

Raised Bed Gardening

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SPEAKERS

Christa Hartsook, Joe Hannan, Dr. Ajay Nair



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.



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 Farm Sustainability Podcast. With me today is Dr. Ajay Nair, Extension Vegetable Specialist with the Department of Horticulture at Iowa State University. Welcome Ajay. How are you doing today?



Dr. Ajay Nair 00:49

Pretty good, Joe. Nice to be with you again.



Joe Hannan 00:52

Yeah, thank you for coming on. And joining me today. We're gonna talk about raised beds today. Right?



Dr. Ajay Nair 00:58

That's true. Yeah, with the spring already here. Although the temperature this week doesn't seem like spring, but it's on us. And everybody is getting excited to get outside and plant, so I think it's a very relevant topic about raised beds.



Joe Hannan 01:13

Perfect. So what is a raised bed and why would we want to use them as part of our gardening?



Dr. Ajay Nair 01:20

A raised bed is a very commonly seen structure in many of the gardens, which homeowners have in their backyard or in the front yard. And basically, what it means is, it's a structure that is raised a little above the grade of the soil, I would say about six to 10 inches high, some kind of a vessel or a container, in which you can add soil and you raise the seeding or the planting bed. So instead of seeding or transplanting directly into the ground, you are planting in this raised structure which holds soil which you have amended or which you have added.



Joe Hannan 01:57

So Ajay, a raised bed, it should dry out or warm up a little bit faster in the spring, right?



Dr. Ajay Nair 02:03

That's true. And that is one of the major reasons why do we use raised beds, there are soils often which do not drain that well. There could be issues with compaction. And so to mitigate all those issues, people usually create raised beds. And as you pointed out, raised beds do warm up a little faster than the ground level. And higher temperature means quicker seed germination, better plant establishment, and quicker growth.



Joe Hannan 02:31

So I really see a lot of these raised beds put in like newer housing developments where they've bulldoze and managed the surrounding area and pulled off a lot of the topsoil basically as a way to grow plants, grow veggies, grow flowers, without having to rebuild the entire area of the ground that was bulldozed out from housing development.



Dr. Ajay Nair 02:53

That's very correct you know, when if you don't have a good quality soil, it's going to impede the growth of the plant. And you know, when we plant in the spring, we are anticipating good growth, nice harvest and the plant performing really well. So these respects help us to get to that goal. And especially again, when drainage is an issue where compaction is an issue, there could be tiles which are not suitable in terms of you know, the soil nutrient status they have. So with raised beds, we have an option to amend and make our own soil mix and add to this base bed and improve the crop growth.



Joe Hannan 03:29

So what can we grow in these raised beds Ajay?



Dr. Ajay Nair 03:32

You can grow almost anything in these raised beds, many of our listeners, homeowners and gardeners and even plant enthusiasts they grow vegetables. That's a very common plant which we see that is grown in raised beds, all sorts of vegetables, starting from leafy greens, brassica crops like cabbage and cauliflower and broccoli, moving into summer vegetables, tomatoes, peppers, eggplants, and so you can grow almost anything in these raised beds.



Joe Hannan 04:00

I've even grown blueberries in raised beds as a way to modify the soil and bring the pH down so I can have blueberries. I even have a small cherry tree and one that was larger and a little bit deeper than most raised beds for a while so you can do about anything.



Dr. Ajay Nair 04:16

You bring in a very good point especially with these berry crops like the blueberries which need acidic soils, it's very difficult to acidify a big piece of land a big big piece of you know plot. But if you create a raised beds that say eight to 10 feet long for four to five feet wide, you can easily amend that soil with with sulfur and peat and try to bring the pH down and be able to grow your blueberry.



Joe Hannan 04:41

Yeah, and that's exactly what I did. I had a four by eight bed for a couple blueberry plants

and just custom built my soil and put a lot of sulfur to pull the pH down and it worked pretty well. I was pretty happy with it.

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Dr. Ajay Nair 04:54

Yeah, I think the warming you you bring in a very good point of the warming aspect to in the beginning where raised beds, when you start things in raised beds, they are typically about one to two degree higher in terms of soil temperature. And in the spring, for example, this week, as you see, you know, it's cold out there. So a raised bed would definitely be warming up a little better than the bare ground.

J

Joe Hannan 05:16

You gotta be careful with the raised beds, if you have perennials in there that they don't get colder during the winter as well and cause some injury and up with some crown injury and things with some of my blueberries. I think that's why I ended up with like, dead cherry trees, eventually it just got too cold on the root zone and

D

Dr. Ajay Nair 05:34

Oh, okay, okay.

J

Joe Hannan 05:37

And Ajay, there are specific plant cultivars, or varieties that are more suitable for growing in raised beds or container gardening and off time, I look at the plant description, and it'll say whether it's good or recommended it for container gardening or small raised beds and things like that. There is a lot of new cultivars or varieties in the vegetable world that are really well suited for raised beds, even if it's a non traditional raised bed plant, like a squash plant or something.

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Dr. Ajay Nair 06:08

Mm hmm. Yeah, that's a that's a good point that you bring. Nowadays, the vendors do add that information about whether it is suitable for raised bed or not.

J

Joe Hannan 06:17

Ajay, if I want to make a raised bed, what can I make it out of?



Dr. Ajay Nair 06:21

Raised beds can be made with many different things. The most commonly seen ones are the ones that are made with wood, you can make it with bricks, you can make it with stone, and you can basically just pull soil from around and just create a structure know that that is also a raised bed. So it is very, fairly easy. And it's up to a left up to the creativity of the person who's creating the raised beds, you know, sometimes they have a formal structure, typically a rectangle, but it could be irregular, it could be any shape you want. So there's a lot of flexibility.



Joe Hannan 06:53

I saw some really cool water tanks. I don't know if I shop at Tractor Supply or Fleet Farm or what the other day but they're clover shaped, and they're about two feet deep. So I can definitely do something a little unique and different.



Dr. Ajay Nair 07:06

Yeah, you can show that you're supporting the 4-H.



Joe Hannan 07:09

Yeah, there you go. Maybe a little Irish history. If you're. I think back and look at the raised beds that I've made before some of my friends have made I see real common, where like a four by four is dropped into each corner of the raised bed, and then they wrap it in two by fours. That seems to be common. I see a lot of raised beds made out of landscape timbers. So it's not quite a four by four post and they're fairly cheap. I mean, you're looking at \$3 or \$4 for an eight foot landscape timber, I believe if you get them on sale.



Dr. Ajay Nair 07:39

Yeah. Joe, when you're when you build these raised beds, what is the depth which you ideally look for when you are creating these beds?



Joe Hannan 07:45

I usually shoot for about 8 to 12 inches deep, depending on what I have. The ones I built at my previous house are all right about 12 inches, just because I knew I want to put some tomatoes and other odds and ends that were deeper rooted in there.



Dr. Ajay Nair 08:01

Sure. Wow. That's that's a good point. Yeah, some some vegetables are a little bit more deeper rooted. If you compare tomato versus let's say lettuce, or spinach, you know, you do need that extra room for them to grow.



Joe Hannan 08:13

Yep. And I've got a few now that are more like the 55 gallon drums cut in half and I see feed bunks all the time used. And those are going to be shallower. Obviously. That's kind of what I have now, because I'm not growing any deep rooted crops I know. But if you use any of those 55 gallon drums or feed bunks or whatever, you got to make sure that you're putting holes in the bottom of them. Right. So excess water drains out.



Dr. Ajay Nair 08:38

Yeah, sure. Yeah. And I think also when you're using wood, which is most commonly used it is better to buy untreated wood. Just because a treated wood would keep these slugs and other pests away because when there's too much moisture, they try to cling to that so and try to buy wood that is you know, more resistant to decaying. And cedar is a good example of that.



Joe Hannan 08:59

Yeah, and cedar is not treated if I'm remembering right, so it just has a natural stability.



Dr. Ajay Nair 09:04

It has its own properties. Yes. But if you want you can buy treated wood too.



Joe Hannan 09:08

Yeah, a lot of green treated products out there probably would not go the full crew so treated or it's treated all the way through it.



Dr. Ajay Nair 09:16

And I think most of the time homeowners are okay, if you're going with the non-treated one also, you don't have to sometimes I have seen that if it's a non-treated, you might have to replace it if it gets decayed, maybe four or five years, you might have to replace

it, but it's not a big issue. I've not heard much of an issue now.

J Joe Hannan 09:35

Okay, Ajay we hinted a little bit about filling these raised beds up, we hinted a little bit about being able to really customize what kind of soil mix goes into these raised beds. So, talk to me a little bit about what you would fill these raised beds with and what you're looking for when you're adding materials to them.

D Dr. Ajay Nair 09:53

Well, one of the biggest, you know advantage of raised beds is that you can formulate your own mixes. So if you're soil was not well drained, if you saw didn't have enough nutrients, you can custom make your own growing medium. And typically, you know, it's not advisable to fill raised beds with soilless mix which you can buy from stores or you know those bags the soilless mix because that would be very expensive. What you can do is use the normal soil which you have in your yard, and then definitely add some compost to it. And when I say compost, some good quality compost, not just any compost, and I also sometimes just mix a bag or two of the soilless mix so that it gives some porosity, some aeration, some some drainage, so we can make our own mixes, again, soil compost, some soilless mix all mixed together. That's what we typically see being used in these raised beds. Have you tried anything else Joe? Or is it something which you have also used?

J Joe Hannan 10:46

Yeah, I usually throw some woodchips in. So I have some nice large materials, in order to help with drainage. Sometimes I'll throw in I can buy a bale of peat moss, and I'll mix that in again to help with drainage and it's a large volume. So I've helped fill it up fairly quickly. And then yeah, compost is always one of my go to add ons. So I always start with like a topsoil for my bulk volume material. And then some composts and woodchips, some peat, kind of whatever and get and get cheaply.

D Dr. Ajay Nair 11:18

Sure, I think compost is a great additive or amendment because it not only provides the nutrients, but it also provides the energy and the strains for the microbes to grow. You know it helps the microorganisms and helps with the quality helps with you know, aeration, porosity, it's a great resource.

J Joe Hannan 11:38
Yeah, compost has got to be in there probably on a fairly large volume, to be honest.

D Dr. Ajay Nair 11:43
Sure, yeah. I know we were also planning to discuss on the irrigation part of it of how do we irrigate? I think compost also does a great job of holding on to the moisture when it's there. So you don't have to irrigate that often.

J Joe Hannan 11:56
Yeah, really, I usually think of July August, where I might need some irrigation.

D Dr. Ajay Nair 12:01
What have you used to for irrigation like drip or you hand water? What are the options would you have tried?

J Joe Hannan 12:09
A little bit of both. I definitely use hand watering early spring when I'm seeding in or getting stuff established and maybe only watering every other week, because we're getting rainfall. I've gone into, like during the summer months during like July and August and I put drip tape down so like a four foot wide bed, I might do two or three lines of drip tape down the bed to get good uniform irrigation. But mostly that is so I can hook it up and turn the faucet on and walk away for a few hours and not stand out there and deal with it. So

D Dr. Ajay Nair 12:40
And it's pretty efficient to drip irrigation, you can conserve moisture, and provide the water right where the plant needs it. I've also seen folks using soaker hoses, which slowly drips and soaks the soil. So again, anything we can do to conserve some moisture drip soaker hose. That's great.

J Joe Hannan 12:57
Yeah, soaker hoses really aren't going to run you any more small scale than what setting up a drip system would be. So that worked pretty well. And it's user friendly.

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Dr. Ajay Nair 13:06

Yep, true. Yeah. And you don't want I mean, we know how the summers in Iowa could turn out, you know, July and August could be very hot. And these plants need a lot of water in those hot days. And so it's good to have some kind of a plan of how you're going to irrigate, not just handle water, but prep would be best.

J

Joe Hannan 13:24

Yeah, especially when you're talking a raised bed, that is not going to pull water from the surrounding area, you're not gonna have any lateral movement from the surrounding garden area into that raised bed. So if it gets dry, you've got to supplement it. So Ajay, am I ever going to need to refill my raised beds?

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Dr. Ajay Nair 13:42

Well as we all know that the soil settles and the same thing will happen with your raised beds they will be some settling the first year more maybe a little less than the second year. But obviously anytime you water you might step into it to plant or you know movement in the raised beds, it will lower the level so it's good to you know amend and just add whatever is needed on a yearly basis. Again, same mix soil compost, and soilless mix so that we have the right level and the right depth for the roots to grow. If you don't refill over several years, you will see that the level is going down and then it's not a raised bed but it's getting more close to the ground level. We want to preserve the meaning of the word the raised bed so I think we should fill on a regular basis.

J

Joe Hannan 14:28

That's been my experience to every couple of years I need to go back in and add some compost, add some peat, add some woodchips, and and those materials will break down over time too. So it's not just that you're settling or compacting it, it's just those materials break down.

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Dr. Ajay Nair 14:42

So I think we were raised beds just thinking of the whole process here for people who haven't gotten into growing crops but they're really interested. Instead of you know going and managing a larger area raised bed, it's a great entry point to start something small, grow more confidently knowing that the soil is good, the drainage is good. So you get the results and you don't get disheartened the first year, you're starting to grow something. So

I think it's a great way to get growing brings up on us, and it's a great time to think about raised bed, and maybe create a raised bed in our backyards.

J

Joe Hannan 15:17

Yeah, I agree, it's a great time to get started with raised beds, start with one four by eight bed, if you do nothing else, just to get the use and flow of it, because it's gonna take a little effort to get them set up takes a little time and effort to get them filled up. But once you got that raised bed, it's going to be there for quite a while. You know, they also had a few advantages of it's now a raised bed, depending on how high you lift that raised bed up, it may be a rabbit barrier as well, you may be able to keep the rabbits out of it. I see a lot of folks starting to add hinges and additional structure to it so that they can make it more of a mini high tunnel and things like that. So, you know, once you get that base structure in place, you can really start play around and do a lot of additional work with it.

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Dr. Ajay Nair 16:02

Exactly.

J

Joe Hannan 16:03

So Ajay, any final comments regarding raised beds today, before we wrap up?

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Dr. Ajay Nair 16:07

I think we covered most of it. There are several resources available through ISU Extension and Outreach Small Farms Acreage Newsletter. And you know, between you and me, there are many resources, many videos available on YouTube. So I think it's time for us to gear up and if one hasn't grown crops, or is at least planning to grow something the spring, maybe a raised bed is a good option to start with.

J

Joe Hannan 16:31

Yeah, I'm looking at about this weekend seems about a good time to get outside and plant.

D

Dr. Ajay Nair 16:36

Oh, it's it's like in the 60s and 70s. We better be out there. Right?



Joe Hannan 16:39

Exactly. So Ajay, thank you for joining me today to talk about raised beds. Thanks to all our listeners for tuning in. And we'll talk to you again here in another week or two.



Dr. Ajay Nair 16:50

All right, thank you very much, Joe. It's always a pleasure talking to you and talking about plants and vegetables. It's fun and exciting.



Joe Hannan 16:56

Great, thanks Ajay.



Dr. Ajay Nair 16:57

Thank you.



16:58

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