

# Crop Damage

Wed, 8/10 2:19PM 24:33

## SUMMARY KEYWORDS

damage, animals, andy, wildlife, garden, raccoons, talking, dnr, area, great, voles, habitat, nuisance wildlife, critters, fruit, species, deer, sorts, utilizing, iowa

## SPEAKERS

Andy Kellner, Speaker 3, Christa Hartsook, Olivia Hanlon

---

### 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.

### O Olivia Hanlon 00:28

In this episode, I visit with Andy Kellner, wildlife biologist with the Iowa Department of Natural Resources. Today, we're talking about wildlife crop damage. I'm Olivia Hanlon, Small Farms Education Extension Specialist, and we hope you enjoy the show. Andy, welcome back. We're glad to have you joining us today.

### A Andy Kellner 00:47

Yeah, thank you for having me back. Apparently, I didn't talk too much last time.

### O Olivia Hanlon 00:51

Andy, like you said, you've been on before, but why don't we start with a reminder about who you are and what your role with the Iowa DNR consists of?

### A Andy Kellner 01:00

Sure, yep. So I'm a biologist with the Iowa Department of Natural Resources Wildlife Bureau, and specifically, I work with the Depredation Program. That programs really revolved around landowner assistance with dealing with human wildlife conflict situations or damages from

wildlife, so we do a lot of technical assistance to get folks the answers or tools that they need to, to be able to help them better resolve the issue and education for preventing future stuff happening too.

**O** Olivia Hanlon 01:28

Alright, so this is your jam here today, Andy, then, we're talking about wildlife crop damage. So let's go ahead and dive in. It's about that time where we are having produce set on if we haven't already had some berries this year? What kind of damage do we need to be on the lookout for at this time of year?

**A** Andy Kellner 01:46

Yeah, it's good. And I guess, since I can't do you know, an episode every day or every week with you, it's just it's always good for to look beyond the horizon of just the day we're on, I think, because especially like when we're putting out plant starts or get those cool season crops going. In the beginning of the year, a lot of times those can get hard. But obviously, you know, end of June beginning of July, we're starting to set a lot of fruit. I just had my first tomatoes off of my stuff here just a couple of days ago and cucumbers and that sort of stuff. And so damages to those those fruiting bodies and anything that's getting attracted to those is kind of where we're at now before it was damaged to the young starts or, or eating the vines of your, of your climbing beans and that sort of stuff. But now we're really focusing in on some of the fruit production.

**O** Olivia Hanlon 02:33

Okay, so when we're looking at damages to that fruit production in particular, who are the main culprits that we should be on the lookout for doing some damage to those this year.

**A** Andy Kellner 02:45

Sure, and I'm going to give you that kind of political answer of it depends, right? So I don't mean to avoid the question, but I always like to be very aware of what's going on in the area or during the year what sort of habitat is around the farm that we're talking about? Or the garden we're talking about? Is it a really dry year? Is it a really wet year? You know, what sort of things do we actually have in the garden that might be drawing stuff in? Or what else might be drawing things into the area? So all of those sorts of things are going to impact who the the likely culprit is. But a lot of the big ones, there's a long way of me saying it, saying there's a lot of typical ones like raccoons, rabbits, and those are always common in garden settings. Deer can certainly be an issue but it can even be things like squirrels and birds. There's one year I was so frustrated, I watched the birds tear apart all my tomato starts. It just, I think the Robins were taking them up and using them for nesting material but it just kind of broke my heart a little bit.

**O** Olivia Hanlon 03:45

Olivia Hanlon 03:12

Absolutely. Alright, Andy, what kinds of things could maybe attract wildlife more in certain years?

A

Andy Kellner 03:52

That's it's a good question to pay attention to those other attracting. So when we're talking about wildlife management, there's a few things it boils down to it like I've already hammered on here. Habitat, so what could be living where? But then the other big draws for for wildlife is food. So outside of the garden, what other food sources could there possibly be? Do you keep bird feeders up? I mean, that's a simple question, a lot of people do just you know back behind the house, but that's not far from from the area where they're producing some veggies or fruit. Do the neighbor's keep that sort of stuff up? Do you have a compost bin? Is it being turned regularly? Are you keeping it fenced off so stuff can get in there? Are you're throwing food scraps out into the garden? Those sorts of things will act as an additional attractant to any sort of wildlife bringing them in and can make otherwise culprits of wildlife that may not have been attracted to the area previously, like possums or skunks or something like that. So always be aware of what else could be drawing the animals in.

O

Olivia Hanlon 04:53

So you hit on this a little bit as it depends what's in our garden. But are there certain crops that are more likely to attract wildlife than others?

A

Andy Kellner 05:02

Sure, there definitely are, you know, there are some things that are just kind of universally eaten by everything, right? But it is, that question brings up the good idea of prevention and looking at things before the damage is occurring, right. And so that's where I really like to look at the cool season plants and even before we're planting and looking at prevention techniques, but that time of year, the young starts are obviously very susceptible to damage. And any of the first green crops when everything else in nature is still kind of dormant are things to watch out for. Anybody who's grown sweet corn in Iowa has most likely seen that it can draw in a lot of different things. Everything eats corn, right. And that's why we like it. It's so delicious. But especially here, as we're getting into the beginning of July, depending on when you get that sweet corn in the ground be watching out during the milking stage for raccoons, they can certainly cause a big pile of damage, tend to be the top culprit there. But birds, deer, everything else will eat that too. In droughty conditions like we have in part of the state this year where it's really dry, I like to keep a close eye on any of my really juicy fruits. So things like tomatoes, cucumbers, watermelons, any of that stuff in dry years, the animals might be more attracted to, even more than a food source as an additional water source. So they're like really pay attention to that. And then don't forget about what's going on underground. I was disappointed the first year I tried to grow sweet potatoes. Didn't think too much of it, and I went to harvest them, and every single one of them was eaten completely out except for like the shell on one side. So what's going on underground can have a big impact too. So don't don't forget to take a peek at what's going on underneath the dirt.

O

Olivia Hanlon 06:44

Yeah, Andy, that brings up a good question. What kind of wildlife will eat are things that are maybe growing underground.

A

Andy Kellner 06:51

So definitely keep an eye out for different burrowing animals and buy those, you know, gophers, moles to some extent, although they'll prey more on insects and whatnot, voles can be so close relative of mice, voles with a V, they can really do quite a bit of damage too under the ground. And it's not like they're digging a hole network of tunnels, but they'll make use of tunnels of other things, too. So between the gophers and voles, I would really keep a close eye on that, that sort of stuff. And that's where some fencing that even extends slightly down into the ground can be really effective at helping you out.

O

Olivia Hanlon 07:25

Okay, those are definitely a few that I probably would not have thought of myself. So glad to bring attention to those. When we're looking at some of the damage that we may have, after it happens if we do not do a great job at preventing it, sometimes that damage can look very similar, even though it's from different species. But what's the best way to identify our problem and then figure out what's really creating that damage?

A

Andy Kellner 07:51

This was great. So I, I dread the phone call when it first comes in about conflict. But this is the part I like, you know, it's, it's fun to go out there and you learn something about the animals and what they're doing. So some of this is going to seem pretty common sense when I say it, but it's not necessarily the first thing you look at. So it's really diving into that detective role. So the first thing I look at is where's the damage occurring? Is it down close to the ground? Is it higher up? I mean, obviously, a rabbit isn't going to be doing damage that's five feet up on the ground. So little things about just location can be really important. I always look really closely at the bite marks if a stem has been bitten off, or if there's a bite out of a fruit look really close to see if that's a clean cut, or if it's jagged. Deer don't have upper incisors. So if it's a rough cut, if there's a leaf that's torn, or a stem where there's part of the stem, still, there might at least look like it's been pulled apart as opposed to sliced, then we might be talking about deer. But if it's something where there's a nice clean cut through a stem, then you're talking about an animal with with you know, upper and lower incisors, then you're talking about rabbits or squirrels or voles and that sort of stuff. So looking at what that actually looks like, I'm a big proponent of looking outside of the garden, take a second stand up, stretch your back, what's what's going on next to the garden where these animals could be coming from in what's potential for you know that quote unquote, habitat out there? Do you have a big silver maple tree that's hollowed out not far from the garden? Well, then you probably have raccoons is there you know, is there a big brush pile around? Well, then that could be home to all sorts of things. So be sure to look out for that. I like to get a handle on how big of an animal are strong of an animal we're looking at? Is there a pumpkin that's broken all the way open? Well a rabbit can't break a pumpkin all the way open, right? So it's not a habit. So let's look at some of those

easy clues like that, and in get to it. And sometimes it can throw you for a loop lot of people when they see a whole bunch of sweet corn knocked over think oh, the deer must have been in here because a deer is a big animal and it's knocking it over right? Well you actually go out there and start looking at And it turns out it's raccoons that climb up the stalk, and then pull it over the stalks are laid every which way. If you look closely, you'll actually see the how they pulled apart the cob and then we're chewing on the on the kernels. So you can see that the bite marks are different. And it's always good to look for those other identifying cues in the area, tracks, scat, whatever they left behind. And honestly, when it comes down to it, trail cameras are becoming a very popular thing. They can be a great resource for identifying what's in the area and what's using stuff when you're not there.

O Olivia Hanlon 10:34

Yeah, and that makes a lot of sense, Andy, but definitely not something I would think about pointing at my garden.

A Andy Kellner 10:41

It's kind of fun, actually find out if the neighbors are coming over and get some tomatoes. Yeah.

O Olivia Hanlon 10:47

So now that we've talked a little bit about who's doing some damage, and why we're seeing some damage, why don't we talk a little bit about reduction and prevention strategies that are out there? What kinds of strategies can we implement to maybe mitigate some of that damage that we may see from wildlife in our garden or to our horticultural crops?

A Andy Kellner 11:06

Great. Yeah. And I don't know that there's always a silver bullet. And I just you have to say that upfront, it's not going to solve everything, but a lot of times, it's a combination of techniques, right. And so we have a few key strategies we like to talk about and utilized as far as helping mitigate some of these damages. And those are exclusion, aversive conditioning, habitat alteration, repellents, and then kind of as a last resort, lethal management. So I don't want to bore anybody with all the details, but I'd like to go in at least a little bit to some of those things, especially when we're talking prevention, exclusion is huge, keeping the animals out of it in the first place, that way, they don't get a taste for it, it doesn't become part of their pattern and routine, it's preventing the problem before it even becomes one, it's a lot easier to prevent, than to break the pattern that's already established. So things like fencing, electric fencing can be very effective for a number a different animals, we talked about the underground critters, if you know you're going to be incorporating root vegetables into in your garden, and you're going to be putting up some chicken wire for rabbits and stuff anyways, then just go down into the ground six inches with it when you're installing it in the first place, I think that can be really helpful. And what's nice about it, any sort of fencing like that, you can easily combine a couple of hot wires, just out and low to the ground and then just above it, which will help with some of the other critters too. So you can kind of get as many of them as possible with that. I don't

mean to sound mean, about electric, but it really it really helps train the animals to stay away from it. And I would even bait those hot wires, something as simple as aluminum foil around it holding together with peanut butter, just so they come up want to smell it, interact with it and get that initial shock, not to be mean but to help train them away from utilizing that resource. Along those lines of kind of training the behavior out of them. aversive conditioning is just a fancy way of saying like scare tactics or harassment, anything you can do to make the area seem unsafe or scary to those animals is going to reinforce any of the exclusion you're doing or any of the other principles of this is not an okay place for you to be. So that can be things like pyrotechnics, having dogs around can be very helpful predator sense, any sort of motion sensor thing that will actually kind of go off when the animals nearby can be great. They actually make motion sensors, sprinkler systems now. And it's it's it's good for, you know, the neighbor's cat is good for raccoons, it's good for the neighbor themselves, any of those things, it just gives them a spray of water when they walk into a certain frame. So I like prevent, or you know, talking about those sorts of things as something that you can have out there, that's not always going, but it will go off even without you being there. So it's kind of a hands off way that the animals won't get used to it. I talked about habitat, and you know, last show, we talked about this a lot with geese, but taking away any of those places for them to live. If there's a brush pile not far from the produce section, you got to get rid of it. You got to burn that during the wintertime or something because it's going to be home to all sorts of things. But otherwise, just if there's the neighbor's CRP backs up to your garden area, if nothing else, be aware of it and know that you want to break up the trails or the any of the movement places from that prairie into the produce. So it can be something like a screen of other vegetables, asparagus can make a great visual screen or actual changing of the habitat itself. And I'm not talking about bulldozing out every tree, just just having ways, small changes to make a big impact. A lot of people kind of have home remedies for repellents, I think some of them can be effective, I think a lot of them can be not effective. But if it's working in an area stick with it, and I like it, but but combine it with other strategies, there's a lot of off the shelf things you can get or home based recipes for, you know, some of those spicy pepper sprays you can put out on things, I would just point out that any of the repellents that are based on like spice or it actually having the substance in its mouth, the animal has to take a bite of it, for it to be effective, right. So it's, it's going to be going through that action of taking a bite, and it might try another plant and not stop it. Whereas some of them that are more like a bloodmeal base, or predator scent base, those ones are going off of their olfactory senses off that sense of smell. So that one doesn't necessarily rely on the physical contact with the plant you're trying to protect. In the end, I, we always want to try all these things first, if if they're not that, combination isn't working, then sometimes taking the step into some lethal management can be a good fit for the area. Now I like to tailor a lot of this for utilizing the season structures that we already have in place. Recruiting hunters that want to be out there anyways in the fall can be a great way of being able to do it hands off, somebody else is coming in and making use of that resource. We there is approval that can be given for furbearer species outside of the season, let's say there's raccoons that are causing a lot of damage, you've tried some other things, we can work with a local law enforcement officer and actually get approval to be able to remove some of them outside of the season. So that is a step that we can take. It's just kind of down the line of other things have to happen first.

○ Olivia Hanlon 16:48

Okay, so if we come to that point, then Andy, is that something we should contact our local DNR officer about? Should we not have the means to take the lethal step? If we've had pesky critters for way too long, and we can't take care of ourselves, what should we do?

A

Andy Kellner 17:08

Oh, it's a good question. Again, if you can utilize a hunting or trapping season, that'll be great, because then you can rely on the expertise of that trapper or hunter, and and build that relationship and that can go on for a long time and be a really conducive relationship into the future. There are nuisance wildlife control operators across the state. So these are private businesses that are certified through the DNR, to be able to do nuisance wildlife, animal removals outside of the seasons. So this is something where talking with the local law enforcement or conservation officer, they can get you in touch with it, otherwise, there is a list that's kept updated on the Iowa DNR website. It's under the hunting tab in the landowner assistance section, and I can, I don't know if there's a way to post a link to show notes, we can certainly provide that for you.

O

Olivia Hanlon 18:01

Yep, I can put that link in the show notes below. So that anyone who needs it can find it. Um, Andy, we talked about a couple of different strategies, but how do we know which one is the best for what kind of damage we're seeing? Whether it be which kind of pest were seeing and then adjusting it that way? Or how do we know when we need to bump up to the next level of those strategies, kind of.

A

Andy Kellner 18:29

So monitoring and keeping track of what's going on a property is super important, right? We're not just going to come in and carte blanche say, yep, here you go, just go kill willy nilly or anything like that, you know. Taking it into your own hands of keeping track of what sort of damage you're seeing, whether that's through the growing season, or maybe it's on a year to year basis, can be really important. That's where the trail camera can be useful in that situation, too, but it's, it's just important to go out there and keep an eye on what's changing. What tactics are working if you try something new, watch and see what the results are. And that's not a go out every other week that's go out there every day and take a peek and see what's working and what's not working. Are there fresh tracks after a rain shower, new scat piles, anything like that. So that's, that's certainly something you can do to monitor it. Then I think, on top of that, working with other people that have been through the scenario is really important. We we all stumble and fail at some level. I've had plenty of my crops in my garden that that have gotten taken out. And it's a learning lesson, right? And I haven't I haven't met a gardener that's not afraid to share their tactic that's worked. So I think working with other producers, and maybe even joining some of the groups that are focused on this stuff to be able to share those ideas and help educate you, whether it's the Fruit and Vegetable Growers Association or anything like that. Those are great places to learn from what has worked for other people in the area. And we're happy to help provide any information that we can too, any of the local depredation staff and in ideas that we've heard through the years with working with producers as well.

O

Olivia Hanlon 20:13

All right, Andy, I feel like we could talk about these mitigation and prevention techniques forever. And we just kind of skimmed the surface of that. But is there a good comprehensive resource out there for folks who are looking for more ideas and more information, specifically, on the prevention and mitigation side of things,

A

Andy Kellner 20:30

I'm gonna slightly take that, as you're saying, I'm talking too much again, Liv. No, I'm just kidding. There's a lot of resources out there. And again, you can certainly contact your local depredation staff for help, we're more than willing to walk through some of that with you, and get you some of that information. Otherwise, there was a collaborative effort with a lot of academic wildlife professors across kind of the Midwest area, they put together a lot of information that's still very relevant today, dealing with a wide range of animals and possible damage scenarios. If you do a Google search for the Internet Center for Wildlife Damage Management, you'll find links that go down and break it through species of birds, carnivores, other mammals, rodents, those sorts of things. It's got a lot of ideas on exclusion, things to be aware of as far as protected status on some species and that sort of information, and can be a really helpful tool. So there's a lot of information out there on the internet, I would say that this is a really good source. Another source that I've really enjoyed and gotten a lot of information out of is a book called deer resistant landscaping. It's by Neil Soderstrom. And it also includes a variety of other species that can be kind of trouble in the, in the garden, if you will, and tactics and steps for dealing with those issues. So those are two really good ones that I'd recommend.

O

Olivia Hanlon 22:00

Okay, you kind of beat me to my next question. It was, I guess, a lead in there, Andy, if people are wanting any more information on anything else, aside from just the mitigation and prevention, if they're wanting information on some of those pesky critters just in general, or anything that has to do with wildlife depredation, where should folks go to look for that information? Or who should they reach out to?

A

Andy Kellner 22:22

Yes, certainly reach out to the Iowa DNR, you know, depredation staff, our information can be found on the DNR website. It's in the hunting tab under landowner assistance, and there's a bit in there on wildlife damage management. A little bit tough to get to, but I'll send the link to you as well for putting in the show notes, so that can be a great one for getting in contact with your local depredation person. And and I think just talking it through with those other groups, like I mentioned to I mean, I rely and I try to go to any of those conferences and seminars to increase my level of knowledge on it, too. We're always learning out there in so whether it's the specialty growers conference every winter or something like that, I'd recommend going to it and getting involved with those other people and utilizing them as a resource as well.

O

Olivia Hanlon 23:12

Alright, thank you so much for those. And for those questions that you didn't answer today that...

Alright, thanks for the plug there, Andy. Is there anything that we didn't cover today that you want to add on here before we sign off?

A

Andy Kellner 23:21

I, I'm a strong believer that education is the most powerful tool. And I just appreciate being a part of the process. I mean, that's, again, when that phone rings, and you know, it's conflict coming in, get into the end of it and help them brainstorm some ideas and getting to that resolution. There's not much that beats that and it's something that you know, human wildlife conflict has been around since time immemorial. You know, it's it's always been a part of life as human beings, and especially for agriculture, I mean, there's references all over the place and old literature that, that go back to wildlife and agriculture. So learn from what others are doing and what's worked for them, and utilize all of that knowledge that already exists. And don't be afraid to fail and stumble a little bit and just make sure you're learning from that opportunity.

O

Olivia Hanlon 24:09

All right. Well, thank you very much for joining us today, Andy, and we look forward to having you back in the future.

A

Andy Kellner 24:15

Thanks, Olivia.

S

Speaker 3 24:16

This program is brought to you by Iowa State University Extension and Outreach. This institution is an equal opportunity provider for the full non-discrimination statement or accommodation inquiries, go to [www.extension.iastate.edu/diversity/ext](http://www.extension.iastate.edu/diversity/ext)