Actionable intelligence to live a Free & Inspired Life

The Solari Report

May 13, 2021

Solari Food Series: Homesteading Part I with John Moody

Pete Kennedy: Welcome to the Solari Food Series audiocast. This is your host, Pete Kennedy. Today it's great to have John Moody back on the audiocast. This time around, we are going to talk about homesteading, living a lifestyle of greater self-sufficiency.

This past year has seen a decrease in the quality and reliability of the conventional food system as well as significant price increases for much of our food supply. In addition, there has been a decline in the reliability of our medical system. Growing your own food and medicine is a solution to both developments.

John lives and works on a 35-acre farm in Kentucky and has been homesteading for the past dozen years or so. He consults with homesteaders around the country and lectures and writes on the topic. Among the other books he has written is *The Frugal Homesteader*.

He is a popular speaker at the Homesteading Mother Earth News Fairs, and I can tell you that seeing is believing. The last time I saw him give a talk, there were lines out the door. I have also seen some of the pictures of the gargantuan produce he has grown on his farm as well.

We will be discussing homesteading in the countryside, but also in urban and suburban areas, too. So without further ado, John, welcome to The Solari Food Series audiocast.

John Moody: Good morning, Pete.

Kennedy: Last time you were on I started off by asking how you got into real food. This time around I will begin by asking what led you into homesteading.

Moody: I started the food buying club in Louisville, and I ran into a problem where I would approach farmers and I would ask how something was grown or how an animal was raised. They generally would tell me that they did it in more conventional ways. They used GM crops or they used chemicals or synthetics. I would ask, "Have you considered doing this in a different way? Have you considered raising food without all of these chemicals? You can raise animals without all of these crazy things," and they would look at me like I was an alien.

The thought that you could raise cows just on grass instead of giving them corn and soy and other things, or that you could raise fruit crops without constantly spraying them with chemicals to stop diseases and pests was crazy to them. This was back in 2006, 2007, and 2008. I am in Kentucky. Kentucky is generally further behind in the times.

So I said, "You don't think that you can do this, but I'm going to show you that you can do it." So that was one of a number of motivations. This was during the housing collapse and the Big Short and all of that madness and all of that stupidity. So there was a mixture of economic concerns, and I did not want my family and my children to grow up inside of a large, major metro city.

Louisville has had a 500% increase in car-jackings and a 300-400% increase in shootings over the past 18 months. Back in 2010 when we moved out of the city, I was telling people, "Cities are convenient and cities are fun. It's nice to be five minutes from the cinema and five minutes from the mall. But cities have inherent instabilities, and all it takes is the right set of factors to come into play."

People thought that me and some of my other friends were crazy for moving out of the city, and now everybody is trying to move out of these cities. They're saying, "Get us out of here! What have we done?"

So there are a lot of motivations – being able to produce some of our own food, being able to teach others how to do it better, letting my children grow up around greenery and animals instead of concrete and degeneracy and what-not. There are a lot of things that got us onto some land.

Kennedy: So more and more people are looking to homestead these days. You consult with quite a few of them. What are some of the recommendations that you give the people wanting to start up?

Moody: The first thing is something that Joel Salatin said years and years ago. He said, "If your goal is eventually to have a homestead and have a more productive household, start now. Start exactly where you find yourself."

I was going to seminary in Louisville, Kentucky, and living in an apartment

building. Even though we were in an apartment building in the heart of a major metro city, I was doing worm compost in the basement of my apartment building and growing peppers and other vegetables in earth boxes outside. I got permission from the landlord to put up some earth boxes and other container gardening, and I started where I was.

I meet people all the time who think, "Once I buy land, then I'll start doing and learning things," and it's almost always a disaster. Again, I might have said this last time, but Thomas Massie, even when he was at MIT, had a garden with his wife while they were students at MIT in Boston.

Those are the types of people who succeed because you learn to quit making excuses right from the get-go. You learn to see what you can do and what you have available rather than what you can't do. So cultivating that right mind set and that innovative skill set before you even start homesteading goes a long way to ensuring future success.

Kennedy: I know that one of the pieces of advice that you give people is to start a little bit at a time. Just start with a few things, and progress from there. Could you expand on that a bit?

Moody: Most people overestimate their abilities. I mean, it's just human nature. Most people think that they can successfully do more than they can. Most people don't think that gardening is that hard.

"John, you just stick some seeds in the ground, and stuff grows." I've actually Had people basically say that to me.

I'll tell a story to illustrate this. About six or seven years ago I got a phone call on a Friday night from a friend. He called and said, "I really, really need your help." Then he went on to tell me a story about how him and three or four other families from their church decided to do a shared community garden. One of the families had a little piece of land out in the metro area, but out near the edge of the Louisville metro. They were going to put in a shared community garden, and they would all work together.

I said, "What size garden did you put in?"

These are people who, at best, had mostly successfully grown houseplants. So I asked, "What size garden did you put in? Maybe a 2,000 square foot garden?" No. "A 4,000 square foot garden?" No. "Eight thousand square foot garden?"

I think they put in a 15,000 or 20,000 square foot garden. It's hard for me to remember at this point.

Kennedy: Wow!

Moody: That is as much growing space as I have. That's my maximal growing space with years of experience. And they put in bees and chickens, and they threw all of this money and all of this time into it. That was back in April and May when their kids don't have as many sports and activities, and the weather is nice and cool, and there are no bugs, and there are no weeds.

He was calling me on a smoggy night in June where one of the families was trying to rally the troops to reclaim the garden that was overrun by three months of weeds and overeaten by every raccoon, possum, and other animal in a three-mile radius.

I see that all of the time. People want to have egg-laying chickens, so they buy 50 baby chicks instead of buying five baby chicks. Another family that I know had never had cows before. Instead of buying a pair of cows, they bought 6 bred cows that calved within a month of them buying the cows.

I have story after story of people like this. I've never met a person who regrets starting small and setting themselves up for success and expanding. At the same time, I've almost never met a person who went big and didn't regret it later.

So you are never going to regret putting in a 500 square foot garden rather than a 1,500 or 5,000 square foot garden when you are first learning. You are never going to regret starting with a dozen chickens instead of 100 chickens.

This is just a good, basic financial principle of minimizing risk exposure. Feeding 100 chickens for a few months represents 1,000 or more dollars between time and feed and chickens and infrastructure. So if you misbuilt your

chicken coop and you walk out one day and all 100 chickens are dead, you are out over $1,000 now whereas if you only have a dozen chickens – because you are still learning – and something goes wrong, you are out $100.

So partly it's about minimizing your early losses. I've met a lot of farmers and homesteaders who take big, heavy losses early on, and they never recover because they've just set themselves up for such failure.

Kennedy: One thing that you emphasize is the importance of having a mentor and learning from those who have gone before you. Could you speak to that?

Moody: Yes. Homesteading is a skillset or vocation. If I wanted to learn how to do metal forging, I could learn a little bit off of YouTube, but if I really wanted to learn that skill, I would go hang out with my neighbor who has a metal forge. I would work alongside him, and I would really learn in that environment and learn really quickly.

Books are useful and online courses are useful. I've been involved in a bunch of those over the years, but especially when you are first starting out, they can't replace working with real live people. So before we moved out to our land, I would usually go and work on people's farms around the area at least one or two times a month.

Long before I ever had chickens, I was helping St. Asaph's farm, which became Marksbury Farm Market. I was going down to their farm and helping move chicken tractors and butcher chickens before I ever had a chicken of my own. You learn so many things in that hands-on environment where you actually get to interact with the animals and interact with the infrastructure, but you are doing it under the supervision of somebody who has often been doing it for years. So you can ask them questions and do a lot of other things that other mediums and formats just don't provide.

Kennedy: That brings us to the topic of community. You've emphasized that when someone is looking for land, it's not only just the land, but it's who is in the neighborhood and what kind of potential community there is there with the neighbors to help each other out. Explain your philosophy on that.

Moody: Having a homestead creates all sorts of daily commitments that are hard to walk away from. Everything that you add to your homestead increases the complexity and increases how difficult it is to be able to walk away for a time. But I still want to be able to go on vacation. I might still have family members who die or who get married that require us to be away from the homestead for a time.

There are all of these things that can happen, and you need somebody who can come and actually take care of your homestead when you're not there. For very practical reasons you need community. We've had various people homestead farm-sit for us over the years, and sometimes that has gone well, and sometimes it's been where every 15 minutes we were getting a phone call because the people had no idea what they were doing. If a pig was making a noise and they weren't sure if the pig was dying or if it was just being a pig, they would call. We were just trying to have a couple of days away.

Also, if you have kids, in the city your kids can hop on a bike and within five minutes have 500 possible playdates. That's not true in the countryside, so when looking at land and other stuff, we were actually in the process of moving before COVID hit last year. We had buttoned everything up, and we were about to list our property for sale, and a lot of people asked, "What are your priorities, John, when looking at a new property? Is it the quality of the soil? Is it fencing?"

I would say, "My biggest priorities are proximity to good churches, proximity to other good homesteading and homeschooling families, and proximity to a good judo/jujitsu dojo that I can continue to train at."

A lot of the other stuff you can improve. You can improve a house, and you can improve soil, but you can't change your neighbors. You have very little control over the community around you. So a lot of people prioritize the house and the land and the fencing and the outbuildings. I'm not saying that those aren't important things, but a lot of those things you can improve over time. But you can't change your neighbors.

Kennedy: I know that one of the things that you said you looked at when looking for land out in the country was just making sure that you were as far

away from any commodity or industrial agriculture as possible.

Moody: Yes, and that is one other thing that is something which you cannot control once you've actually moved. You can't control what your adjoining neighbors do with their land. As you know, Pete, drift and overspray is just an absolute endemic catastrophe every single spring.

I forget what they said a couple of years ago, but it was something like six or seven million acres at least were hit by drift and overspray. So if you are looking for land, you definitely want a piece of property – even if it means it's a less nice piece of property – that is not anywhere near conventional row crop agriculture because you will get hit by drift and overspray. There will be little or nothing you can do about it, you will suffer immense emotional and financial losses, and the system is completely stacked against you to both protect you and your property and to get any sort of compensation for the damage that is done. So steering clear of industrial agriculture is an absolute must.

Kennedy: I remember the Legal Defense Fund had some cases in Texas – one in particular where the recovery *the farm received* was nowhere near the amount of actual damage. These industrial Ag people can throw lawyers at you all day and take away your time and wind up where things progress to the point that the settlement, at one time you wouldn't have accepted it at all, looks pretty good after they've stalled you for a couple of years in court.

Let's go to planning and designing your homestead once you have the land picked out. What are some of the basic steps that you take there?

Moody: One of the first pieces of advice that I give people is this: Don't build anything permanent for at least three or four years, and don't remove anything that is a permanent structure for that time period.

I was on Facebook yesterday, and some guy bought a piece of homestead land. He put up a picture. It had a concrete pad with concrete walls – maybe four or five feet high. He was asking, "Should I tear this down?"

I said, "No! Do you know how expensive concrete foundations and walls are?" A real solid concrete foundation and concrete walls are about $40,000 to

$50,000 at this time. Why would you ever tear it down? It could be one of a million things, and just because you don't know what it could be yet, don't destroy what it could possibly be. You can't see the future.

I always tell people not to make any decisions that are hard to undo in your first few years. Once you build a building, that is one of those hard to undo decisions. Moving buildings is bad. It's bad for the building and bad for your bottom line.

Focus on getting to know your land. If you need to and you want to fast-track things, hire somebody to come do a consult and a design consult for you. People will hire somebody before they remodel their house.

Most people aren't going to go in and remodel their own house, but they will buy a 40-acre piece of land, and they will never think to hire somebody before building this here and putting that there and spending $25,000 improving the land. They never think, "Maybe I should spend $1,000 to bring somebody in who has been doing this for decades to make sure that I don't do anything dumb."

So hire somebody to help you or take some time before you start doing things that are hard to undo.

Raspberries, blackberries, and other berry plants are easy to undo. You plant those, you decide in a couple of years that you need to move them, and it's no big deal. Building a portable chicken coop or chicken tractors are easy to undo. Using portable fencing rather than starting to put in a whole bunch of permanent fencing is another good idea. Fencing is very expensive, and it's not really moveable. So don't do permanent fencing other than perimeter fencing.

I'll sometimes go to meet people, and I will go to their property after they have been there a few years, and there is all of this fencing running everywhere. They'll say, "We decided to put a horse paddock here, and this there."

But none of the fencing works for them rotating animals, and now it's in their way. It's in the way of this, that, and the other. I'll say, "You put this fencing across where water is running."

So get to know your land or bring in people who know how to read land so that when you do build permanent things they don't become a problem down the road.

Our property has a barn that was here when we bought the property. It sits at the bottom of our upper pasture. That basically means that the barn seasonally floods. They put the barn right in the way of how all of the water moves across the upper pasture of the farm to the middle and then the lower pasture.

They would say in their defense, "It was the one flat spot where we had space for a barn."

I understand that, but then you should have regraded the land around the barn to move the water from running through the barn to running around the barn. You should have put a pond right on the shoulder of the barn, over to the side so you could divert all of that water into a pond. Then you would have a pond for the animals that had a barn instead of having a barn that seasonally is a pond.

Kennedy: Right.

Moody: So when you buy land, get to know your land. Don't do things that are going to be hard to undo and that are going to be costly.

Kennedy: Let's go to some of the day-to-day obstacles that homesteaders and farmers face. What have you done in regards to pest control on your land?

Moody: People are always amazed to hear that last growing season we didn't use even any organic chemicals in our food growing – not even Diatomaceous Earth and other stuff. A lot of this goes back to learning to work with nature rather than against nature.

Why do they have to fog our cities with mosquito and other sprays? Up in Louisville they always have to put out the warnings in late spring, "We are going to be fogging these areas of the city because they are overrun with mosquitos and other bugs." That is because they have unbalanced the ecology. They have

unbalanced the ecosystem.

On our way up to Louisville, there is a train track that runs parallel to the road for a number of times. The train track is on a berm. In between the train track and the road, there is this ditch. So there is a berm for the train track that goes up to the train track and goes down into this gulley, and then it comes back up to the road. Do you know what that fills with all spring long? Water. Do you know what multiplies all spring long in that water? Mosquitos. Then that part of the city is overrun by mosquitos and other bugs. It's a design problem.

One of the first things that you do on your property is you want to design ecosystems that reduce pest pressure and increase predatory species pressure. In woodlands, one reason why ticks are suck a problem is because we no longer have pigs and other animals moving through the woodlands and keeping them cleaner. So we have increased the habitat for ticks, and then people don't keep as many chickens and guinea hens and other animals, so we have decreased the predators of ticks.

You see how we create our own problems. We put in ponds everywhere, but very few people keep ducks anymore. The first rule is good design – reducing habitat that encourages pest species and increasing habitat and features that encourage predatory species or bringing on more predatory species goes a long, long way in reducing certain pests.

Kennedy: I know that one thing you have done is putting bat houses up along your property. Could you talk about that and the effect it's had?

Moody: We haven't gotten to put them up here yet, but we do have bats on our property. We put up a lot of bird houses, and we've done other things. Bat houses are on our list. We already have at least one bat colony that is very close to our land. I would have to look up the number, but I believe a single bat colony eats thousands of insects a day. It makes those little zapping lights look like child's play in terms of pest control.

There is a great story out of Texas. I think it was from the late 1800's when they were having malaria issues. There was a mayor or somebody down there who instead of trying chemicals or other things to deal with the mosquitos that were

spreading malaria built giant bat houses all across this region of Texas. They became the first malaria-free area by working with nature rather than working against nature.

People are always amazed that roughly 20-30% of our growing spaces are dedicated to flowers and other perennial plants. They say, "You are giving up a third of all of your growing space."

I say, "Yes, but this allows me to grow twice as much food in the remaining space because my pollination is so much better and my pest pressure is so much lower."

There was a great study done out of England a few years ago where I think they gave up 10% of row crop space in row crop operations and planted native wildflowers every tenth row or something like that. That simple 10% put back to a more natural habitat slashed the need for pesticides by up to 80% for these farms. It was just incredible.

So we grow tons and tons of flowers – both perennial flowers and annual flowers. We do a lot of cover crops and other things that provide the habitat that beneficial creatures need to do the work for you.

One of my homesteading principles is: I never want to do something that an animal or nature or a microbe or a plant will do for me.

People ask, "John, why don't you till?"

I say, "Why would I till when I can have a plant till for me?"

They ask, "Plants till? I didn't know that plants could run a tiller."

What do you think plant roots are? Plant roots are the original tillage machine. So grow the right plants, and they will till and break up the soil for you. Have the right animals that take care of the pests for you.

Kennedy: That brings up some of these other critters like deer, squirrels, and raccoons. There is nothing more demoralizing than having a squirrel taking one

bite out of your mango or avocado and just leaving it there. How have you dealt with those critters on your farm?

Moody: A dog is probably one of the best investments if you get the right breed and the right dog because it will keep a lot of things off of a couple of acre area. It will protect some of your livestock, it can protect your trees and things from deer, and it can protect your garden. So dogs can be really effective.

Fencing is somewhat effective, especially if it's done right. The problem with fencing is that animals can go under it and animals can go over it. So people who rely on fencing alone often run into significant problems.

We use a mixture of targeted hunting when hunting is necessary to cut back numbers. I became somewhat adept at trapping certain types of problematic species. We do double fencing around our main garden, and getting a dog has been on my list for a while. I'm looking for a breed that will work well with our size operation and whatnot.

Kennedy: Let's go on to another obstacle, which is weeds. You touched on this earlier when you spoke about cover cropping. Could you elaborate more on this, please?

Moody: I wrote an entire book about dealing with weeds. There is so much that we could say here.

The way that most people garden is the proverbial hamster wheel. I tried this. When we first bought our land, the first thing I did was try to borrow a tiller from somebody. Why do you need a tiller? Because that's how you get rid of the grass and weeds, isn't it? But it's wrong. For every weed or plant that you kill with a tiller, you turn up 1,000 of its progeny that it has dropped into the soil over all the years that it's sat there. You end up on this hamster wheel.

It's almost like the pharmaceutical industry where you take one drug for one problem, and that drug creates these side effects. So then you take a second drug for the side effects of the first drug, but that one also has side effects. So now you are on a third drug for the side effects of the second drug, and you are just trapped. You are going round and round in circles.

I wanted to get off of that hamster wheel, so I used methods like occultation, which is tarping with dark tarps, solarization, which is using clear plastic, cover cropping, and all of these different tactics. I also learned that a lot of things that we think are weeds are actually incredibly nutritious things for either us or our animals.

We are recording this April 16. Do you know what is growing all over disturbed soil right now? Chickweed and henbit. Why do you think that chickweed is called 'chickweed'? Chickens love that weed. Why do you think henbit is called 'henbit'? Hens love that weed.

Over the past four weeks, yes, we have had to weed the garden of some early season weeds that are coming up, but we are weeding it by feeding it to our chickens who are literally eating 20 gallons a day of weeds. So they need very little feed because they are getting all of this really nutritious food.

People always ask me, "How can you raise chickens without soy? How can you raise chickens without having to buy all of this expensive feed?"

Well, part of it is seeing the relationship between the parts of your homestead. So a lot of weeding, like lamb's quarters, chickweed, henbit, purple dead nettle, and a lot of these weeds that come in in our area we feed to our pigs and our chickens. It makes our pigs and chickens more nutritious, it reduces the amount of purchased feed that we need for them, and that redeems the time that it takes for us to cut out those weeds in the garden patches. Everybody wins.

Kennedy: When you talk about cover cropping, I've heard you use the phrase, 'a jungle of plants'. You want to expose as little as you can to sunlight and leave as little open space as you can in the garden, correct?

Moody: People who generally see our homestead in June or July, one of their first comments is always, "This looks like a jungle."

Think about the way that you think about most gardens. You will have a row of pepper plants or a row of tomato plants. And what is around each tomato or pepper plant? It's a moonscape.

When I see how most people grow stuff, it's this giant cratered moonscape of nothingness. They till up the ground, destroying the soil and destroying the health of the soil, and then they plant a lone tomato plant, and then a foot away they plant another tomato plant. Their whole goal for the next four months is to protect that tomato plant at whatever cost.

Then they go back through and they cultivate or they till. But when you look at nature, plants grow in partnership and harmony with other plants. Healthy plants actually require the very, very close presence of other plants.

I don't know how deep you want to get into this today, but when you eat food, what actually lets your body access the nutrients in that food? It's your microbiome. It's the fungi and yeast and bacteria and other things that live inside of you.

This is the same for soil. I was outside this morning just singing hymns because this is so amazing. What is the one thing that plants can do that pretty much nothing else in the world can do? They can take photons that the sun is shooting at us, and they can turn them into sugar. That's what makes plants amazing. All of that energy that the sun bathes the planet in, a plant can turn that into sugar, and the plant uses some of that sugar to grow, but it sends a lot of it down to the tips of its roots in the soil. Then it trades the sugar. Who does it trade the sugar with? The soil microbiome.

The healthier your soil's microbiome, the healthier your soil's stock exchange is, the healthier your plants are, the more nutritious your food is, and the better your yields. So the more roots and stuff you have, the better everything works.

Kennedy: That's probably your specialty more than anything – soil producing healthy soils. Could you talk about what you look for and what factors you need to have the healthy soils? I guess your use of mulch and compost is critical in producing that.

Moody: Yes. If you were to say to me, "John, I'm putting in a garden," or, "John, I've been gardening a few years, but I want to improve what I'm doing. Where do I start?" I would say, "Step one is a soil test."

A soil test costs anywhere from zero to $15 to have your soil tested. It's literally 'dirt cheap' to get a soil test. You absolutely want to do soil testing because my motto is, "Without a test, it's just a guess."

I have people asking, "Should I use animal manure, John? Should I put down kelp and sea mineral on my soil? Should I put down Azomite? Should I put down calcium, John?"

I don't know. Did you have a soil test? How can you know without a soil test what your soil actually needs?

It was hilarious. This is just another social media warning story. I think it was two years ago that someone in a major farming group on social media put up a post. This guy put up a post and he said, "What would you apply to this piece of ground to grow peppers and tomatoes?"

The first ten people who chimed into the post all said, "What do your soil tests say?"

The guy went back to the original post and edited it. He said, "I am not going to bother to do a soil test. So, knowing that, tell me what I should do to the ground."

Then, Pete, the people just shredded him in the comments. I mean, it was like 5,000 comments of hilarity.

It's like somebody saying, "What gas should I put in my car? I don't have a gas gauge. I don't know the model of the car. I don't know if it's diesel or not, but what gas should I put into this thing?"

Kennedy: They are flying blind.

Moody: Yes. So start with a soil test. It's cheap, and it gives you all sorts of good basic information. It will tell you things like where your organic matter is as well as other stuff. Again, this is such a cheap thing. You can usually find a soil consultant for $50 to $100 if you don't know what to do with the results to

help you devise a game plan.

Kennedy: It's easy to find a lab to do the testing, right?

Moody: You can use an independent lab, but what most people use is what is in every single county in all of America. There is a USDA extension office, and all of those do soil testing. Usually you've already paid for it via your taxes. So it's anywhere from zero dollars to $5-$10 because you've already paid for it.

You can do an independent lab if you want, or you can do one of the extension services. You take in your little baggie of soil, and they send it to your state lab. In anywhere from three to four weeks you will get a letter back in the mail with your results. Then there is usually a recommendation section that is utterly worthless, and 95% of the time you should ignore it.

Kennedy: Do these test for the minerals? Is that pretty standard?

Moody: Yes, you are going to get your pH, you are going to get a base set of minerals – calcium, phosphorus, potassium, iron, and sometimes boron. I would have to grab one of mine to see what University of Kentucky does. You will usually get your soil CEC (Cation Exchange Capacity) number, which we aren't going to get into today because that is a little more complicated.

I suggest that at least every other year for $5 you get your organic matter levels tested. At the end of the day, if love covers a multitude of sins, and if trim covers a multitude of carpentry sins, organic matter is what covers soil sins. Organic matter is really the heart and soul of healthy soil. You want to be managing your soil in a way that your organic matter levels – if they are already good – stay that way or increase. If they are low, you are building soil organic matter. Nutrient dense food and healthy plants and drought resistance and so much else all hinge on soil organic matter.

Kennedy: This brings us to your own experience. Could you describe the way the land was when you bought it and what you did to the organic matter within a fairly short period of time?

Moody: I joke, but it is absolutely true, that I managed to buy a farm 'soil not

included'. I borrowed a neighbor's tiller, and the tiller broke before the soil did. We had less than half a percent of organic matter. We had rock-hard clay on top of limestone floaters.

I grew on cardboard boxes our first year because I could not grow anything in the ground. Nothing could grow in that soil except for weeds and grass.

I basically used a mixture of approaches at first. I got entire tri-axle loads of cow compost from our local stockyards. We had our own chickens, so we started making compost. I would get all of the woodchips I could possibly get from the local tree-trimmers. This reminds me that I need to call them when I get off this podcast today to try to get more woodchips.

If you are dealing with really bad soil, you are going to import at first nutrients and organic matter. For years I picked up 1,000 or more pounds of coffee grounds a week from small coffee shops up in Louisville because coffee grounds are 50% organic matter. It's just incredible.

Right now in America a city like Louisville – a small coffee shop – produces almost five gallons a day of coffee grounds. Louisville has 1,000 small coffee shops. That is 5,000 gallons a day times 365 days a year. That's almost 2,000,000 gallons of grounds a year! And that's just the small coffee shops.

There was an article on NPR just a week or two ago where they said that at least one-third of arable, farmable land in America is now completely degraded. We produce enough coffee grounds alone in America to rebuild a million acres a year in terms of organic matter and some of the soil content. It's crazy!

So we grab coffee grounds and other things, but the thing that you have to realize with soil is that soil is like the Dead Sea. Why is the Dead Sea dead? Stuff flows in, but never leaves. So one of the most common mistakes I see among people managing their soil is that they end up a whole lot like the Dead Sea where they are constantly importing more and more cow manure and more and more material and compost, but they are not cycling it back out. Your soil can become the Dead Sea.

I had a soil consulting client years ago. She said, "Nothing will grow in this

section of my backyard."

I said, "Have you done a soil test?"

She said, "No."

I said, "Get a soil test, and we'll talk."

She sent me the soil test. Pete, I don't think that the moon was as high in minerals as this woman's backyard. I think that if I scooped up dirt off the surface of the moon, it would test lower than this poor lady's backyard. I had to ask her, "What on Earth happened here?"

She said, "Years and years ago they said that the pH of the soil was really high, so they wanted to lower the pH, so they put down all of these amendments."

I said, "They put down amendments without testing the soil first?"

The soil's pH was really high because it already had all of these minerals and stuff in it, and then they doused it, and now the soil is just a moonscape. Her only option is to bulldoze it out because it's too high to fix.

This is why cover cropping is so important where you begin to cycle these nutrients that you are bringing in, and you begin to become less reliant on massive imports of nutrients because you are starting to grow them yourself and you are starting to hold them in place and make them available to the plants.

Over time, the way that you manage your soil should become far more targeted. At this point, we have been here a decade. I pretty much never put down compost anymore. I'm putting down targeted minerals and other amendments that I know are exactly what I need at this point. I already have a lot of phosphorus, and I already have a lot of potassium. I already have other things.

So once you get healthy soil, you move to only applying what you need so that you manage it well rather than beginning to unbalance that beautiful dance and equation.

Kennedy: You mentioned earlier using manure. One of the things that you have also brought up is growing your own fertilizer. The manure doesn't fix nitrogen in the soil like you need. Could you discuss that?

Moody: A lot of people who grow food are heavily dependent on animal manure for fertility. The problem with animal manure is it has far too much phosphorus and potassium for far too little nitrogen. So, yes, manure provides nitrogen, but for the amount of phosphorus and potassium that it usually has, it doesn't have that much nitrogen. Over time you end up building up excess phosphorus and potassium in your growing spaces, but you are always running short on nitrogen.

It's amazing. I think that the atmosphere around us is something like 70% nitrogen.

Kennedy: It's about 78%.

Moody: It's the most abundant gas in the atmosphere. There is a problem: Plants can do nothing with the nitrogen in the atmosphere. It's in a form that is completely unavailable to plants. Mark Shepherd, who is a really incredible permaculture guy, points out that you can plant trees that will fix nitrogen for your other trees.

There are all sorts of plants that have one other superpower beyond just turning photons from the sun into sugar. They can take atmospheric nitrogen, and through bacteria that colonized their root systems they can turn it into soil nitrogen that is available to them and other plants. Clover and beans and legumes and a whole bunch of other plants can do this.

Kennedy: That was what soy was originally for before it became way too big a part of the standard American diet.

One last topic on the soils: One of the things that you've had a lot of success with in increasing your soil is worm composting. Could you go into the use of worms and the difference that has made?

Moody: I got into word composting before we even had a farm. It's

something that I could do in the basement of my apartment building and would only have my neighbors look at me so strangely. Worm compost is great! There is so much research on the benefits of worm compost.

You will go to stores, and you will see that they have 'slow release fertilizer' for sale, so that when you put something down on the soil, it doesn't immediately wash away. This is another thing to understand. What holds minerals and other things in place in the soil is the soil food web. When you put minerals or amendments down on the soil, unless the food web gobbles them up and latches onto them, they wash away. They wash deeper and deeper down into the subsoil where they are not available to plants, or they literally wash out into the ground water table. Then we are polluting our water, which is what urban areas do every single spring, and then these dumbass companies come along and apply all of these synthetic fertilizers to people's lawns. Studies show that half of what they are applying goes straight to our water.

We have a client for my son's worm casting business over in Lexington. We actually have two of them now. Every spring they get 20 gallons of worm castings from my son's worm casting operation that they apply to their lawn. All of their neighbors are always amazed. Their lawn looks good all year long when their neighbors' lawns look dead because of the benefits of the worm castings. They increase water retention and they strengthen the soil food web, and they are a slow-release form of fertilizer.

They hold onto the nutrients, and they promote healthy plant growth and healthy root systems. So even over and above the benefits of standard compost, worm compost is just where it's at. It's a super-easy thing to make your own worm compost. It's not rocket science.

Kennedy: Let's move onto growing produce. One of the things that I'm interested in hearing from you is how difficult it is to purchase seed at this time with the shortages this past year, especially if you are just producing food for yourself right now.

Moody: Back in December *Modern Farmer* started warning people about seed shortages for this year. I haven't checked recently, but a lot of the major seed sellers are definitely struggling to keep up with orders, and there are all

sorts of things that are very hard to come by.

I wanted to get a little bit more seed potato this year to go along with what I had and what I saved. I called two of the main places that I get seed potato from, and they were sold out. They gave me the names of another place – this place up in Louisville. This place said that they got in four tractor trailer loads of seed potatoes, and they were already sold out and could not get any more.

There are still places that you can get seeds, especially some smaller seed companies. Remind me to talk to you about this after the call. I know a small business that is a family business like our business. They have a little seed business. They would probably love to do a promotion with Solari and give a discount to Solari subscribers for their seed business. They still have seeds. They planned ahead because they are smart, and they are a great small business. We can get that to the listeners who are interested.

Some of the bigger companies like Johnny's and Baker Creek and whatnot are facing this. Store-bought seeds are so crummy at times. I don't like buying the Lowes and Home Depot type of seeds and plants if I can help it.

Kennedy: What about seed saving or seed banks? What can you tell the audience about those?

Moody: I don't know why more people don't save seeds. Since Solari people are silver people, this will probably resonate with them. A lot of common plant seeds cost the same per ounce as silver. So let that sink in. When you are buying most of your garden plant seeds, you are paying the same price per ounce as silver.

It's a little packet, but it's $3 for a little packet. The little packet is like .02 ounces or something ridiculous like that for 25 seeds. Seeds are expensive. Learning to seed save is totally worth it.

We can't really get into this deeply today, but one of the things that I talk about in some of our on-farm classes and some of my talks is that about a quarter of everything we grow now we save seeds by letting the plants go to seed themselves. Then in the spring, they will regerminate, and we just move them

around.

You could even seed save by making a small greenhouse or a low tunnels or other things and purposely letting plants go to seed, and shaking the seeds over a bed so that they will come back next year. Then you can just lift out the plants and repot them in different places.

Kennedy: Tomatoes are particularly good at that kind of thing, right?

Moody: Obviously the problem is that you can only do this if you are not growing a lot of different plants that are going to cross-pollinate. The only tomato that we grow are cherry tomatoes for my son's cherry tomato business. It works great for us because the cherry tomatoes and a lot of the flowers are only crossing within their own families, so it works. Obviously seed saving becomes more complicated when you have more varieties.

The only winter squash that we grow is butternut, and we will grow some pumpkins. We don't have to worry about our butternut crossing with spaghetti squash and acorn squash and then not having viable seed.

Kennedy: Let's talk about urban agriculture a bit. The obvious problem is the lack of growing space there. Could you speak to vertical growing versus horizontal growing?

Moody: I think we talked about this earlier in the week. I know a guy up in Louisville who lives on a tiny, tiny lot pretty much in the center of the city. I think in some years he has successfully grown 70% of all of the food his family of three eats on this tiny, tiny lot.

When you are in an urban area, you have to be creative because you don't have all of this sprawling space that you can waste. So you can do things like get rid of ornamental landscaping and grow edible landscaping.

Instead of growing ivy as a covering, I've helped people grow sweet potatoes in containers on their porches and balconies. The sweet potato vines and their flowers grow over the sides, just like an ivy would. But sweet potato greens are edible, sweet potato flowers are edible, and sweet potatoes are edible. So you

end up with something that is beautiful and edible.

LSU in conjunction with the University of Edinburgh just released six or eight new ornamental sweet potato varieties. They are really beautiful sweet potato varieties that are even classified as 'ornamentals'. So your worst Dolores Umbridge HOA inspector who says that you are only allowed ornamentals, you can say, "See? It's an ornamental."

A lot of people have serviceberries as ornamental plants. Serviceberries are as or more nutritious than blueberries, and they don't require all of the finicky soil stuff that blueberries do.

So the first thing is if you are in a more urban area, you just have to rethink how you use the space that you have, and what you lack in horizontal space, you want to use in vertical space: Tower growing, trellising up the sides of your house and your fences and your garage. I've seen people build on top of their garage planting boxes. They will grow up the sides of their garage, and they will grow on their fences.

One of the fun things in the city of Louisville is that you are only allowed five chickens, but the Louisville code doesn't say anything about rabbits or anything about quail. So I know people who do their own meat rabbits and quail inside of the city.

Kennedy: That's right. One of the most important things when you read any code is to look at the definitions. That is what you look at first, and then you look for the loopholes.

Moody: You have to be creative. Again, if you have a porch or a balcony, what edible, ornamental plants can you grow rather than just decorative stuff?

It's really just a mindset shift. I know a lot of people in urban areas who grow more food in an urban area than some of the so-called homesteaders I know.

Kennedy: What about growing in your house, John? The weather is getting stranger as time goes along – whether it's natural or otherwise. Are you seeing more people growing in the house? What recommendations can you give to

people who want to do that?

Moody: Indoor growing has gotten a really big bump because of the technological advancements of the hemp and other indoor growing conditions. So those have really started to trickle down to be available to average growers.

One thing that really annoys me is when I don't have access to fresh lettuce. Something like 80% of all of the lettuce in America comes from two valleys in California.

Kennedy: Right, and they have been implicated in quite a few foodborne illnesses in the last ten years or so.

Moody: I noticed forever ago that I would go to Costco, and when we needed lettuce and I couldn't get it from the buying club and we didn't have any growing here, I would look at getting organic lettuce at Costco. Pete, I never ever found packs of organic lettuce at Costco that were sitting on the shelf with a pick date that was not at least 8-10 days. They were already a week old.

One thing that I did over this winter is I started intensively indoor growing lettuce and other greens using an indoor growing setup. It has been a smashing success. I was amazed at how well it did and how much lettuce we got as well as other things.

You could basically get one of those stainless steel racks, and you could set yourself up. I estimated that I could build a full indoor growing system for about $300 to $350, and I could grow $100 a month on that system. So it would be a $350 investment that would grow for me $1,200 of food a year, and it would probably use about $30 to $40 of electricity.

So a $400 investment brings a $1,200 return a year for many years. The rack is never going to go bad, and the lights are rated for a decade of use.

There is also an approach to indoor growing called Kratky setup. If people are interested, a number of my friends use the Kratky model of indoor growing. I have friends now doing wicking beds. There are all sorts of neat ways to grow indoors.

The easiest thing is, again, for your indoor potted plants, choose edibles and medicinals. In our house we grow parsley, aloe, and rosemary. If you have a good window that gets a lot of light, you can grow all sorts of herbs and other stuff right in your house in a window. Then if you want, you can upgrade to some kind of rack system and whatnot, and you can buy some grow lights.

Another thing worth mentioning is microgreens. Sally wants my next article for Weston A. Price to be on indoor greens and other growth.

Kennedy: What is the expense in the grow lights, John? What do those usually run?

Moody: I'm going to look really quick because everything lately has been a little crazy price-wise. One thing to watch for grow lights is there are a ton of different brands that are now available. The brand that most of my friends who are really into it recommend is Barrina LED grow lights. I bought a 6-pack of them, which is currently $100 on Amazon. They have actually gone down in price a little from when I bought them. When I bought them, they were $110. They have gone down to $100.

Kennedy: One thing that you have also constructed on your property in recently years are high tunnels. Could you talk about what goes into that and how it's worked out?

Moody: The high tunnel is absolutely one of the best things you could ever build. If you are looking in terms of self-sufficiency, ability to grow food year-round, by almost any metric you can't beat a high tunnel, a greenhouse, a caterpillar tunnel, or a Chinese-style greenhouse – whatever one works best for your situation. They are just amazing.

Kennedy: Could you explain a little bit about exactly what they are for the audience?

Moody: It's basically any enclosed growing space that still allows light to enter, but it helps trap the heat. You are basically creating a micro-climate.

The main difference between a greenhouse and a high tunnel is greenhouses were traditionally built using glass and then polycarbonate panels whereas high tunnels are generally done using greenhouse grade plastic for the cover, but they are fairly similar. High tunnels are generally built using more of a tubular steel arch construction whereas greenhouses were typically more framed using something more similar to house construction because it's a 'green house'.

There has been a lot of merger and overlap with these. You will find high tunnels that are now built using polycarbonate panels, and you will find greenhouses that are built using tubular steel.

They are completely amazing. It's April 16th, and most people in Kentucky have yet to plant a garden, and we have been harvesting out of our high tunnel for a month. Basically, if I really pushed it, the tunnel would let us have year-round food.

Kennedy: Wow! Some people into growing just don't have as much time to spend on it, and they just start with plants instead of growing from seed. Do you have any comments on that as far as the quality of one versus the other?

Moody: You can get great plant starts. Plant start sales are such a big thing now this time of year at farmers' markets. You should be able to find all sorts of great plants to buy locally from farmers and farmers' markets.

Again, I really dislike getting plants from the big box stores. They generally tend to sell you things out of season because then they die and you become a repeat customer. Seriously, in Kentucky last year there were basil and all sorts of other warm to hot season crops – and these aren't just little plants they are selling; these are 3" and 4" tall plants – that were for sale at Kroger in March. March in Kentucky has the last freeze date two months away. It's madness!

I really dislike big box stores like Lowes and Home Depot. They have all of these plants stuffed together in that artificial environment, and they just spray them to death with all sorts of chemicals and synthetic fertilizers to keep them going until somebody finally buys them.

Kennedy: Better living through chemical products.

Moody: So it's great to get plant starts, but get them from local farmers. Another way to get plant starts is to find a neighbor who gardens and who does their own plant starts, and say, "Hey, I want to buy some plant starts from you. When you start your plants, can you start some for me?"

Kennedy: John, this has been great. I thought that this might be more than one audiocast when I started, and now I know for sure that it is going to be at least two.

For now, I think I can get permission from the owner of the website to have another audiocast on this.

Moody: For the audience, I am here because of the people who listen. If there are specific things that you really want to talk about, let Pete and the totally awesome people at Solari know.

Kennedy: For now, could you give people your website where they can find out some of the things that you've written or if they are interested in a consultation for those who are homesteading at this time?

Moody: My website is http://JohnWMoody.com.

Kennedy: And people would be able to order your books, *The Frugal Homesteader*, and *Winning the War on Weeds*, on your website, right?

Moody: Yes, that is all on the website.

Kennedy: Okay, John. Hopefully we can pick this up soon. Until then, take care.

Moody: Thank you, Pete.

MODIFICATION

Transcripts are not always verbatim. Modifications are sometimes made to improve clarity, usefulness and readability, while staying true to the original intent.

DISCLAIMER

Nothing on The Solari Report should be taken as individual investment advice. Anyone seeking investment advice for his or her personal financial situation is advised to seek out a qualified advisor or advisors and provide as much information as possible to the advisor in order that such advisor can take into account all relevant circumstances, objectives, and risks before rendering an opinion as to the appropriate investment strategy.