so well for apples and grapes, and we'll have it for the other crops likely when we do the other crops. But it really gives you a pictorial guide of what the heck you're supposed to be doing in your orchard or in your vineyard at that particular time or what you should be looking for and managing.

D Dr. Lina Rodriguez Salamanca 03:51

And one of the important things that the entomologists have in there is that now they have major pests. So those are pests that will be present in most orchards, in most years. And that usually can cause economic damage if you don't manage them. So those are very important, and they will be throughout the guide, you'll see most of the major pests listed by state charts. Yeah, and so in the minors are those insect pests are often present, but they're not causing economic damage often or therefore they may not require management.

J Joe Hannan 04:26

Kind of the reason for separating out major and minor is because in the old versions of the guide, we had everything kind of packed into one. Every pest that could be possible at a crop growth stage we had listed there, but in reality is a lot of these things aren't very common across the entire region or are not going to be seen every year. So we try to pull out that information out and stick it at the end of the chapter and just really focus on the stuff that you're likely to see. In an effort to simplify things a bit, right?

D Dr. Lina Rodriguez Salamanca 05:00

That's right. And now at the end of the chapter you'll have a chart, or a table, that will have the products, the major and minor pests, side by side, comparing products, insecticides, or fungicides with the efficacy that we have disgusted as a group and approved as a group.

J Joe Hannan 05:21

So you're not losing any information, we're just reorganizing it to hopefully make it a little bit easier to find and access the appropriate information when you need it and more in a graphical user interface, a hard copy graphical user interface.

D Dr. Lina Rodriguez Salamanca 05:38

That's right. There's one little thing I forgot to mention about this chart for stage and insect pests. And it's that on those states where you have a particular problem with Coddling Moth, Oriental Fruit Moth in apples, the entomologist had put in there boxes for when the mating disruption should be placed in the orchard. And that's going to be very important and is a very good tactic for those two insects.

J Joe Hannan 06:04

Oh, thank you for adding that. I appreciate that. So we have this pest by crop stage for insects, but we don't have it for diseases. Is there a reason that we don't have it for diseases?

D Dr. Lina Rodriguez Salamanca 06:17

Yeah, the pathologist went back and forth, and we decided that it's hard to predict. Diseases and insects are very different. Diseases, really will be dependent on the pressure of disease that you have had in the past in your orchard for apples. And for the most part, it would also be dependent on weather, weather conditions, humidity. Pathogens, in order to occur, they need humidity, rainfall, and temperature. And so it's a lot harder for us to make a chart like the one the entomologist developed.

J Joe Hannan 06:53

Yeah, there's some risk there of just going out and blanket spraying for diseases at different crop stages if we had a chart like this, because you may not need to based on so many other factors, right?

D Dr. Lina Rodriguez Salamanca 07:05

Yes, that's right.

J Joe Hannan 07:06

Whereas with the insects, if you have a history of having this insect, it's likely going to be there. They're largely dependent on heat unit, growing degree days, not entirely, but very largely dependent on growing degree days. And so it's much more appropriate to have this chart for insect use and management, in this case, so thanks for clarifying there, Lina. Appreciate it. Okay, so after the insect charts by stage, then we dive into really what is the old spray schedule by stage, although this looks a lot different than what we had in the past, correct?

D Dr. Lina Rodriguez Salamanca 07:46

Yes, we just have added more columns than we had before. And something that you'll notice is that now you should be able to do a side by side comparison. So on the rows, you'll find the products, down that first column, and then the columns would be the pests that are important

on that particular stage. And then you can make comparisons by product on efficacy, and also, now you can see in there, if you should be on the look of the PHI pre harvest interval the REI will be also there, and we also included the maximum application per year, and the maximum product per year, so you keep those in the back of your mind so you don't go over and you get the most of your products.

J Joe Hannan 08:37

Yeah, it's, again, it's really a graphical interface to see what products can be used on what pests and to help you make determinations when you have multiple pests that you're dealing with at one time. What is going to be effective across multiple pests, right?

D Dr. Lina Rodriguez Salamanca 08:53

That's right. Yes. And hopefully really streamline that process of building your pest management plan.

J Joe Hannan 09:00

Yeah, because previously, you would have to go through and look at okay, I gotta find Japanese Beetle, and then I gotta go find Spotted Wing Drosophila, and then I've got to go find this, and kind of piece together, what products are going to be good across all these or dial back to the back of the chapter to find the efficacy table. And this way puts all that information right at your fingertips at that particular stage.

D Dr. Lina Rodriguez Salamanca 09:21

Yes!

J Joe Hannan 09:22

And honestly, I think we went back and forth for about three months on what information to include there. Wanted to include the PHI, the REI, the max amount, the max applications, the IRAC, the FRAC code, the product, the active ingredient, and now that I see this and now that I'm starting to use it, I'm really glad we spent three months trying to figure this out, because boy I really think it's very, very usable for looking at and making decisions. I've been using it more on the insecticide of things right now because I'm giving some talks this next week on insect management, but boy, I really find this information all they're on one page really usable, so, good work to you, Lina and team, for putting that together?

D Dr. Lina Rodriguez Salamanca 10:05

Oh, no! You know, for us, it's very important that you growers have all the information you need in front of you in the guide. And we're actually hoping that as you use this guide, you give

us some feedback, what features, what columns you use the most, and what would you change on the layout? Because this guide is for you. It's made by us for you.

J Joe Hannan 10:28

I'll even comment on did we make the right choices on what are major or minor pests? I mean, we may we may have made an error there and so, again, provide the feedback so we can make the changes. So Lina, we've got all this information in the tables by stage and the information that you find there, is what we defined as, at this stage here, right? For the major pests.

D Dr. Lina Rodriguez Salamanca 10:53

Right, yes. So on what we call the state chart, we have major pests.

J Joe Hannan 10:59

Okay, but don't feel like we've taken out the minor pests, right? So the minors pass, we just moved to the end to the efficacy tables.

D Dr. Lina Rodriguez Salamanca 11:05

Yes. And that efficacy table again, will have the product and formulation, the active ingredient, that IRAC or FRAC code that we discussed in the prior podcast, and then columns with all the important major and minor pests and their efficacy rating. So we either will be an excellent, good, fair. We had put a little R or the square brackets to indicate that that particular pest or pathogen can develop resistance to that particular product, and that has been documented, in the Midwest or somewhere in the U.S. We will put an X there if that pest is not in the label so that you're not, you know, breaking the... remember, the label is the law. So you always have to be on the look for those. In some cases, products may not be effective for a particular pest or pathogen, we have an I on those cases for ineffective. And there's some cases where maybe the product is just brand new, and we may not know if it's efficacious or not. And so we have used a U to indicate that.

J Joe Hannan 12:11

And so some of those efficacy ratings may have changed from the 2019-2020 book, because at one point, the two books (we had a fruit tree book and we had a small fruit book, right?) And several years ago, we combined them but they had two different efficacy rating standards within each book.

D Dr. Lina Rodriguez Salamanca 12:31

Yeah, the Midwest specialist, you know, we start thinking about consistency, and more than anything, making this guide easy for you to read and remember what different terms and ratings meant. So yes, we were very intentional about adding some consistency to efficacy

ratings meant. So yes, we were very intentional about adding some consistency to efficacy tables for both insecticides and fungicides, but also across three fruit and small fruit.

J Joe Hannan 12:57

Yeah, that's been on the to do list with this group for a while it's just we finally got around to doing it. We don't necessarily work faster some days. Okay, Lina, one other key difference that folks are going to see in the crop stage tables, is that there is no longer a note section on the right hand side of those tables. Do you want to tell us where that information went?

D Dr. Lina Rodriguez Salamanca 13:23

Yes, absolutely. So we have placed those now as comments, as bullet points at the beginning of the stage. So for example, apple first and second cover, you will find in there about five or six different notes that we want to bring your attention right there. So you're aware of different specific notes for some products or for some pests or diseases right at the beginning of the chapter, of the stage, sorry. Of the stage.

J Joe Hannan 13:51

Yep, at the stage each side. So when you're coming through you have stages, it's really more important, more important now than ever before in the book to actually read the materials before the tables as well because there's a lot of wonderful information in that text material and how to actually effectively manage that particular pest at that stage. And then in fairness, a lot of the notes and things as we're going through this that were in the old book, a lot of that was REI, or PHI, or max application, max amounts of product per year, so that information is still on the table, we just kind of condensed it and simplified it a little bit. So again, you didn't lose anything we're just trying to reorganize it to make it a little bit more accessible to find and use and internally to help us be consistent from crop stage to crop stage and crop to crop as well really.

D Dr. Lina Rodriguez Salamanca 14:39

Right.

J Joe Hannan 14:39

So Lina, I think that's probably a great place to wrap up on Apples, unless you have other comments that you want to make on the Apple chapter.

D Dr. Lina Rodriguez Salamanca 14:48

No, I just want to encourage all growers to look at that Apple chapter, check out the pest and stage chart that is brand new, the different state charts through the the chapter and at the end of the chapter that efficacy table with all pest minor and major and the fungicide efficacy

of the chapter and emergency table with all pest, minor and major, and the rangicide emergency tables too, and give us your feedback. We look forward to hear what do you think and what do you use the most.

J Joe Hannan 15:12

The new designs are not set in stone, so provide that feedback. So the book can be found, look at the show notes and we'll have the direct link to the book there. I just did a quick Google search for the Midwest Fruit Pest Management Guide 2021. It was the first search that came up. Computer must have been listening to me because it auto filled it halfway through typing it in. And if you're an Iowa Fruit Farmer, I have a free copy for you as well talk to me and we can get you a copy here in some way, shape, or form. So thanks, Lina, again for joining me today. I'll talk to you very soon about part three. We'll talk just a little bit about the grape chapter.

D Dr. Lina Rodriguez Salamanca 15:47

Great. Talk to you soon!

J Joe Hannan 15:48

Alright, thank you. Take care everybody. Thanks for listening.

I Iowa State University Extension and Outreach 15:51

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