

Fruit Trees on Steroids?



Interview with Lynn Hoag

Jon C. Frank

May 22, 2008

Mr. Jon C. Frank: Hello. This is Jon Frank.

Mr. Lynn Hoag: Oh, hi, Jon. It's Lynn.

Mr. Jon C. Frank: Hello, Lynn. Looks like we were put on hold until it was right at time.

Mr. Lynn Hoag: Okay.

Mr. Jon C. Frank: Well, my name is Jon Frank. I'm with International Ag Labs. And I'm happy to have Lynn Hoag and interview you, Lynn, on the subject of

planting trees by a method that you'll be describing. Why don't you just start off and tell us just a little bit about yourself, and then we'll proceed from that?

Mr. Lynn Hoag: All right.

Well, Jon, I was born in India 67 years ago. My parents were missionaries for the Seventh Day Adventist Church. And I want to tell you a little bit of where my-- where I'm coming from, because people will understand a little bit better and get more out of the--this seminar if they know that.

I believe strongly that there are treasures of wisdom and knowledge. In Colossians 2:3, it says, talking about God, "In whom are hid all the treasures of wisdom and knowledge."

And when we look at the pictures of these trees and the difference in the growth, there's obviously some wisdom and knowledge there.

Mr. Jon C. Frank: Yes, there is.

Mr. Lynn Hoag: Yes.

And so, I look--I observe nature carefully, trying to find wisdom and knowledge. I also look in the Bible for principles of practical living and principles of growing. Then, in my business, which is home construction, I look for knowledge and wisdom there, also.

So, I have designed a home using principles from the Bible, and from careful observation of nature, and from Ellen White's writings. And that's where we get this tree planting method. And we've come up with what we call a courtyard home to create a healthy home, an affordable home, a home where we grow High Brix

food all year round so that, even in the middle of winter, you could have tropicals growing in your home, have a very pleasant place to live.

And the same garden courtyard where these plants are growing also provides the heat for the home and the garden in the wintertime also provides the cooling for the home and the garden in the summertime.

So, let's talk about the tree planting method and the history there.

Mr. Jon C. Frank: Okay.

Well, just before we do that. I--.

Mr. Lynn Hoag: --Okay--.

Mr. Jon C. Frank: --Do want to mention that people can email me questions that I can relay back to you at Jon@aglabs.com. And if they can--if I can work them in, I'll try to. Otherwise we'll collect them, and we'll have a follow-up call.

Could you--Lynn, could you just give a little background on who Ellen White is, and then go into the history of the method?

Mr. Lynn Hoag: Oh, okay. Sure.

Ellen White was a lady that lived about 100 years ago. Matter of fact, she died in 1915, I think it was. She was one of the early organizers of the Seventh Day Adventist Church.

And she received a very vivid dream one night regarding how to plant fruit trees. She also planted tomatoes, she said, this way, and grapevines, and other deep-rooted plants.

And I believe that there's a lot of wisdom and knowledge in the things that she wrote about. And--so, anyway, that's where this tree planting method came from.

Mr. Jon C. Frank: So, she ascribes it to a vision from God?

Mr. Lynn Hoag: Yes.

She says--she said that in a night--in the night season that she received this. Now, whether that means a dream or a vision I'm not sure. She planted trees this way in California and in Australia.

And I came across this method because her grandson, Herbert Clarence White, came to my church in Baltimore, Maryland when I was just a teenager, just 13 years old, and taught a weeklong seminar in organic gardening and this tree planting method.

And I was so fascinated; I twisted my dad's arm. And he took me every night for a week, and it was a long ways from our home to the church. After that week was over, I was so fired up that I went home and planted 30 fruit trees in the backyard.

Mr. Jon C. Frank: Wow.

Mr. Lynn Hoag: Yeah.

And they all did marvelously well. It wasn't very long after that, though, that my father was transferred to Canada, and so I didn't see those trees for a few years.

Then when I was in college, dating my wife-to-be, we were in Washington, D.C. at that time, and Baltimore is just a nice afternoon drive away. So, on weekends sometimes we would take a country drive and go out and look at the old homestead and look at those trees. And they did marvelously well.

Every place that I've lived from the time I was 13 until now, if I've lived there a year or more, I have planted fruit trees this way. And they've all done very well.

And of course, as you can see in the pictures there, they--it has just as spectacular results when it comes to other types of trees. But, in the picture, those are sequoia trees, sequoia redwoods, which are the slow growing redwoods that grow naturally in the Sierra Nevada Mountains at 5,000 feet and up.

Now, there's a fast growing redwood, but that's the coast redwood. And it only grows over by the coast.

Mr. Jon C. Frank: Is that the same one--are these the giant redwoods, or these are not?

Mr. Lynn Hoag: These are the giant redwoods. The sequoia is a very slow-growing tree while the coast redwood is a fast-growing tree. And the coast redwood cannot take the cold that the sequoia does, but the sequoia's much more cold hearty. And they get watered because the--you know, in California, it doesn't rain. It hasn't rained now for two months and won't rain and probably 'til September or October. But, they get rain. They get watered up high in the mountains because there are thundershowers in the summertime high in the mountains.

Mr. Jon C. Frank: Okay.

Well, interesting. Well, it's--so, how old are these trees that we--we're looking at?

Mr. Lynn Hoag: The ones you're looking at are exactly three-and-a-half years from the time of planting to the time those pictures were taken. They are now four years old. They were planted May 19, 2004. But, the pictures were taken three-and-a-half years from the day of planting.

And each one of those trees was about six inches tall, just a little tiny twig. I made sure that when we--they're all about the same size. But, I made sure that we did not use the largest one in that Ellen White planting method. But, you can see a spectacular difference.

Mr. Jon C. Frank: It is spectacular.

Mr. Lynn Hoag: Yeah.

Mr. Jon C. Frank: I thought the photos side-by-side of your granddaughter are truly amazing.

Mr. Lynn Hoag: Yes.

Mr. Jon C. Frank: And--so, let's get into the method. Let's--tell us, what is involved in now?

Mr. Lynn Hoag: Well, interesting method. When Ellen White first described it, she said, "First, I ordered my hired man to dig a deep cavity in the ground." She does not say what size just a deep cavity. "Then put in rich soil--rich earth, topsoil, or muck."

Now, muck has two meanings as I, you know, understand it from here. They used to muck out the barn. So, that has to do with the manure. And then, there is muck, which comes off the bottom of a lake or a slow flowing river or creek. And I find that that muck has a lot of benefits in planting.

Anyway, so these were different layers of earth and muck--topsoil and muck, then stones. And there's a layer of stones that go across here. Now, that changes the electric current in the soil. Then, we put in rich earth again. After this, he put in layers of earth and dressing compost until the hole was filled. So, that's pretty short, the way she described it originally.

Herbert Clarence White, her grandson, who worked for her for seven years and--as a teenager in California taking care of the grounds around El's [sp] Haven and planting this method. He's the one that I learned it from.

Now, he added to that a--what he calls a "breather." A man--an orchardist named Geiger added that.

Mr. Jon C. Frank: Okay.

So, there's been some continued adaptation on the method, then.

Mr. Lynn Hoag: Yes. Yes.

And I think, from reading Ellen White's instructions, that that would be proper, because she called for her students to study the needs of plants and saying that different plants would need different care and different nutrients.

And anyway, that breeder seems to work, and I use it regularly. Now, she-- Ellen White always used the rocks. According to her grandson, he always use--she always used a layer of rocks in there and [inaudible].

We start by digging a deep hole. Now, just arbitrarily we have settled on three feet deep and three feet wide to put this tree. Now, we separate the topsoil from the subsoil as we're digging this out of the planting hole.

And in the bottom of that hole we put a couple of pieces of drain tile or, if I don't have tile, I'll turn over a couple of gallon planting pots if they're sturdy enough, just turn them over upside down. The principle is simply to get air in the bottom of that hole.

And if you're using drain tile or a piece of plastic pipe, why put some rocks on either end so that it doesn't fill up with mud. That's all that's for. Now--.

Mr. Jon C. Frank: --Okay--.

Mr. Lynn Hoag: --Okay.

Now, we fill up the bottom one-third of this hole with a mixture of topsoil and peat moss and finish compost. And I often have substituted for the peat moss, and even for compost, the duff, the litter on the forest floor. And often, adequate compost hasn't been available, and so we just use what's composting naturally on the forest floor, and that seems to work pretty well, too.

Now, to that we add about five pounds of phosphate, colloidal phosphate or soft rock phosphate, in that bottom one-third of the hole--.

Mr. Jon C. Frank: --Okay--.

Mr. Lynn Hoag: --There [inaudible]--.

Mr. Jon C. Frank: --So, let me cover this. So, once--.

Mr. Lynn Hoag: --Sure--.

Mr. Jon C. Frank: --You have the hole dug, then you place on the bottom of the hole--you place some pipes for some air.

Mr. Lynn Hoag: Yes.

Mr. Jon C. Frank: Okay.

And then, on the outside perimeter of the bottom of the hole, you're placing rocks around there. Is that correct?

Mr. Lynn Hoag: No.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: No.

Now, usually when I dig the hole, there's enough rock there to make this layer of rock. But, that's a layer of rock that goes on top of that first layer of rich--enriched soil that we put down there.

Now, later, Herbert Clarence White and a fellow named Dr. Kirschner wrote a book called Are You What You Eat? And they varied this so that the rocks were put around the outside edge and kind of--not--well, not in a layer. And that, as far as I can tell, is contrary to the way that Ellen White did it. And there seems to be some evidence that a layer of rock is more important, because that seems to change the electrical current in the soil. And we can measure that.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: We can measure that. And, of course, we know that, you know, those hairline roots are taking up nutrients in an electrical exchange, an ion for an ion exchange here. And somehow--I can't tell you all the reasons for it. I just know that it works.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: Yeah.

Mr. Jon C. Frank: So, you do put--so, you put down pipes on the bottom of the hole, then you put a one-foot layer of soil mixed with compost or peat, or you could even substitute with forest soil.

Mr. Lynn Hoag: Yes.

If I had the compost and peat and leaf mold, I'll use all of them, and of course the soft rock phosphate. We need about five pounds of soft rock phosphate in that one-third bottom layer of that hole--.

Mr. Jon C. Frank: --Okay--.

Mr. Lynn Hoag: --In there. Okay. Now, when that's down, then we put the layer of rock in. And I've used everything from gravel size to softball size. I don't know that it makes a lot of difference, but that's what I use.

Mr. Jon C. Frank: But, you want a complete layer of them?

Mr. Lynn Hoag: Yes, I want a layer that's maybe an inch or so thick in there. And I would--it doesn't--I don't think it needs to be solid, although usually it's pretty solid there. It seems to affect the electric current more, and that's why we're doing it.

Then, on top of that layer of rock, we're using--the next one-third of that hole, or the next foot, we want to use just plain topsoil without any amendments, without compost, without leaf mold, without phosphate rock, just plain topsoil. Don't use the subsoil, just--but the plain topsoil.

Then, on top of that, to fill up the rest of the hole, the last third of the hole, we want to use the same mixture that we used in the bottom.

Mr. Jon C. Frank: Okay. So, you're repeating from the bottom mixture, then.

Mr. Lynn Hoag: Right. We're--.

Mr. Jon C. Frank: --Okay--.

Mr. Lynn Hoag: --Repeating from the bottom mixture. So, we've got very rich soil in that one foot that we're going to plant the tree in, and then regular topsoil, and then underneath that the rich again.

Now, on top of the--now, we've got the hole pretty well full. And on top of that, we'll put in about a one-inch layer of compost as a mulch. And then, on top of that I will put a mulch of leaves, or grass, or hay another three inches.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: Yeah.

Now, that hole is full. Sometimes people put rocks on top of the leaves or grass. I do not, because I have to throw the rocks out. In about six months' time, the earthworms will eat up all of that mulch. And I'll have to throw the rocks back

and put in more mulch, and then put the rocks back. So, I just add more mulch on top as I go.

Mr. Jon C. Frank: So, do you have--then you don't use a layer of rocks on the top?

Mr. Lynn Hoag: I don't, usually. Maybe if it's in a front yard or someplace and we want it for aesthetics, we'll use river rock or something on top of it. But, as far as I'm concerned, it's just more labor, especially in the garden. And I'll just add mulch on top of that.

Now, the earthworms won't take the--you know, the very top layer of mulch because it's dry. And so, you just add more on top. And then, of course, they keep digging down whatever is moist. And they're doing a great job, of course, of feeding that plant besides.

Mr. Jon C. Frank: That sounds great.

So, now, one thing I just want to get clear again. When you're--you got the bottom layer in. You put a layer of rocks. Once you put the second foot into the hole, do you then put another layer of rocks?

Mr. Lynn Hoag: No. No.

Mr. Jon C. Frank: So, the layer of rocks is just in between the second and third foot down.

Mr. Lynn Hoag: Yes. Yes.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: Now, I suppose there'd be nothing wrong with experimenting, but I believe that that was there for a purpose. And there's just one layer of rock described here.

Now, Clarence Herbert White used a rather large rock, maybe the size of a football or so, underneath the root ball of the tree. And he used that as an anchor. Obviously, if you've got a tree that has a taproot, you don't want that rock there in the way. I have used that rock sometimes and sometimes ignored it, and don't see any particular big difference.

Mr. Jon C. Frank: Okay.

So, you haven't seen any difference with or without that big rock.

Mr. Lynn Hoag: No, I suppose I'd have to--I've planted hundreds of trees this way. But, you know, I'd have to be doing hundreds with an experiment, keeping accurate records to see if there was any real difference. And I can't say that I--just with my trials, I haven't seen any big difference.

Mr. Jon C. Frank: Okay, interesting.

Mr. Lynn Hoag: Yeah.

Now, we also have planted tomatoes this way, and I'm planting some grapevines now this way. And this last Tuesday night we dug a hole in the garden--the church garden class that I teach and planted a tomato plant this way. We did this in a previous garden class and picked over 100 pounds of tomatoes off of one plant.

Mr. Jon C. Frank: Through the growing season.

Mr. Lynn Hoag: Through the growing season, yes. Yes.

And so, my wife suggested that maybe we would try to break that record and maybe try to grow 125 pounds this year. I don't know whether we'll do it or not, but we dug a deep hole about three feet or more deep and about six feet long and three feet wide. So, it's a pretty big hole. We mixed in a lot of leaf mold and compost, and of course the rock phosphate, and some--.

Mr. Ron: --This is Ron--.

Mr. Lynn Hoag: --Gypsum in this. We had some very tight soil--.

Mr. Ron: --Hi, Laverne [sp]--.

Mr. Lynn Hoag: --In there. So, we added some gypsum besides. We also put in a little seaweed kelp.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: A little seaweed kelp.

Mr. Ron: I don't know if I--I can't--.

Mr. Lynn Hoag: --And--.

Mr. Ron: [--Unintelligible--.]

Mr. Lynn Hoag: --Didn't do this, but--.

Mr. Ron: --I can ask--.

Mr. Lynn Hoag: --But sometimes I will add a little bit of ocean water for the minerals.

Mr. Jon C. Frank: Okay.

Mr. Ron: All right--.

Mr. Jon C. Frank: --Now, have you ever played with--?

Mr. Ron: [--Unintelligible--.]

Mr. Jon C. Frank: --And adding microbial inoculants at the same time?

Mr. Lynn Hoag: You know, I haven't on the fruit trees. I have with the tomatoes. And I think--.

Mr. Ron: --Okay. I'll have to check--.

Mr. Lynn Hoag: --That there's a tremendous [inaudible].

Mr. Jon C. Frank: Okay.

Mr. Ron: --Yeah. I'll check with her on--.

Mr. Lynn Hoag: --When we grew 100 pounds of tomatoes off that one plant--.

Mr. Ron: --And we'll call you back--.

Mr. Lynn Hoag: --We used the inoculants--.

Mr. Ron: --Leave a message.

Mr. Jon C. Frank: What have you seen, then, on fruit trees--.

Mr. Ron: [--Unintelligible--.]

Mr. Jon C. Frank: --For the time it takes to bring it into bearing? Obviously, it increases the growth dramatically. How long--how much time do you see it shortening up the yield until you get the first yield?

Mr. Lynn Hoag: I've seen fruit trees where the second year we had some fruit, and certainly the third year. I have a peach tree in my own backyard planted

that way. And the third year was just a bumper crop. So, it does speed up the-- you know, when it will come in to yielding.

But, you know, there's some advice about that. God gave the children of Israel--when they were still in the Sinai Desert, he gave them some advice about planting fruit trees. And that's in Leviticus 19:23-25. Are you familiar with that?

Mr. Jon C. Frank: Yes. It was about waiting for a certain number of time before you harvest, right?

Mr. Lynn Hoag: Yes. He--well, depending on the version that you read, it basically says don't eat the fruit for the first three years. Then in the fourth year, it would be--the fruit would be dedicated to the temple or be an offering to the Lord, and then, from the fifth year on, that you could eat of that fruit. And then, God said to the children of Israel that, if you do this, I will bless your crops. And you will--you'll have abundant crops. And that seems to be true.

I don't believe it's a--you know, a sin if somebody eats some fruit off a tree that was planted last year, but there's some benefit to it.

Mr. Jon C. Frank: So, what do you do? Do you just ignore that, or you just prune it off so you don't get the fruit early?

Mr. Lynn Hoag: Well, I eat the fruit. I have done both. I have taken trees and picked the fruit off. In my own backyard, I'm always real anxious to get that fruit. And so, in the third year when the--when my peach tree just had a bumper crop, I enjoyed that. That was great.

But, there is something to allowing that tree to grow leaves and stems and get strong so that, over the life of that tree, that it'll produce more fruit.

I did an interesting experiment in the garden class last year. I took two little fig trees that were no more than 18 inches high in pots. I took them into the garden class, and we used one of Dr. Carey Ream's formulas for changing the plant from leaf and stem growth to flower and fruit.

And so, we drenched that--those two little fig trees with this mixture, which is simply a coke for the phosphate and the sugar. We dumped that into a five-gallon bucket. Then we added a--I forget which it is--a quart of--I think we added a quart of vinegar, just cheap vinegar you buy in a grocery store, and a half a quart of household ammonia, and then filled it up with water and just mixed that up.

Now, I added a little seawater to that, but that's not necessary. It'll work without the seawater. And then, we drenched those two little trees with it. And, of course, there was a lot--five gallons of water. There was a lot of water left there, and sent that home with people who wanted to use it at home.

But, anyway, within about two weeks time, those two little fig trees just burst out with figs.

Mr. Jon C. Frank: Hmm.

Mr. Lynn Hoag: Now, they're way too small. They're just baby trees, and they're way too small to be putting on fruit. Nevertheless, they did that. We forced it with that formula. And I got good figs off of them. They tasted just fine.

This spring, when those fig trees came back, there's only one of them that had any fruit at all. And I'm looking at it now. It just has one fig left on the whole tree. And it's probably about 24 inches high now. But again, it's just too small to be fruiting, and it kind of stunted the trees.

Now, I have other figs in the yard, so I'm not--you know, I'm not worried about it. It was just an interesting experiment. But, it did stunt the tree there. And I think that's what this text in Leviticus is getting at. I think the reason behind it is make the tree strong. Let it grow leaves and stems. And then, over the life of a tree it'll produce more.

Mr. Jon C. Frank: Speaking of which, on the life of the tree, how do you see if trees holding up in their older years from being planted with this method? Any difference, or do you mostly see the difference early on only?

Mr. Lynn Hoag: Well, you know, I build houses, so it seems like I'm always building and planting and selling and moving on. And I don't know how to answer that question. The trees are healthy. They're very healthy. So, I'm assuming that they would be healthy later, also.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: I haven't been back to the trees in Baltimore. That would be interesting. I haven't been back there for probably 20, 25 years. But, that would be interesting. The last time I was there, that was a very, very healthy grove of trees, and they were all quite mature and bearing very well. But, I have not been back there for some time.

Mr. Jon C. Frank: Okay.

Now, let's talk about the tree that you would prefer to select. What's the ideal tree to put into this hole?

Mr. Lynn Hoag: A small tree. Of course, get--you know, get a healthy tree. Get one that's not root bound. It would be far better to get a small tree than to go get the biggest tree that you can in the nursery. The bigger tree is likely to be root bound, and it'll be harder to handle. It'll be--it'll have more transplant shock. The small tree would be far better.

Mr. Jon C. Frank: Okay.

So, would you say then--basically, you're saying bare root is the preferred.

Mr. Lynn Hoag: Yes. Yes.

Well, I prefer the bare root. Some trees like your citrus, you just about have to buy, you know, in a pod, at least here in California we do. But, yes, bare root is my preference, anyway.

Mr. Jon C. Frank: I know Dr. Reams recommended bare root. And he talked about getting just one-year-old trees that were only a foot tall and maybe they would have a two-year-old root on them. But, it was--he preferred the smallest and youngest trees he could find.

Mr. Lynn Hoag: Yes.

Also, I noticed, in buying trees in the nurseries, that some of them are damaged either in shipping or in the nursery, or maybe by mice or insects. And so,

you have to look carefully at the tree and the bark and make sure that it's a good healthy tree.

Now, I just planted a Santa Rosa plum tree, and the only Santa Rosa plum that the nursery had left had damage in its bark. But, this particular lady wanted a Santa Rosa plum, so we went ahead and took it and planted it this way. And it has done very, very well. It's been in the ground a couple of months and is just taking off growing very well.

Often, the first year you'll see three, four foot of new growth on a fruit tree. And I had a lady who took the gardening class a year ago, went home and planted about 20 fruit trees on her property. And by the end of the summer, I think it was September or October, she invited me and my wife over there. And I didn't even know she'd planted these until we went over there. And she showed me how she planted them according to this method. And I was amazed at the growth. The least amount of growth on any of her trees was about three feet of new growth.

Mr. Jon C. Frank: In how much time?

Mr. Lynn Hoag: In--well, she must have planted in May or June at the earliest, probably May, let's say. And this was September or October, so May, June, July, August, September, five, six months at the most. I think it was more like five months. And three feet of new growth, that was the least amount.

And then she had two cherry trees, which both did quite well. One had eight or nine feet of new growth. And one had over 10 feet of new growth in just that five-month period.

Mr. Jon C. Frank: That's awesome. That's amazing.

Mr. Lynn Hoag: It is. Now, when she was digging the holes for them, her neighbor looked over the fence and said, "What on earth are you doing?" And she just thought she was crazy. But, by the time I had gone and looked at the trees, now her neighbor was calling to her over the fence and saying, "Hey, what did you do over there and tell me more about it," you know?

Mr. Jon C. Frank: I can imagine.

Mr. Lynn Hoag: Yes, 'cause it just--it really works there.

There's a story of a guy who--in Visalia, California. Now, Visalia has a longer growing season. They rarely get frost there, and maybe once every 10 years they'll get a little snow. So, it's a warmer climate than most of the country.

But, this man dug a hole four feet deep and seven feet round and planted four Lombardi poplar trees. Now, you know, poplar trees, especially the Lombardi, are very fast growing trees.

Mr. Jon C. Frank: That's right.

Mr. Lynn Hoag: And in the--by the end of the first year, he had 19 feet of new growth. By the end of four years, he had trees that were 80 feet tall.

Mr. Jon C. Frank: Amazing.

Mr. Lynn Hoag: It is. It really works. There's some wisdom and knowledge there in that method of growing.

Mr. Jon C. Frank: Well, we have some people that couldn't get on in the conference earlier because it wasn't unlocked. And so, I have a question again

about the pipes in the bottom of the hole for air. How--what size of pipes are you looking at in the bottom?

Mr. Lynn Hoag: Well, what we planted this week, we took two four-foot pipes. So, they're three or four feet in diameter--in--excuse me, inches in diameter--three or four inches in diameter and a foot or a foot to 18 inches--14, 18 inches long, whatever. Whatever's easy. Throw a couple of those in the hole. Put rocks on either end just to keep it from filling up with mud. You want that air down there, and you want it to be able to interact with the soil and the organisms in the soil.

And I even have taken a gallon planting--plastic planting container and turned it upside down in the hole. But, the purpose--the principle is simply to get air down there.

Mr. Jon C. Frank: And I would imagine, as the barometric pressure changes where we'd have air movement going up and down all the time, is my guess on that.

Mr. Lynn Hoag: Well, that's my guess on it. I've never measured it. It'd be interesting if somebody would actually measure it.

Mr. Jon C. Frank: I know Dr. Reams planted a--he was hired to plant a carrot, and it was to go on a cover of a Burpee's Seed Catalog. And so, he dug a big hole. And he planted a carrot, and it did have soft rock phosphate mixed in with the soil.

And he put pipes down--that had air pipes, and he ran some air through that so that it had some air--forced air going through the soil. I don't know for how long on the day that they ran air or--but, there was some air coming into that soil.

And then he kept--it was a deep hole. He planted down into the hole. And then, as the carrot kept growing, he kept building up the soil. So, then it was finally all over, he had a humongous large carrot, several feet large. And it was--then went on the cover of Burpee's Catalog. And so, I know he'd worked with air, as well, and with soft rock phosphate.

Mr. Lynn Hoag: That's amazing. You were telling me about that earlier, too.

Mr. Jon C. Frank: Okay.

I'm going to just throw a few things in here that I--when I've studied from Dr. Ream's material that he of course was part of the Seventh Day Adventist Church and followed the eating program--the--and also came in contact with this root growing method. Now, he added a few things. And again, like I said, he wanted a small tree.

One of the things that he insisted on is look very carefully at the roots before you put it into the soil. And he also used the larger stone to put his roots over. But, when you look at the bare root, the majority of the roots should be placed to the north. And he said, "If you can't figure that out then put where the least roots are to the south."

And so, it's very important that the majority of the roots go to the north because there is an ionization flow going from the south magnetic pole to the north magnetic pole. And so, that's how the roots were orientated earlier. And then, when they were uprooted to be sold as a bare root, then you put it in the same orientation.

So, that was a key thing for him. And if you put the majority of the roots to the south, you--basically, the plants don't do as well as they would with them to the north. So, that was one thing that Dr. Reams--was an innovation that he had on this.

Another thing that Dr. Reams did was he made a dip out of--for the roots. And Dr. Reams would take soft rock phosphate and then just put a pinch of a nitrogen source, perhaps ammonium sulfate or calcium nitrate, or something, usually ammonium sulfate--and make a thick potato soup. And then, he would dip the roots into that before planting.

And a third thing that Dr. Reams always insisted on was once in 10 years applying some K-mag or in--you could find it maybe in a feed store labeled as dynamite [sp]. It is the same product. But, K-mag--and Dr. Reams always called this Sol-po-mag, where it is sometimes called that in Florida. So, there's three different names. It's all the same product. He recommended spreading K-mag at the rate of 200 pounds between July 15th to September 15th.

And what he said it did would cause the plant to uptake more copper. It made copper available to the plant, and that caused a loosening of the bark. And

many times trees get root--or bark-bound I should say. And by loosening that up, more sap would flow and would cause a greater increase in growth.

And he was very particular on the timing of it in the year. And he said, if it was applied during that time, the molecule--that's the sulfate of potash magnesia--would stay altogether as a complete molecule, and it would do its work of making copper available. And so, that was another thing.

There's a little caution. If you have citrus and you see very thin skins on the citrus, then don't apply any K-meg because it'll thin the skins even further. But, an interesting thing that he has developed with--as a add-on to what you're talking about.

Mr. Lynn Hoag: Now, that's sulfate of potash magnesium.

Mr. Jon C. Frank: Correct, or--.

Mr. Lynn Hoag: --Okay--.

Mr. Jon C. Frank: --Sol-po-mag is another term. Now, the way it's mined and what it's called by industry is K-mag, K-dash-mag.

Mr. Lynn Hoag: K-dash-mag. Okay.

Mr. Jon C. Frank: Yeah.

And the thing is only apply that once every 10 years. So, you could plant the tree whenever it's springtime say. And then at some point, if you have only 1,000 square feet, then just use four-and-a-half pounds and apply four-and-a-half pounds per 1,000 square feet. So, that's another little thing that he did.

Mr. Lynn Hoag: Okay.

Now, that is to prevent the tree from splitting its bark or from girdling itself?

Mr. Jon C. Frank: It was used to help make copper available. And when you have adequate copper, it causes the bark to stretch. It allows the bark to stretch.

Mr. Lynn Hoag: Okay.

Mr. Jon C. Frank: And that would then--a very constricted bark caused a reduction in the sap flow of the plant. And so, that helped to do that. Sometimes when he would apply K-mag or Sol-po-mag to an existing grove that had very tight bark, it would cause the plant--the bark to split. And as it split, it would make a loud popping noise. It sounded like a gunshot.

And so, what--he said, "You'll see this great big rips in the bark." And he said, "Do not worry about that. Just--it'll heal back. And it'll come back and you'll have tremendous growth." And a lot of times, older trees are bark bound. So--.

Mr. Lynn Hoag: --Interesting. Yeah.

Mr. Jon C. Frank: Yeah.

I got a question here from George [sp], and he's asking, "Should you plant very young trees or larger ones?"

We would like to see the youngest as possible. They will actually make the greatest gain.

Mr. Lynn Hoag: Right. Right on.

Mr. Jon C. Frank: Okay.

Now, I just wanted to mention as well that I will be having a follow-up article to this interview. We will be basically making an official High Brix Gardens formula for planting fruit trees. And so, there will be some--a little bit more emphasis on adding in the microbial aspects to planting a tree. This will be made available probably within a few weeks.

But, Lynn, do you have any other things you would like to talk or cover? Why don't you--have you done it with grapes?

Mr. Lynn Hoag: I am doing it with grapes now. I don't have the results for you yet.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: I'll have that probably--by the end of the year I'll have some idea there. I know it works well with anything that I have--any plant that I have used--any deep-rooted plant especially does very well this way.

Mr. Jon C. Frank: Okay.

I know that one of the things we're going to hear that a three-foot by three-foot hole's a lot of work. And putting all this system down, it's a lot of work. So, it does--what do you say to people when they ask you about that?

Mr. Lynn Hoag: I--well, it is a lot of work. But, if you want to see a miracle in your yard, why, just try one, and you'll just be amazed. It'll be hard to believe what's happening with that plant. It'll just take off.

Mr. Jon C. Frank: Okay.

I have another question we--about the--when we put the soil into the hole, do we just put the soil in, or do we actually--do we tamp it down, or we just put the soil and leave it loose?

Mr. Lynn Hoag: You need to do some tamping, otherwise that soil will sink. And your--the--that tree will sink in the hole. And especially if it's a grafted tree, it might start putting out roots where you don't want it on the grafted side.

So, you do need to tamp it some. And that big a hole, I try to mound it up so that, when it sinks--because it is going to sink some--it'll be more in line with the natural, you know, ground level.

Another thing that we do here is we put a berm or a dyke all the way around it. And I do that about six feet--a six-foot circle. We're only digging a three-foot hole, but we're doing a larger circle. And that's--we put mulch all the way out to the end of that. And that's to hold your fertilizers. You fertilize it, and, if you're irrigating, to hold the water there.

Now, in the middle of winter, if there's too much rain, like we get in California sometimes, then I--then it's easy enough to break that dyke so that the water can escape and you don't drown the tree. But, you do need to tamp that. You do need to be aware that that soil is going to drop. So--.

Mr. Jon C. Frank: --Okay--.

Mr. Lynn Hoag: --That's a good point, Jon.

Mr. Jon C. Frank: Okay.

Well, interesting. I want to just kind to review. Some people--a lot of people joined in late, and that was my fault. I didn't unlock it. But, I didn't know to unlock it either. So, a lot of people tried to call and couldn't get on until they were--they joined in partway through. So, as a review, then, when we dig the hole, three foot by three foot is a typical hole that we would like to shoot for.

Mr. Lynn Hoag: Yes. Uh-huh.

Mr. Jon C. Frank: And at the bottom of the hole, then, we could lay down a couple drainage pipes, could be about a foot to a foot and a half long. Put a couple of stones on the end of each pipe. And then, on top of that put a mixture of soil, compost, maybe some peat, or other forest-y type soil--forest soil, along with five pounds of soft rock phosphate mixed in. Put that on top above the pipes and tamp it down some.

Mr. Lynn Hoag: Yeah.

Mr. Jon C. Frank: Now, above that, then put about a one inch layer of rocks. It can be smaller rock pieces or it could be a little bit larger rock pieces. But, try to get a layer in there about an inch deep or so.

Mr. Lynn Hoag: Yes. Uh-huh.

Mr. Jon C. Frank: Above that, then, we put then another foot of topsoil only with no amendments, just straight topsoil--.

Mr. Lynn Hoag: --Just straight--.

Mr. Jon C. Frank: --For one foot.

Mr. Lynn Hoag: Yes.

Mr. Jon C. Frank: Tamp that down.

Mr. Lynn Hoag: Yes.

Mr. Jon C. Frank: And then, above that, we could then either put a bigger rock in there or we could skip it, depending on which we prefer to do. I know Dr. Reams did recommend the rock, and that--a larger rock orient the roots to the north.

And I could use a root dip. The root dip would be, again, soft rock phosphate, a little--a pinch of ammonium sulfate made into a thick potato soup. Dip the root. And then--.

Mr. Lynn Hoag: [--Inaudible--.]

Mr. Jon C. Frank: --Fill it. Go ahead.

Mr. Lynn Hoag: Now, are you going to be making that dip? Will that be available from International Ag?

Mr. Jon C. Frank: Yes, I'm going to follow up with a complete High Brix garden method.

Mr. Lynn Hoag: Yeah.

Mr. Jon C. Frank: And I will have a diagram and detail all that. But, right now I just primarily want to get the method that you've been using for--what--40 some years.

Mr. Lynn Hoag: Yes. Uh-huh.

Mr. Jon C. Frank: And--okay. Then the third layer, which would be the top one foot, would be, again, the same mixture as the very bottom mixture. So, it'd

be a mixture of topsoil with some compost with maybe some peat moss or some other forested leaf mold type soil. And, again, another five pounds of soft rock phosphate put in there.

Mr. Lynn Hoag: Yes.

Now, with Herbert Clarence White, he talked about putting in green sand for potassium. And in our California foothill soils here we have more than enough potassium, so I skipped that. But, if you are in an area where you need potassium maybe that would be a good thing.

Mr. Jon C. Frank: Okay.

And the other thing is that green sand will be providing a certain amount of iron, which is, of course, valuable for getting higher bricks. And the compost is also going to provide some potassium as well.

Mr. Lynn Hoag: Yes.

Mr. Jon C. Frank: Now, the adaptations are going to be primarily to add in microbial inoculants into the whole process, which I'll cover at a later point.

So, I think that's kind of the basic way to do the tree. And then, you could then put a layer of mulch over the top of it. And by the time the tree is all done, before you put the mulch, it should already be mounded up a little bit higher than the regular soil level because there is still going to be a settling of the tree. And so, you want to make sure that it's mounded so that the graft doesn't get submerged into--.

Mr. Lynn Hoag: --Right--.

Mr. Jon C. Frank: --The soil.

Mr. Lynn Hoag: Right. And then, if you mound it, then you're going to have to--at least in California you're going to have to make sure that we have a dyke around it so that the water stays there and soaks in. It doesn't just run off.

Mr. Jon C. Frank: Okay. Yeah--.

Mr. Lynn Hoag: [--Inaudible--.]

Mr. Jon C. Frank: --That's a good point--.

Mr. Lynn Hoag: --There. Yeah.

Can I give you a little sidelight?

Mr. Jon C. Frank: Yeah. We've got another 15 minutes that I scheduled it, so we're fine still.

Mr. Lynn Hoag: Oh, okay.

I've got this little--I moved here four years ago. And so, I've got a peach tree that I planted in the backyard this way. And the third year it just was a bumper crop. But, when I started that third year, it was a wet, cold spring, and that poor tree just got peach leaf curl so badly that I thought it might die.

So, I made a drench out of ocean water, and, of course, mixed with plain water--freshwater. And I just drenched that tree down good. I have two peach trees, and they both had peach leaf curl. So, I drenched them both down real good.

They--all of the leaves with peach leaf curl in about a week just--time dried up and fell off the tree. Then, all the new leaves that came out were just fine and healthy, and there was no more peach leaf curl.

Mr. Jon C. Frank: Amazing. Now, how--that's a--that's awesome, because a lot of people struggle with peach leaf curl.

Mr. Lynn Hoag: Yes.

Mr. Jon C. Frank: What amount of seawater was in your water?

Mr. Lynn Hoag: Let's see. For a five-gallon bucket, I think, I put about--well, I think I put a gallon of seawater, or close to it--just a little--.

Mr. Jon C. Frank: --So, nearly a 20 percent solution, then, of ocean water.

Mr. Lynn Hoag: Yeah.

Now, you don't want to do that very often. But, ocean water also seems to have the effect of changing a tree to more fruit and--flowers and fruit. And--but, another thing that I noticed--now, that was the first year had fruit on it.

But, what I noticed was that that fruit was absolutely delicious. And the ocean water for some reason seems to make a very intense flavor with some things, especially tomatoes and carrots. They're just--it just changes the flavor so that they are much better, much more intense.

Carrots, for instance, I can pull and eat a good six weeks earlier than I could the same variety planted the same day on the row next to it as opposed to the ocean water row where we use ocean water as part of the fertilizer mix.

Mr. Jon C. Frank: And everything else was the same?

Mr. Lynn Hoag: Everything else was the same. The variety was the same. They were planted the same day. And yet, they were so much sweeter so much earlier.

Mr. Jon C. Frank: And did you say six weeks earlier?

Mr. Lynn Hoag: I think it was a good six weeks earlier. Yes, that picture of my granddaughter--she--that was a couple of years ago--but she and a little friend of hers, I couldn't keep them out of that ocean water row of carrots. They just went and kept eating them because they were nice and sweet. They wouldn't touch the others 'cause they were still bitter. They weren't mature enough. So--.

Mr. Jon C. Frank: --I can just envision you filling quart jugs full of ocean water, putting four of those in a postal box, and shipping them all to us poor folks out in the middle--mid--upper Midwest.

Mr. Lynn Hoag: Well, you don't need a lot of it. You don't a lot of it, but it seems to work on some things. And I have also killed plants using too much ocean water.

Mr. Jon C. Frank: Well, just to let you know, we use quite a bit of ocean minerals either the dry form or in a concentrated liquid in the High Brix garden program and find that it is a good, you know, addition to the program.

Mr. Lynn Hoag: Yes.

I'm convinced. The little bit that I've used it, I'm very convinced in my trials with it.

Mr. Jon C. Frank: Well, I don't have any questions now coming in by e-mail.

Mr. Lynn Hoag: Okay.

Mr. Jon C. Frank: So, I think--do you have any further comments or thoughts you'd like to say or wrap it up with?

Mr. Lynn Hoag: Well, if somebody wants to e-mail me or call me, it's fine with me.

Mr. Jon C. Frank: Okay.

And what would be your e-mail address they can send that to?

Mr. Lynn Hoag: LynnHoag@hotmail.com.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: Thank you, Jon.

Mr. Jon C. Frank: Well, thank you, Lynn. I appreciate you sharing with us. And just to let you know, this will be available as a download. And so, we'll make sure you get a copy as well. And we're very thankful for your sharing your experience and your knowledge with us.

I did have one question that came in from Julia. I missed her question earlier asking about shade trees or shrubs, same method?

Mr. Lynn Hoag: Same method, and it'll work just as well. Yeah, same method.

Mr. Jon C. Frank: And you'll get the same results.

Mr. Lynn Hoag: You'll get the same results. You'll get phenomenal results.

Mr. Jon C. Frank: Okay.

Well, we're excited. I know I've got a Memorial Day weekend planned to plant four different trees by this method. And I'm looking forward to watching the results. And--.

Mr. Lynn Hoag: --You'll get good results, Jon.

Mr. Jon C. Frank: Okay.

Mr. Lynn Hoag: You'll get great results.

Mr. Jon C. Frank: All right.

Mr. Lynn Hoag: Thank you.

Mr. Jon C. Frank: Well, thank you, Lynn--.

Mr. Lynn Hoag: --You're welcome--.

Mr. Jon C. Frank: --I appreciate your call. Thank you for your time.

Mr. Lynn Hoag: Bye-bye.

Mr. Jon C. Frank: Bye.