

**Podcast Series: Holistic Nature of Us**

**Episode # 52 : Meet: Craig Floyd #2**

**<https://www.judithdreyer.com>**

Hi I'm Judith Dreyer,

Thank you for joining me for this pod cast series "The Holistic Nature of Us".

My intent is to take us, you and I, into a better understanding of the concepts behind our holistic nature and how that ties directly to the holistic nature of the world around us. How can we connect the dots in practical ways that we are nature and nature is in us?

I will be featuring authors and educators, practitioners and others whose passion for this earth helps us create bridges. We'll see what's trending, what's relevant to our world today, not just for land use but to connect the dots between nature and ourselves. It's time for practical action and profound inner change so our natural world is valued once again.

Today I am so excited to have Craig Floyd back on the show. Craig is the farm manager for the Coogan Farm, which is a part of the Denison Pequotsepos Nature Center here in Mystic Connecticut. This man is a wealth of knowledge about farming, sustainability and working with nature in a holistic way.

So welcome again Craig. I'm happy to talk with you today.

CRAIG: Well my pleasure. Thank you for having me Judith.

JUDITH: Well, you do an awful lot down there and it's a good thing to get the word out. Tell us a little bit about the overview of your farm and your farm managing in the Coogan Farm.

CRAIG: The farm was purchased in 2013. We wanted to save the last open space in Mystic for the community and we wanted to keep the farm in Coogan Farm, We developed a giving garden where 100% of what we grow

is donated to help feed the 2,200 food insecure people in Windham County. This is 11,800 square foot plantable garden and we do everything as naturally as possible. We trying to keep Mother Nature happy.

JUDITH: Right and that's something we've forgotten to do. We tend to take over farming and we actually gave over our farming practices and our food production to big farms with only annual crops, and we're realizing the error of our ways. You have such diversity there.

I know today we wanted to talk about tomatoes, so let's start with that.

CRAIG: Alright. Tomatoes seem to be everybody's favorite thing to grow. Some people complain because they get too many of them, but I wonder if anybody really realizes what the potential is of a tomato plant. Most people when I ask them what's the biggest tomato plant you've ever seen. You might say 3 to 3-1/2, 4' tall and they use those little wire tomato cages to hold them up. But the actual potential of a tomato plant is 22' with 300 lbs. of tomatoes. We're not there yet. Ours typically grow about 15'. We do get a lot of tomatoes off of them, so there's a lot of potential out there. I wanted to take a little bit of time today and talk about tomatoes. But before I get into too much information, I wanted to give people my contact information and you can put it on your site if you want to, because I'm sure there are going to be questions. My contact information is: [cfloyd@dpnc.org](mailto:cfloyd@dpnc.org) so if people have questions they can e-mail me and we'll do our best to answer them.

JUDITH: Thank you Craig, and you are a wealth of information. And just for my listeners he's very, very helpful. Let's continue on.

CRAIG: All right so the first and most important thing is soil test, soil test, soil test. Did I say soil test? Soil test!

JUDITH: You sure did!

CRAIG: If you do a soil test and you need to use Logan Labs. That's what we use. There's a big difference in labs and they give you a lot of information. The reason most people don't do a soil test is because they don't understand them. They feel it's too difficult to decipher what it is that the scientists are trying to tell you. Perhaps the biggest thing is they'll see PPM or PPA found for acre or parts per million. All you have to do to figure out how much amendment you want to put in your garden is Parts Per

Million x 2 equals pounds per acre. And I can send you a file that has it broken down even further from that so that if you only have a 100 square foot garden, you'll know how much to put in there without trying to figure it all out, because that's difficult.

JUDITH: Craig that would be helpful because I offer a transcript for every podcast and we'll make sure it gets included in that podcast.

CRAIG: All right, that sounds good, excellent.

JUDITH: Great.

CRAIG: Okay, so once the soil test comes in, and you really should be doing your soil test in bulk and you're going to want a base soil test. And yes, it is a little bit more expensive, it's \$25 but they're going to tell you so much more and then you can start amending your soil. There are four things to look for on a soil test that really need to be optimum. If you don't have the optimum amount of these four different things, you're not reaching complete photosynthesis in the plant. And once that photosynthesis turns to form respiration all that stops, and the plant is not going to put out like it should.

So directly involved in photosynthesis is magnesium, that's a primary cation also iron and manganese. Manganese in particular is very, very important. If you do a Google search on importance of manganese in the soil, you'll find out just how important it is. Those are secondary elements. And then nitrogen is a trace element. You're not going to get a readout on nitrogen on a soil test because it varies so much, so quickly and there's usually enough nitrogen in soil anyway that you probably won't need any. But if you look at your plants and your plants are looking a bit piqued, you know you should be looking at your plants every day. If they look a little piqued, you could add some bone meal or something like that for nitrogen but you're probably not going to use that.

Now the next thing is what kind of seed do I want? Do I want an heirloom seed, or do I want an F1 or a hybrid seed? If you're after flavor heirloom is the way to go. We use strictly Brandywine here in the giving garden and the flavor is just intense. They're really, really good. F1 plants, you know if you use a Big Boy or an Early Girl or something like that they are going to have a little more disease resistance, etc., but if you get a good soil test and you get your soil balanced, which is going to take you 5 years, you get that soil balanced than there's no need to worry about your plants being sick and

in fact there's no need to worry about insect pressure either. Healthy soil, healthy plant, healthy human and consequently you don't have to worry.

And here at Coogan we are a no kill, no spray farm. We don't need to spray because of our soil being so healthy. You need to decide what kind of seed you want. Everyone has their favorite tomato plant so I'm not going to tell you you've got to grow Brandywines. Decide what you want. And then to remember that next year if you are using heirloom seeds, you'll want to save those seeds because seeds go through a screening process and by the time it gets to the little seed packet that you get the seeds in, you're in enough with the wimpy guys. You want to remember that in the garden, especially with tomatoes, you want to build a football team, which means you would need the biggest, fattest seeds possible. They will give you potentially bigger plants, which will give you potentially much more production out of a plant.

JUDITH: Craig if I can stop you for a second. One of the things I did realize and we both know Kris McCue of BFA, she told us that the breeders get all the best seed and what's left in the packets is like the 4<sup>th</sup> or 5<sup>th</sup> level of seed. And of course, if you go to the dollar store or some of those places, I'm sure you're getting just the bottom of the barrel and we wonder why they don't grow, it's because the quality of the seed is so poor.

CRAIG: That's right, that's right. People obviously right now are probably not saving seeds. You've got to start somewhere. We used Johnny's. I am a Johnny's supporter from day one. They are a fantastic company but there are a lot of other companies out there just as well. Get your seed. Decide on what kind of plant. Get your seed and grow your tomatoes this year and then we can have a discussion later on, on another podcast on how to save those seeds so that you're going to get the number one seeds, the big ones and what will also happen is those seeds will develop a symbiotic relationship with your soil, so your tomatoes will become very particular to your soil and so if you and a neighbor are both growing the same kind of tomatoes, your tomatoes will taste a lot different than his because of your soil. So, the seed is very, very important.

Now the other thing is, is when you get those seed packets, I want you to open the packet, and I want you to put in a pinch of inoculants so that every single seed that goes in the garden should be inoculated. And you can purchase inoculant from Advancing Eco Agriculture, and it's called BioCoat Gold. Now it's going to cost you about \$52 for a pound. Do you need a

pound? Nope. So here at Coogan Farm what we've done is we have broken it down to smaller containers so that they're small enough for the home gardener. We do have those available here at the farm. But if you get four or five gardeners who want to go together in buying inoculant well that's the way to go. Every single seed needs to have inoculant. It will increase your germination and it will also boost your production in your plant.

The next thing is potting soil. I can send you my program on what to put in potting soil. We don't just buy a bag of potting soil and throw seeds into it. We amend our potting soil with a lot of different things that people have never heard about. You know ground phosphates and zeolites and all this kind of stuff. When I send you that Word document it will also explain to you exactly what each thing is and what it does for the plant. Why is it that I'm using that in our potting soil? And credit for that potting soil goes to Digga from Hunts Brook Farm in Waterford Ct. It works very, very well for us.

So, you've got your seeds. They've been inoculated. You've got the potting soil and now it's time to plant them. You're going to plant them into cells. The bigger the cells the better. You can get 50 cells, that's 50 containers at your local nursery and get them. The issue is you don't want to start your tomato plants too early. Actually, you should be transplanting tomato plants when they're about 4" tall. If you wait or you go to the nursery and you buy those tomato plants that are 18" tall, it has already gone past the decision making process that that plant needs to make as to how many fruits it's going to set. When you transplant that 18" tall plant you're going to shock it. Even if you drench it, which you should, if you plant an 18" plant and a 4" plant side-by-side, the 4" plant will overtake the 18" plant and it will put out more tomatoes than the 18" plant. So, I know I'm going real fast here. I'm trying to....

JUDITH: No, no you're giving us great information and I like the order that you're giving it to us in, because we started with the packet. We started with the choice of our seed and what to do with those seeds with the inoculant and now the potting soil.

When you say not to plant them too early, what do you mean?

CRAIG: You don't want the plant to be any taller than 4". So right now, everyone is chomping at the bit to get out to the hoop house or the

greenhouse. You know I can start plants in February, and I can put them in 6" pots or 12" pots – and we did that last year, we tried that, and you know it didn't really do anything for us because that plant gets shocked. You know it's like taking a dip in the ocean this time of year. It's going to really shock your body. You're actually being counterintuitive there, or counterproductive in doing that, so smaller is better. And when you're transplanting those plants you want to drench them, like I said, and what we use for a drench, you can use compost tea if you want to and you've got good compost tea, but we purchase a product called Quantum and Quantum comes from Green Earth Ag and Turf. They're in Bridgeport Ct I think, but you can Google them and you want to get Quantum <https://greenearthagandturf.com> and you can buy it in 8 oz bottles. We usually get 3 gallons or a gallon will treat an acre or you can get it right here at Coogan Farm, we sell it here as well. And you're going to make a diluted solution of that, so that when you push that baby seedling out of your seed tray you're going to then soak it in a bucket that has that Quantum in there. Again, you're trying to eliminate any kind of shock and continue the plant to grow. So then you're going to go ahead and plant in your bed and amend your bed with worm castings, which is another thing that we sell here. You can buy worm castings at a local nursery. Usually they'll come in 8 lb bags. We sell 20 lb bags as well. Put worm castings on everything and I can give you an example some other time about what it will do for potatoes. It's unbelievable what worm castings will do for potatoes. But you want to amend your tomato plant well with worm castings.

And then the question is spacing. So spacing, you know the catalogue will tell you 2' between plants. We actually do 60" and the reason for that is, it's like this Judith. I'm coming to your house tomorrow with 15 teenage boys and I worked in the garden real hard and I'm going to bring you one pizza to feed those boys. That's not going to work out well for you at all. And consequently, you want to make sure that that tomato plant is going to get all of the nutrition that she wants so that she can really do what you expect of her. We want to plant them far apart. But the advantage of doing that is, we're going to plant four basil plants around every tomato plant. And you want to do the basil as sets as well that you are going to transplant. And then in between the groups of the tomato plants with the basil and let me back-up to the basil. The reason that you would do basil is because tomatoes and basil are buddies in Marinara sauce. They're also buddies in the soil and basil will improve the flavor of the tomato right off the vine. It will make a good difference for you.

So in between the plantings of the tomato plants with the four basil plants around it, I want you to plant borage or comfrey. Borage is easier. Why? Because borage is going to really attract the native pollinators and you need those native pollinators to really visit your plant. We also put other flowers in the garden to attract native pollinators; calendula, marigolds, nasturtiums, you know they're all good. There's a number of different plants that you can use but those seem to work the best for us. And we use a lot of zinnias in our hedgerows as well and you know the flowers are just gigantic because the soil is so good. Don't forget to put worm castings around all of those plants as well.

Then the number one mistake everybody makes – they don't water enough.

JUDITH: Yeah, tell us more about that because you know Connecticut has experienced a drought for two years and obviously, we're not in a drought any more. We had a lot of rain last year. We have had a lot of rain this Fall, even though we haven't had much snowfall. I don't know about you folks, but we're saturated up here east of the river.

And tell me in the summer what you mean by more watering.

CRAIG: Plants should be watered every day, whether Mother Nature does it or whether you do it. And if you're going to do it, you're probably going to water for about 1-1/2 hours every single day. There's multiple reasons why you want to do that but perhaps the most important one is the microbiology in the soil. The microbiology in the soil needs a good water content, like 50%. And what that means is that when you grab a handful of compost as an example and you make a fist and you squeeze that real hard you should have droplets of water coming out between your fingers. You're going to want to water that every day, again, if Mother Nature does it for you, then that's fine, but every day you want to do that. You not only want to feed the microbiology, you also want to give it a drink, and the same thing with a plant. It needs that water.

JUDITH: How about in morning or evening, what do you recommend?

CRAIG: I would do it before 2 o'clock in the afternoon because you're going to want that to kind of dry out before evening, otherwise, here come the slugs and everybody, I'm assuming, knows that a tuna fish can filled with stale beer put into the garden bed right at soil level will attract the slugs

and you'll go out there in the morning and you'll have a handful of slugs that drank your beer and didn't make it out of the can.

So again, the microbiology...I don't expect people to go out and purchase a microscope and look at the soil and find out what's in there, but ideally, just so you know how important microbiology is, 75,000 species of bacteria, 25,000 species of fungi in a teaspoon of soil. There are all kinds of ways of adding microbiology to the soil. One is good humus or good compost. The other is Quantum. The Quantum will do that for you. You can also purchase microbiology through Advancing Eco Agriculture which is where I sent you to, to get the Bio Coat Gold. They have different kinds of microbiology there. You can go to their website and you can find that out.

So now you've got the plant growing. She has buddies with basil. She's got pollinators that are pollinating her. Now it's getting way too busy and you've got suckers. You've got to prune the plant. We train our plants to have 3 main leaders. It's kind of hard to explain without showing you, but a sucker is between the main stalk and the branches that come out and that sucker is right at the access. Right where that branch comes out of the plant there'll be a sucker in there and you want to pinch them off sooner rather than later. Once you establish, okay I've got my main stalk and I want to have two more leaders. I want to have one on the left and one on the right, as I'm gardening in a row as an example. I'm going to let the bottom two grow and as they're growing, they're going to get suckers too, you've got to keep on pinching those suckers off. And so, what happens then, once you do that, then all of the nutrients and stuff is going to the food instead of new growth. So now the question is, how do I hold up this plant that's 15' tall.

JUDITH: That's true.

CRAIG: Yeah, yeah so people who typically buy those little tomato cages, they don't work. We use 10' tall 2x2 posts in our garden. Without going into a lot of detail, because I don't want to run out of time here, we string a #9 wire along the top of these poles through eye bolts. They're connected to turnbuckles on either end and from there it goes down to a ground anchor. We've got this overhead wire above our tomato plants. Johnny's sells Tomahooks, not tomahawks, Tomahooks and a Tomahook is a wire device that will hang on your overhead wire and it has curled up on it a whole bunch of really strong string. And you unravel that string from where the Tomahook is attached on your overhead wire and you let it go all the way

down to the ground next to the tomato plant and then Johnny's sells tomato clips. They are little round white plastic tomato clips. You can get them in a package of 100. For a typical plant you're probably going to need 10 or 15 clips anyway if you're going a 3 leader system like we do, and they are reusable. They are about, I don't know, ten cents apiece something like that. They're not real expensive. But it holds that tomato plant up and therefore it makes it so much easier for both the sunlight to reach the tomatoes, but it makes it easier for the gardener because 1) you can see those suckers that you need to prune and 2) you can pick off any leads or anything like that.

Now I want to bounce back to water for just a second. Overhead watering – absolutely the worst possible way to water. You need to use a soaker hose. Why? There are a couple of reasons: 1) when you water from overhead it is the most wasteful use of water period. You're going to waste like 70% of the water. It's crazy. 2) The other thing is that when that water hits the soil it bounces back up. When it bounces back up and hits the tomato leaf it has the ability to spread soil born diseases to your plant. And that's not good. So, soaker hoses you can get them at Wal Mart or where ever. You don't need to do anything fancy with a drip irrigation system. Although, that's ideal. Just use a soaker hose. You connect it to a regular hose, connect it to a timer on your faucet outside and you can go to the Bahamas and have a good time and that thing will water your garden every single day at the same time for as long as you need it and life is good. So that's kind of important.

JUDITH: Cool. I met a guy in the student Master Gardner Program down in Virginia and he was an engineer and he had the most amazing watering set-up for his garden. He had raised beds and he put in sewer piping that had holes in it and he knew how long to run the hose to give all the plants the amount of water that they needed every day and it was just a really cool system. I love the creativity, is what I'm getting at. People have a lot of creativity with designing their own systems that fit their property.

CRAIG: Absolutely. And you know it's not for me to say well you know you need to do it my way. No, that's not the case. Everybody's garden is different and what I do here may not work for somebody else. And what somebody else does may not work for me. The key is to gain as much information as possible and then decide what works the best for you and how much do you want to put into your garden financially and work wise. I will tell you that once your soil is balanced, less work, less cost, higher production without question.

JUDITH: Well that makes sense Craig. The healthier the soil is...and you've got to keep feeding it. You know we have to remember that the soil needs good food just like we do or it's not going to have good nutrients in the food that we harvest from it. As you and I talked about before, our food quality is greatly diminished with our farming practices. So yes, we're eating a tomato but maybe only getting 40% of the potential nutrients that could be there with sustainable regenerative farming.

CRAIG: That's true and it's important to remineralize your soil. We use basalt, carbonite, azomite that is critical. That will add to the nutritional quality of your food as well. You know we can do some more information on where to get that and how to apply that later. Kris is an absolute resource for that kind of stuff. She is a rock star and she's a good friend as well.

I want to keep on going here just a little bit. Once you get those plants all set and you've got your water system in you need to mulch it. Never, ever, ever do you have bare soil. Never. You want to mulch it. You can use landscape cloth if you want to but that's not really going to do anything for your soil except make it so that you don't have to do as much weeding. But it's better to put nutrients into the soil and my number one besides worm castings, my number one is seaweed, without question seaweed. And here in Connecticut you know most people probably drive an hour just to get to the beach. It's free. You just have to find a beach that has it and after a storm that's come out of the south is the best time to do that. And you're going to put that seaweed on the soil probably 4-6" deep and right around all of your plants. The seaweed has the ability to unlock trace nutrients in the soil that are not normally available to a plant. It has a natural pesticide. It does have weeds but they're seaweed weeds. They kind of look like cornstalks. They're shallow rooted. You can pull those out. Actually the best way to weed is never pull a weed. Just snip it off and leave the roots in there. You want to feed that microbiology. You know you've got to take care of those teenagers and feed them a lot of pizza! You've got to feed them all the time.

JUDITH: Right. Wow, this is really helpful. This goes out to a lot of gardeners. We have a lot of gardeners for listeners and I'm really just delighted for your expertise, your sharing and your time and consideration. And tomatoes are a biggie. We want to see healthy tomatoes in our harvest. We don't want to see rot that can happen on the tomatoes. There's powdery mildew that can happen on tomatoes. They can look terrible by July and

how can we keep them nice and health and thriving to keep producing better fruit?

CRAIG: That's true. And you just gave me a perfect segue into a tip. And the tip is, if you have powdery mildew how do you get rid of it? You don't need to buy chemicals to do that. Milk.

JUDITH: Milk? Make it like a spray, a foliar spray?

CRAIG: Yeah you can use it as a foliar spray and to go back to feeding a garden, yes you don't put on 10-10-10 one time in the springtime and expect to feed all the microbiology and the plant for the rest of the season. You need to feed the garden at least every week. Ideally you can dilute your foliar feeds and if you have a FertiGator in your system, that's a device that picks up the so called fertilizer and injects it into your system. We just use volunteers and sprinkler cans. It works for us. It doesn't cost a lot of money. It's not highly technical. Anybody can do it and what do you feed it with? Again, you go right back to Advancing Eco Agriculture and if you click on vegetable gardening it will tell you what you can use, or you can use Quantum. Quantum does as well. I'm telling you, if you use Quantum you are going to see a huge difference in your garden and you're going to get unbelievable production. I had buckwheat jump 8" in just 4 days.

JUDITH: Wow! I love those kinds of stories because I know we can garden better and we can garden where it's healthy for the soil, the microorganisms and us. I think in the command, control and conquer paradigm that we've been living under, more is better from the place of conquering where from a place of sustainability more is better because we're all happy. You know? We're all taken care of and that's the model that I'm trying to promote with these podcasts.

CRAIG: Well and in taking care of the garden there's one thing that I want to leave you with is microbiology trumps everything else.

JUDITH: I hear that over and over again. You're absolutely right. The microbiology is where it's at.

CRAIG: Yup.

JUDITH: Okay. Well Craig give us your contact information one more time before we close.

CRAIG: Sure, and I spell it for you this time. It's [cfloyd@dpnc.org](mailto:cfloyd@dpnc.org)

JUDITH: Wonderful. And I highly encourage my listeners to contact you if they have a question.

All right Craig, until the next time thank you again. This was very practical, very educational and we can apply what you said this spring as we plan our gardens, and for that I'm really grateful.

CRAIG: Thank you and bon mon?

JUDITH: Okay, this is Judith Dreyer. I'm the author of "At the Garden's Gate", book and blog. My book is available through my website [www.judithdreyer.com](http://www.judithdreyer.com) as well as several distribution arms such as Amazon, Nook, Goodreads and more. I'd like to remind all of you that a transcript is available for each podcast and will have the 2 sheets that Craig offered us on potting soil, and I forget what the other one is but we'll have both of them there.

And please like and share the podcasts. Let's get the word out and support each other.

And remember, **now** is the time for practical action and profound inner change so we value our world again.

Enjoy your day.