

Podcast Series: Holistic Nature of Us:

Episode # 35: Meet Nigel Palmer, The Institute of Sustainable Nutrition

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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'm delighted to introduce you to Nigel Palmer. He is the outside consultant for The Institute of Sustainable Nutrition. He teaches sustainable regenerative gardening techniques, the keeping of bees and discusses monthly the night sky and many subtle nuances of the world out of doors.

Welcome Nigel! Happy to have you here today.

NIGEL: Thank you so much.

JUDITH: I understand Joan Palmer is also with us tonight and I'm going to ask Joan to step in first and tell us sometime about the TIOSN and how you got going.

JOAN: Okay, thanks Judith. We've been around for 6 years but we started years before that with just a glimmer of an idea of what we wanted to teach. I finished my Master's Degree in Human Nutrition and felt that I enjoyed my education but I felt like, there was so much missing from that. And from

that I started putting workshops together and presenting them. Through that I was asked to do a program for a graduate degree program and interns started coming to work at my home. From the model that came out of that, the school kind of formed. The response has been so strong that we knew we needed to grow this and bring it to the world. So, the institute started that way; teaching the science of nutrition and then moving into sustainable regenerative gardening and then we move into culinary skills and then into kitchen medicine, looking at all the old traditional ways of healing and preventing illness and all of those have a connection with foraging in all those sections. It has been a real, I guess a surprise at finding the hunger that is out there for the information. People are really drawn to it and feel that it really changes their lives and we see the desperate, almost a need for this and then the community that it creates for people too. It fills that void in people's lives of trying to connect to these ideas.

JUDITH: Well, your promotional material is fantastic. I'm in the field of nutrition myself. I also have a Master's in Human Nutrition. The dot isn't there for taking some of that information and translating it into growing good food, so that the vitamins and minerals that we learn about should be in our food. And unfortunately, I think there's a diminishment going on. We know a lot about how soil has been denatured and hopefully, Nigel, we can go into that a little bit, about soil and why that's so important for nutrition but the dot you're connecting is, you need the soil, you need the nutrients. Then you take everybody into the kitchen. I think that's the piece that's really missing in the outside world. We get a lot of information. A lot of short bites here, there and everywhere but how do you put it together to have a healthy family, you know?

JOAN: And gold standard, you know we always talk about that "gold standard" in education. When I finished my degree, I felt so depleted. I felt like there was something missing. We never talked really about the food, the soil, the kitchen, the remedies, the herbs and the outdoors in the boardroom. It just felt like we got that didactic piece and the rest was missing and so that's what we kind of tried to create at the school.

JUDITH: Good for you! This is exciting. I'm so delighted to have both of you with us today.

Nigel let's go into soil. Let's start there. What's in the soil? Why's it important? And what do you think is the missing piece for the general public to learn about soil?

NIGEL: Yes. Well in order for plants to grow, and grow healthily, they need minerals from the soil, but they also need the biology in the soil. And there are a lot of minerals that are essential for growing plants, both macro and trace minerals. But there's also the soil biology that interacts with the plant roots extending the range for gathering nutrients and water. Twenty percent of the energy or more of the energy from photosynthesis of the plant feeds the soil biology. In nature things aren't given away for nothing. So, the plant is giving this to the soil knowing full well it's going to reap benefits from it. And in fact, the soil biology will fix nitrogen, break down minerals into plant available forms and create compounds to be transferred to the roots. And in fact, the soil is the digestive system for the plant. And that's something that we find in the school quite frequently is a relationship between the teachings of gardening and the teachings of nutrition. What the gut needs. What the gut does. What the soil biology needs and does. And so, in order to have a healthy plant you've got to have the right minerals and you've got to have strong biology. Then you'll get healthy plants, which translates to healthy food for us to eat. I like to think of the soil as a digestive system just like in humans.

JUDITH: I think that's a great analogy to make because my native elders always said that we are the world and the world is us. And we see this in the older medical models, right, such as Ayurveda and Traditional Chinese Medicine. They know that we are the microcosm and the outside world is the macrocosm but we're the same. To put the importance of soil in digestive terms gives us a more personal relationship with the soil, because it's just like us. I really like that, and I don't think most of us, even in the Master Gardener Program realize that the plant feeds that biology. I think that's a very good point.

NIGEL: Yes, the soil biology I think is one of the least understood and least talked about pieces of agriculture. When you think of biology and the hundreds of thousands of types of biologies that are out there and yet we only know the names of 10% of them, never mind what they do. And yet there's the fungus that's in the soil, the fungi and the tens of thousands of varieties of fungus that again we only know the names of 10% of them. There's a huge amount of information and relations and functions that we

don't understand. My favorite is Archaea, which is a life form that was identified in the 1980's. It was found in the geysers at Yellowstone Park and at the bottom of the oceans where there's no light and high pressure. And it was thought to be a bacterium but upon further review it turns out it's its own life form and it wasn't until the end of the last century that this was actually even realized. And then we come to find that Archaea is ubiquitous; it's in the soil, it's everywhere. And so, when you think about these life forms and how little we know about them, it gives a glimmer of how much is going on in the soil biology that is yet unknown. And when we have agricultural ideas that disrupt the soil biology or in fact kill it in the guise of herbicides and fungicides, then you have to wonder, "are we on the right track"?

JUDITH: Well I think there's a body of research out there that's showing that we're not on the right track, you know? With chronic diseases increasing and our health isn't that great. I know when I was teaching at West Conn I would tell my students, you're the first generation that may not outlive your parents. And that's a very sad thing to say to a younger generation, that you're not really that healthy. And everything affects the next seven generations, so it takes time to repair soil and that's the missing piece again. We've lost topsoil at an alarming rate and we've continued to denature the soil with our practices, our monocrop practices.

Tell us more about your gardening focus at the school and how you get folks with their hands in the soil, so to speak, to understand the complexity.

NIGEL: Yes, a lot of this stems on a model. In order for people to have a framework to understand ideas, there needs to be some model that has to be repeated and grown upon. And so, we teach a plant model and a soil model. And by doing that and repetitively explaining the relationships between biology, the fact that these plants feed the biology. The biology digests the minerals to get them in the plant available form. And talking about these symbiotic relationships and then using the human body and digestion as parallels, something that they experience in every day, that helps a lot. We focus an awful lot on actually making amendments in the program. Soil is amazingly depleted in a lot of places. In just about any place, it needs to understand the minerals that are in the soil and everywhere needs biology. So, the amendment program that we have, focuses on making sustainable amendments that are free in your backyard and don't cost any money.

JUDITH: Oh wow! Can you give me an example of one?

NIGEL: Yes, so one of my favorite mineral amendments is the recognition that plants accumulate minerals and weeds accumulate minerals that are in different proportion to the soil. And there are databases, James Duke database for instance, that will give you mineral composition of different weeds. These minerals are available once you recognize that dandelions have a very broad spectrum of minerals in them, then it's very easy to gather dandelions; the roots, the stems, the flowers and ferment them. And now you have a liquid that is multispectral mineral content and it's stable, shelf stable. And what did it cost? Well it didn't cost you anything. You went and got some dandelions. And there are many ways to ferment plants and get them into forms that are usable. You can use organic brown sugar for instance. You can use organic apple cider vinegar and my favorite is leaf mulch from the woods. This is a practice that I learned about reading some Korean Natural Farming books. But leaf mold is the quintessential biology of your local area and it's free. And it is amazingly powerful to use either as a medium to extract or as a biological source to literally change the composition of your soil.

JUDITH: That's fascinating. This year I made a nettles fermented tea, so to speak, just by putting nettles in a bucket. But I also added some of the other weeds in the garden. I let it sit there. I stirred it up and I waited a couple of weeks. Then I added the sugar to it and then I just started feeding my plants and I did notice, like overnight, they perked up a little bit, you know? It was funny to have that instant awareness that they, the minerals were doing something, in the soil. That sounds very biodynamic to me. Is some of that from the Bionutrient Food Association or is it biodynamic farming?

NIGEL: Well in Biodynamic Farming there are several herbs that are key to those practices; dandelions, nettle, comfrey and horsetail and actually you touched on my favorite which is stinging nettle. Stinging nettle is the most amazing food that I think we have available to us.

JUDITH: I agree, I agree.

NIGEL: We harvest that and dry it and have it as a tea almost every day. And I've done spectral analysis on the amendments that I've made using stinging nettle and the broad-spectrum components are just amazing. It is by far, at least in my opinion, the single best amendment available. In fact, I

use it not only as an amendment product where I'll make shelf stable products with it, but I also will bury it in the soil itself in making very small compost piles as part of my processes for growing potatoes, for instance.

JUDITH: Hmm. That's interesting. So, you make small, I'm just going to say this, like a cup of it and put it around your potatoes, is that what you're saying?

NIGEL: Well so, in the principles of growing that I like to use, I want to make sure that the soil is in better shape after I grow something in it rather than depleted somehow. And so, for instance, when I grow potatoes, after harvesting my potatoes I'm left with a hole in the ground where my potato was. So that hole gets a couple of handfuls of compost. That gets a few sprinkles of rock dust that I've collected from local quarries for no charge, because that's a waste product for the local quarries. I add to it a couple handfuls of stinging nettles because it's that time of year and I happen to have it all over the place. I harvest it and I throw that in there. And then I'll throw a few sprinkles of IMO 4 which is another Korean natural farming product that is an amazing product that consists of, not only biology, but also a mineral content. And so, when I'm done with my 100 potato plants I end up with a section of the garden that after that I'll throw a cover crop on it. And right now, I'm in the process of putting chopped leaves on top of that. And come spring that is a nice fertile place to grow vegetables.

JUDITH: And you have the equipment to test that too, don't you? To test the viability of the soil. You really get to know right then and there that what you're saying and what you're practicing really is achieving the result that you want.

NIGEL: Yes, you can tell year after year. For instance, growing garlic, our garlic, we've been growing the same seed for maybe 15-20 years or something like that now. And there is a period of time when the bulbs were getting smaller and they were becoming more subjected to disease, if you will. And by invoking some of these processes in the garden we were able to turn those garlies around to becoming very solid and firm and large again. And they're continuing on that path. So, yes, it's really fun to see the changes that take place in the garden when you're using any kind of technique, right? I mean even just simply mineralizing your garden and watching the weeds change in your garden is fascinating in my opinion.

JUDITH: I agree with you. It is interesting.

So, you take your students then, the course is once a month for a year, is that correct?

NIGEL: Yes. It's a weekend a month, a Saturday and a Sunday. It's two full days 9-5 and we really pack in the information. Students usually leave spinning with a lovely glow and a smile.

JUDITH: Oh, that's a great way to look at it. But also, they get to see the garden evolve from winter to the following winter, correct? They start in the beginning of the year to the end of the year, so they get to see these changes that you're talking about. They get to see and taste and look at that rich soil which helps them bring that knowledge back home, I would think.

NIGEL: Yes, the program starts in Sept. and ends in July. Our garden is a place where we demonstrate these things. We call it a demonstration garden. They see the practices that are put in place there. They're not really there long enough unless they happen to come back, which many of them do, to long-term effects in the garden. So, it's really a one -season thing. It's learning to do these things. I think most people look forward to bringing those practices home and seeing the changes in their own gardens or their own space, and we hear about that. We hear about how they tried this at home and it really worked. Because when you're in a garden once a month, you're really not got your feet and your fingernails into it, right? You do it at home and you practice these things at home, like you suggested with the nettle, that's when you really begin to see things change.

JUDITH: Right. Well on another topic, I know that you're also the beekeeper there. Tell us something about the bees and what's happening with them.

NIGEL: Oh geez, well there's an awful lot of pressure on bees. There's a laundry list of damage we do to a species. What we do here, is well really just try to propagate bees. We really don't have any interest in taking honey. We have more of an interest in having hives and watch them swarm and procreate and just be healthy. Though our program is very introductory and really just about how to get started and love them. I mean anyone that's ever had a hive, if you sit and watch these little girls go in and out all day long, oh my gosh, it's just so beautiful to watch and to realize their antics and things like that. We experiment with teas, feeding bees teas. We

experiment with trying to fix their digestive systems. Bees are suffering from the likes of glyphosate just as humans are and their guts are suffering, too. One of the things that we can do to try and improve the health of a bee gut; it's suggested that a lot of the difficulties that bees may have are very similar to us, again, back to the human garden parallels and again many of the digestive issues that we're having associated with glyphosate as well. And so, I suggest the bee experience is just one of introduction and learning to appreciate them and love them.

JUDITH: Yes, instead of always taking from them, right?

NIGEL: You bet. That's exactly right.

JUDITH: Yes, and in my travels with this podcast I've come to realize that we've been operating under a command and conquer kind of model. It's time to get more sustainable and holistic. But we get the holistic model with the body/mind/spirit in all the holistic centers, but I don't feel we've really connected the dot that that same model needs to be applied to our use of and participation with nature. And I think you folks are sharing all the wonderful things that you do that supports the new model, the better model, the more holistic model, because that's how nature works, you know? Nature is very holistic, and we're forgotten how to look at that.

Well, before we end I would love to know three tips that you can share with the listeners that they can do today. Three practical tips.

NIGEL: Well the first one is to **never leave your soil bare**. When the soil is bare it is exposed to the sun and the dry air and dry out and very quickly you'll destroy the ecosystem, the bacteria, the fungus and the Archaea in the soil. Without that biology in the soil, growing anything is going to be rote. You will be able to grow something, but you won't have things that are going to thrive. So that's the first thing.

The second thing... We're you going to say something?

JUDITH: I was going to add a comment here. When you have a summer like we did this year with a lot of rain, do you find that your different amendments and practices actually keep your plants healthy through the seasonal changes?

NIGEL: Sure. And this was a great summer for this kind of conversation because it was so dry for so long and then it was so wet for a short period of time and then it got dry again. Well rather than having six tomato plants lined up in a row, our gardens are generally full of something growing and many people look at my garden and say, “wow, look at all the weeds”. But in fact, by having that rich ecosystem, when things are very, very dry all of that plant matter and the root structure is able to hold onto water and so things aren’t going to dry out as quickly and in fact it takes quite a bit of drought in order to cause things to dry up. By the same token, when things rain and you get a lot of rain right afterwards, that soil structure is able to absorb that rain. And so, it’s by having a thick carpet, if you will, that allows resilience and it’s these sorts of ideas that differentiate a successful crop to a crop that fails when conditions are not optimal.

JUDITH: Great points. Okay, so that’s about the soil.

NIGEL: Tip number two – **do a soil test**. A lot of people who are gardening or in agriculture they may or may not understand what minerals are actually in their soil. And when I suggest a soil test, you need to do a soil test that evaluates the macro and the micro minerals in the soil. A lot of times the problem with crops are because of excesses as well as deficiencies and it’s only by measuring the soil that you get a baseline from which to then know what to add or what to not add as you go forward.

JUDITH: Yes, that’s a very good point. Thank you for that.

NIGEL: Number three and this is my favorite, and that is **learn about the weeds that grow in your garden**. The weeds are great cover crops and mulches. I select the weeds in my gardens. For instance, the cilantro and the dill and the parsnips, they’re all over the place in my garden. They’re some of the weeds. The nettle, the dandelions, they’re just lovely, the sorrels, purslane, just lovely, lovely foods as well. And so also by learning about these weeds, when you need something to grow, I just don’t do anything and all of a sudden stuff grows. They’re cover crops for me. So rather than having to plant something on top of another crop, sometimes I just do nothing, and the weeds come up and usually they’re what you want. Once you recognize that weeds are mineral accumulators that are distributing minerals on the soil to move the soil towards the balance that nature wants, then you might realize that it’s not worth fighting them but having them healthier. We talked about it briefly but they’re great foods.

They're hugely nutritious foods. And they're also very useful for making amendments and also you can determine to some extent what the mineral composition of your soil is by the weeds that are growing there. There are some really good books out there that can help you with that. But I think the most important thing is recognizing that weeds are the things that balance the soil mineral composition by nature.

The fourth one, I know you didn't want one, but I've got one anyway.

JUDITH: That's okay.

NIGEL: The fourth one is the biology, and this is probably the most important thing that I found in the soil is using biology to transform it. When you use an **IMO, an indigenous microorganism or a potato leaf mold product for instance, these things will totally transform your soil.** It's just amazing what it does and with our biannual usage or maybe even a little more frequently, you can break down many of the thicknesses in soils, in compost and do many other things. So, learning some biological amendments is very important as well.

JUDITH: And are you suggesting that they go in the soil where you're planting, your tomatoes for example, or are you suggesting that they go in your compost pile?

NIGEL: All of the above. You can also use some of these biologies to combat other biologies. One of the philosophical approaches that I use is that by having a huge amount of biology causes the bad biology to remain in check, right? So, if you've got so many biologies out there, there's only so much food for these biologies to eat and so they have to do battle for those resources. And by having an ubiquitous amount and quantity of biologies the bad ones are going to have to stay in check, so you can use this as a treatment for mildews and things like that, pathogens that are on the leaf as well as in the soil.

JUDITH: Hmm, fascinating. I would love to see you make some of your amendments and learn more about how to use them, specifically growing certain types of plants, such as vegetables. You know that's our food crops. But I'm also a huge fan of wild edibles, so I think these are great points.

Before we go, could you please give us your contact information?

NIGEL: Sure. The contact information for the TIOSN, the Institute of Sustainable Nutrition, is www.tiosn.com and there's a phone number and it's area code 860-764-9070.

JUDITH: Wonderful. Well I want to thank both of you again for joining me and joining us, the listeners, at the Holistic Nature of Us. I know I'm inspired by your talk, your practical advice, all your soil knowledge. It's impressive but it's timely. We need you folks to do what you're doing so that we can turn around our food system because I feel, for my journey, that it's depleted and it's really not something that's sustainable. I want to thank you again.

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 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 please like and share these 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.