

# Preparing for Starting Seeds

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## SPEAKERS

Speaker 3, Olivia Hanlon, Dan Fillius

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### Dan Fillius 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.

### Olivia Hanlon 00:29

In this episode, I visit with Dan Fillius, Commercial Vegetables and Specialty Crops Specialist with Iowa State University Extension and Outreach. Today we are talking about getting prepared for starting seeds. I'm Olivia Hanlon, Farm Food and Enterprise Development Education Extension Specialist and we hope you enjoy the show. Dan, welcome. We're glad to have you joining us today.

### Dan Fillius 00:49

Oh, thanks, Olivia. It's good to be here.


### Olivia Hanlon 00:51

Dan. We're glad to have you back. It's been a while since you've been on so why don't we start with a quick reminder for everyone out there on what you do in your role here at Iowa State?

### Dan Fillius 01:00

Sure. So my job is to serve the commercial vegetable growers of Iowa and help them with improving production practices. So if they've got any problems or questions, I make site visits, house calls and answer texts, emails, Instagram messages, DMs, you know, all that stuff for


getting production practices improved. In addition, especially crop growers are people I serve as well. We have a separate field specialists for fruit crops. And so vegetables and specialty crops are in my realm and fruit crops are for for someone who is going to be I believe, starting sometime in the next several months.

 Olivia Hanlon 01:42

Sometime soon we hope right Dan?

 Dan Fillius 01:44


Yeah, exactly. That's right. And yeah, but last time I was on this podcast, I believe I my position was the was a Food Safety Specialist, and so I've moved around in extension. But I was a vegetable grower for 13 years, and I'm excited to be helping people and sharing that knowledge that I developed over those 13 years.

 Olivia Hanlon 02:01

Yes. And we loved working with you in the past and we're excited to continue working with you in your new role, Dan. Like I said, today we're talking starting seeds. So when we say starting seeds, could you tell us what exactly that means for anyone out there who may not know what that is?

 Dan Fillius 02:17


Oh, sure. So typically, we're talking about planting seeds indoors in some sort of a container and raising those plants under ideal conditions, until it's safe to plant those plants outside.

 Olivia Hanlon 02:28

Okay, it's pretty straightforward.

 Dan Fillius 02:30

Yeah.

 Olivia Hanlon 02:31

So what is the advantage to starting seeds? Why might someone consider starting their seeds, rather than just planting them right into the garden?



**D** Dan Fillius 02:38

Oh, yeah. Well, some plants you want to have earlier harvest. And so starting them off with the first month or two of their life indoors, allows you to plant them out at an older stage of life, and then they will give you fruit earlier. Also, you get better survival out in the garden, you know, the conditions aren't always ideal in the garden or on the farm for planting these plants, and so you can end up with better spacing because you don't have to seed you know, two times or however many, you know, 1.5 times as many seeds out there. Then you can plant it exactly the spacing you want from the get go. It works nicely.

**O** Olivia Hanlon 03:21

Yeah, that makes a lot of sense. Dan, what kind of plants should we consider starting as seeds?

**D** Dan Fillius 03:26

Sure, well, most of them can be started early, there are a few things that work less well. Those are typically things that have tap roots, like carrots, there are other crops like cucurbits, like winter squash, watermelon, those types of things that have sensitive root systems. And so some people do start them for the first couple of successions, or every succession, really depends on the grower. But there is some gamble if you're being too rough with them or if they're ready to go into the ground and the weather is poor outside and you're not able to plant them and they stretch you know, the stems get super long in the tray or the roots get really root bound. You know, it's not a perfect system. So I guess what I'm trying to say is there are other plants that work really well direct seeded like cucurbits - they've got big seeds, they typically jump right out of the ground, and if you were to transplant a winter squash indirect seeded on the same day, the benefits of having a transplanted one usually are not 100% realized, you don't get the same benefits as you do with like a tomato.

**O** Olivia Hanlon 04:32

Okay, very good to there.

**D** Dan Fillius 04:34

I guess I'll say that and one final quick thing. The direct seeded winter squash will often catch up to and pass the transplant one in vigor and in quality.

**O** Olivia Hanlon 04:44

Okay, good to know. So when we're looking at getting started with starting our seeds, what kinds of materials do we need to gather before we can even think about putting those seeds in?

**D** Dan Fillius 04:54

Yeah, there's a lot right. A lot of things that are necessary for doing this ideally. A person can just take an old younger container, something, put some soil in it, put it on their windowsill. But often what happens is there's just not enough light and the stem of that little seedling, stretches, stretches, stretches trying to get closer to the light to better conditions. And then you end up with this really thin, wispy, weak transplant, and so you can use those transplants in your garden and if that's all you've got, it's, you know, sometimes the benefits of doing that are better than not. Especially with the tomato, because you can plant it deeper, and they will sprout roots out of their stem that thin, long stem, they will sprout roots out of that, and then teaches routes that allow them to take up nutrients. But to achieve the goal of stout stems, strong transplants, things that are going to be very vigorous out there in the garden, not blow over in a light breeze and have their stem snapped off. There's a number of things that that really help with that. First and foremost, I already hinted at with the window being the limiting thing for this is light. So having supplemental lights for these transplants is crucial, and this is maybe not a surprise because plants are magical and that they eat light. So a window is typically not enough, what people are typically doing for this is getting a fluorescent fixture - T5, rather than a T8 fluorescent fixture, it's more intense light, putting grow bulbs in there, or a LED fixture, the upfront cost of an LED fixture is higher, but the life is longer. If you already have a T5 light fixture, fluorescent light fixture, they do make bulbs that fit into those fixtures that are LEDs. So there's like sort of a middle ground there, where you can use LED technology but with an older fixture. But that what I have in my basement for starting four trays for my home garden. So four foot long, four bulbs in the fixture and in a T5 fixture concept. A lot of people set these things up on these wire racks, these shelving units and have you know a different set of four trays on each shelving unit. So watering is often done in people's basements, sometimes in a room in their house. As a new homeowner myself, I'm learning the wisdom of keeping water away from the house. So keeping water contained in the room or in the basement is crucial and how I do that and how a lot of people do that it's using the plastic tray that contains all of these transplant trays. And then the other benefit that that gives you is that you can pour water into that tray, and then it will wick the water up from the bottom. And that can give you a nice full soil profile of water. Because sometimes watering just a little bit on top, you end up getting just the top half inch wet and then the the rest of the plug is super dry. And that is also not good for those plants. You know, I've sourced things for my setup from both online marketers, and also from the local like hydroponics store here in town. So these are both, you know, places that even though I'm not growing hydroponically, they have supplies like grow lights, and these trays, and the basin and everything to use, and the bulbs to put in the fixtures. You can just use normal fluorescent light, but it's best to use an actual like legit grow light bulb, and potting media. A good high quality one is nice, many people will soilless but you know there are compost based ones that are also good. I'm just buying a bag when I don't get anything super fancy. But bags, media, three more things, a fan is good to circulate the air around these things, keep pathogen growth down, and also wind on these plants can make for stronger stems. Also, a heat mat is really good to put underneath these, these plants, especially for those warmer season crops like tomatoes when you're starting early. Eggplant and pepper even maybe more so, that really gets them to jump out of the ground and and grow nicely. And then finally a timer for the light, for your grow light because 16 hours is right around ideal for these things and so you set that timer for 16 hours. They're in my basement, the basement is a colder space generally speaking, I have that 16 hours start in the early morning with the coldest, you know 1am 2am, something like that until sunset typically. And that allows for the heat from those lights to make a little bit warmer at that coldest part of the day. I don't know if everybody does that, but that's just what I thought would be good for mine. Yeah, it makes sense. All right. So Dan, one of the most important things that we need for this are seeds. Where are some of the best places to get our seeds and when do we need to think about buying them? Yeah. So I mean, there's all sorts of good places to get these and they've

just grown over the years. You can seriously just if you're taking a trip to the garden center, many of them have good quality seeds there already. We've got a tremendous seed house here and breeder and preservation company seed savers exchange here in Iowa, that a lot of garden centers will have varieties from seed savers at them. And you can get a packet of these seeds. Those are good, you know, a lot of commercial growers, some commercial growers will still grow those varieties those open pollinated older varieties, many commercial growers are growing more hybrids and more newly developed varieties, ones that are specifically resistant to certain diseases that they're encountering problems with and the ones that I've, you know, for organic growers, I know and small small scale growers, a lot of growth, a lot of them are going with Johnny seeds, great customer service, great selection, also their catalog and website have a lot of good information about like all this stuff that I'm talking about right now is probably on a fact sheet like on the Johnny's website and like ideal selling dates is all on the Johnny's website and in their catalog and like seed spacing number of seeds per cell, how far to plant it out in the you know, away from itself in the garden, all that stuff. Great thing, if you're looking for 100% organic seeds, High Mowing seeds is a really good catalog. And then there's another one that's growing in its coverage of our state Osborn seeds is another one, you know, but then there's also other ones Harris Seed, seed way, Rup, these are all great sources for seeds.

**O** Olivia Hanlon 11:31

Absolutely. And then Dan, when do we need to think about purchasing our seeds? Will they sell out at some point? Is there an ideal time to buy those?

**D** Dan Fillius 11:41

Yeah, so the ideal time is, as soon as you get your garden plan, really, that's the ideal time as far as knowing what to buy. But the ideal time to make sure things don't sell out is now you know, generally speaking things are still available in January, February. But there have been in the last couple of years because there have been a lot more home gardeners buying things, and some supply chain shortages also in getting seeds from the growers of the seed to these catalogs, some difficulties and so people have come up short. But sooner is better than later. I know that some of these companies cut off home gardener sales, at some point in last couple of winters to prioritize their commercial growers, or made it only on certain days that home gardeners could order on the website or something like that. And I guess a follow on to this is you can buy many seeds ahead of time and like let's say I really like a certain variety, you can buy two or three years worth of that seed right now and store it in a cool dry place. I have mine in a little Rubbermaid in my basement. Germination, it should be good, you know, if they found seed and like the pyramids, right, the 1000s of years old, it's still germinating. That's that's hyperbole, right? It's not that not every seed is gonna germinate really great 90% or 90+ percent germination out, you know, 5-10 years from now, but they they don't need to be planted this year, if you buy it this year, except for if it's been pelleted. Because the pelleting that goes on to seeds typically decreases. It's holding capacity.

**O** Olivia Hanlon 13:17

Okay, that's good to know, Dan. So we've talked a lot about getting prepared, but when do we need to be prepared by when you think about starting seeds?

**D** Dan Fillius 13:25

Yeah. And so this is another like that Johnny's kind of like has all this information in there because it is different for every single crop. But generally speaking, many vegetables like lettuces and cold crops in the cabbage family, kale, cabbage, broccoli, cauliflower, those things are all pretty reliably four weeks to transplant. You plant them, they're given ideal conditions, they will be ready to go into the ground in four weeks, or a month ahead of planting. So you just back calculate from when you can plant those and those things are typically frost tolerant, and so all the broccoli you can have some negative situations with it gets up to this heart of the frost button heading. But anyway, you back calculate from a plant date, say for mid April, and then you plant those in your in your house in mid-March. Tomatoes can take like a month and a half, peppers and eggplants anywhere between a month and a half to two months. You just back calculate from your frostfree dates for those ones, or if you're gambler from the date you want to plan them.

**O** Olivia Hanlon 14:21

Okay, awesome. Well, is there anything we did not cover today that you'd like to add Dan?

**D** Dan Fillius 14:27

There are some really good varieties available at many greenhouses around the state. So you may not need to start your seeds, check and see what is out there. But if you know there's a variety that's like an interesting one that you just want to grow and it's not available anywhere else. Give it a try even if all you have is that windowsill with a yogurt container, you got to start somewhere and troubleshoot from there. But don't let you know the perfect be the enemy of the good in this situation. Have fun with it, plant some seeds and and see where it gets.

**O** Olivia Hanlon 14:58

Yeah, absolutely. Thanks again for joining us today, Dan, and we look forward to having you back in the future and maybe talking about how to get these seeds started.

**D** Dan Fillius 15:07

Oh, it'd be my pleasure. Thanks so much for having me.

**O** Olivia Hanlon 15:10

Thanks, Dan.



**S** Speaker 3 15:10

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