



Greenhouses

Transcript – Growing Systems

Hello and welcome to Honor's Lab, Greenhouse Construction. This is module eight. So today we're gonna learn about growing systems and if you want to grow your plants in the floor or in raised beds. The reason that we're going to talk about this while we're still in the construction modules is that depending on how you want to grow may depend on how you finish your building out. So, there's several ways to grow your food in your greenhouses. The most popular are in the ground, in raised beds, hydroponically or in pots. I've grown plants in my greenhouses all four ways, so let's take a look at each style to see which is going to fit your needs the best.

So, hydroponics. When we first started growing vegetables in our greenhouses over 30 years ago, we did it hydroponically. We had long six-inch PVC tubes that we ran a system in that was called nutrient filled technique. So basically there was a half inch of fertilizer water running in the bottom of the six inch tube and the plants were suspended with a sponge at the top of the tube and the roots, they just dangled down into the fertilizer water and the fertilizer water was constantly circulating. This was a really cool system, but I didn't like the chemical fertilizer and after a few years, I decided that this just wasn't for me. The floor of that greenhouse that had that system in it was weed barrier topped with 3/4-inch screened gravel and this floor system worked fine for this type of operation. A cement floor would also work for this type of operation too, so that's something that you could put in if you wanted to do that. We eventually switched to hydro-organics which was better because it had no chemicals involved.

Okay, next is pots. We did a hydroponic system where the plants were grown in bags of sawdust and we've also grown the vegetables in potting soil just in pots, so we've done pots two different ways. Both of these methods are fine for growing plants. The flooring that you would want for this would be weed barrier with gravel on the floor or you could go with a cement floor. So, growing in the soil is the next way. Some growers like to grow directly in the soil that the building's placed upon and I have grown in my native soil, but 99% of us have the wrong type of soil to grow amazing vegetables which means you're going to need to amend the soil a lot. So, if this is going to be your method, you're going to want to amend the native soil with compost before you plant. There's two main drawbacks to this method. One, the weed seeds that are in the soil will germinate and grow amazingly great when you feed and water them, making your garden pretty much a weedy mess that will cause you labor. You're gonna have to clean that up.

The other big drawback is that the amendments you will need to use are generally put over the entire area and half of your space is going to be walking aisles and wasting your money amending the aisles is not a good idea for you, but the weeds will love this idea. So if you're going to grow directly in the native soil, decide where you will grow your plants and where you're gonna put your aisles and go ahead and amend the plant area and weed barrier the walking aisles. I've grown on top of my native soil in mulch gardens. This is where you put compost and 12 inches of loose mulch like straw and plant the plants into the mulch in the compost. So, the goal here is to re-mulch the garden when the weeds come up to suppress them. This works fine for annual weeds, but the crab grass saw this as an opportunity to take over the entire building. I love the mulch method, but I could not control the grass. So, growing in the ground or having the native soil exposed was not a good method for us to grow our food.

Okay, so the next one is raised beds. So, over the years my buildings and systems have all converted to raised beds. I love growing in the raised beds and they work really well in the greenhouses. The initial flow of the greenhouse is weed barrier, then I put in the raised beds and gravel the aisles in between, so all my beds and aisles are a standard width. They're 56 inches width for the beds and 16 inches for the aisles, so that equals 72 inches or six feet for a bed and an aisle. So, with everything standardized, all the equipment can go from any bed inside or outside, so it has the low

tunnels and all the different covers for the low tunnels and they're totally interchangeable and that is a really fantastic system.

With the beds raised above the floor, I can then choose a weeding method for the aisles that is more aggressive than I would use around the plants. I can salt the aisles, I can use fire, I can use organic weed killer, we can weed whack the aisles and this helps to keep them really clean and it saves a lot of time from just hand weeding the aisles. Also, my amendment investment is smaller because I can concentrate the amendments on the bed and not put the amendments in the aisles. So, I like to have my beds oriented running alongside north and south, so this allows me to put a cover on for the night and just flip back for day exposure on the southside of the bed. So, this is easier in my buildings that have the long wall that run east and west. Think about what kind of growing system you're going to want in your greenhouse before you decide on the location and before you build it. The goal is to grow food and the growing system is to determine how well you're going to do this.

So, your homework is to find a few greenhouse growers in your area. One that grows in the ground and one that has raised beds and ask them how they like their growing system and ask them what they would do different if they were starting over. So growing food in a greenhouse is fun and can really save you money and increase the quality of your food. It's a major step towards food independence and it can extend your growing season from a few months to an entire year. So, the money invested in putting up a greenhouse can be recouped in a few short years with the savings you get just in the food that you grow. So, before you build, you will want to go and make some decisions. Go back through each module and make some notes as to the size, the style, the orientation, the foundation, the heating system, the cooling system and the covering and if you want to build your own or to buy a kit. So, decide on your growing system as well before you start your construction. You'll find that the greenhouse will be one of your best additions that you can make to your family's health, budget and wellbeing. So have fun with this and I want to thank you for watching.