



Harmony Valley Farm

An update for our Community Supported Agriculture Members - Since 1993

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***The Soil Will Save Us* by Kristin Ohlson A Book Review By Bobbie Harte**

If you're reading this newsletter, you already know many of the benefits of organic farming. You intuit that organic practices make tastier food, encourage biodiversity, and promote clean air and water. What you may not be aware of is that soil is connected to climate change, that land mismanagement contributes to 30 percent of the carbon emissions that enter the atmosphere, or that certain farming and land use practices may even reverse global warming. Striking the perfect chord of reality and optimism, Kristin Ohlson's 2014 book, *The Soil Will Save Us: How Scientists, Farmers, and Foodies Are Healing the Soil to Save the Planet*, explores just that.

In college, I chose Botany 101 to fulfill a five-credit science requirement. I like plants and I wanted to learn more about them, but the class was a disappointment. We covered the biology and chemistry of photosynthesis, and we grew plants in milk containers and exposed them to different kinds of light. Sadly, I don't remember anything else. What I really wanted from that class was something like Ohlson's book: an exploration of the complexity of the soil and its connections to all of life. The book begins with a discussion of carbon farming and goes into the science of soil and photosynthesis. Ohlson effectively presents complicated scientific ideas in a digestible way, and she seamlessly shifts from details to the big picture. With her engaging writing style, Ohlson takes us to visit scientists, farmers and ranchers from Zimbabwe to North Dakota to Western Australia, as well as urban landscape managers in New York, Portland and Boston.

Healthy soil prevents droughts and floods, purifies water, grows healthy food and sequesters carbon. Soil is a collection of fungi, worms, bacteria, protozoa, nematodes, microarthropods, earthworms, beetles, voles and more. How many microorganisms are in a cup of healthy soil? "More than all the humans who have ever lived," Ohlson writes.

Working together, those living things create healthy soil. "Weirdly, we've all been schooled in the notion that plants are takers, removing nutrients from the soil and leaving it poorer," Ohlson writes. "But when plants are allowed to work with their partners in the soil, they're givers. They feed carbon exudates to the community of bacteria and fungi to keep them thrumming with life and pulling mineral nutrients from the bedrock as well as from particles of sand, silt, and clay...When the

This Week's Box

PORCELAIN GARLIC: Roast the entire head of garlic, then squeeze the garlic out of the individual cloves and add to golden smashed potatoes.

RED ONIONS: Make red onion jam to top off burgers, sandwiches or enjoy it with a simple snack of cheese and crackers.

ZUCCHINI OR FLYING SAUCER SUMMER SQUASH: Did you know that you can pickle both of these varieties the same way as cucumbers? Use your favorite dill pickle recipe and make a batch of refrigerator pickles.

GOLD POTATOES: Slice potatoes thinly and combine with thinly sliced onions. Drizzle with olive oil and season with salt and pepper. Place in a foil packet and grill or bake until tender.

RED & YELLOW GRAPE TOMATOES: Mix these delicious tomatoes with sliced radish, fresh herbs, baby romaine or baby kale and top with a creamy yogurt dressing.

GREEN TOP CARROTS: Use the green tops to make carrot top pesto. For a healthy back to school treat, bake some delicious carrot muffins.

FRENCH ORANGE OR SUGAR CUBE OR GREEN JAPANESE MELON: This week's selection is officially the last cantaloupe of the season. While the change of seasons may be bittersweet, the melons themselves are just plain sweet. Enjoy the final taste of summer.

WATERMELON: We are nearing the end of melon season so enjoy! For a new idea check out the recipe for Grilled Watermelon and Tomato Salsa in our recipe database.

EDAMAME: Refer to the vegetable feature in last week's newsletter for cooking instructions. If edamame is a new vegetable for you, refer to the recipe database on our website for recipes including Wasabi Roasted Edamame and Fried Rice.

GREEN TOP RED OR GOLD BEETS: As you can tell grilling is my top way of cooking, and beets are another easy vegetable to grill. Cut off the top and bottom of the beet, place in a foil packet and grill until tender. Peel the outer skin off before eating. Super easy with no dishes to wash!

MINI GREEN ROMAINE LETTUCE: Romaine is a perfect lettuce to use in your favorite Caesar salad recipe. It is also another reason to keep eating those BLT's!

BABY KALE MIX: Baby kale mix is tender enough to eat as a salad. Just add red onion, a soft cheese of your choice and top with a lemon or orange vinaigrette dressing. Baby kale can also be added to your morning fruit smoothie for additional nutrition.

JALAPEÑO PEPPERS: Running out of ideas for these hot little peppers? How about dicing them and freezing them for later use.

MINI-SWEET PEPPERS: These are wonderful to eat fresh and would be a great addition to those school lunch boxes. These little peppers are also easy to freeze. Toss them in a freezer bag whole or slice and remove the seeds then freeze.

WITCH STICK PEPPERS: See this week's vegetable feature for recipes and storage ideas.

GREEN BELL OR ORANGE ITALIAN FRYING PEPPERS: These are the orange, long, skinny peppers in your box. You'll find them to be sweet and delicious, raw or cooked.

CHOICE - SWEET ITALIAN BASIL: Combine basil with carrot tops to make a delicious & nutritious pesto to slather on sandwiches, toss with pasta or layer it with slices of tomatoes and serve alongside scrambled eggs.

predator soil organisms eat the bacteria and fungi, all those nutrients are released near the plant. There's always enough, unless human or some other force messes up the system."

How can humans mess it up? Chemical fertilizer is one way. Scientists determined long ago that nitrogen, potassium, and phosphorus are essential for plant growth, and most chemical fertilizers are a combination of the three. But scientists have discovered more and more essential nutrients, and healthy soil is not a simple recipe with a list of ingredients and instructions for their combination. Plants obtain the minerals they need through complicated interactions with soil microorganisms. "Even after tilling," Ohlson writes, "soil microorganisms will

still be in the soil, but they aren't likely to provide these varied nutrients to the plants once the chemical fertilizers are applied. Simply put, these applications interfere with one of nature's great partnerships. By the terms of this partnership, plants ...distribute carbon sugars through their roots to the microorganisms in exchange for nutrients. Fertilizer disrupts this pay-as-you-go system." Putting nutrients at a plant's roots via fertilizer means the plant doesn't have to give up any carbon to get them, and the soil organisms can't get enough food, says Ohlson, quoting USDA microbiologist Kristine Nichols. "Without their carbon meal, the mycorrhizal fungi can't grow and stretch their strands of carbon through the soil. They and the other soil microorganisms can't produce the glues

that fix carbon in the soil and build the aggregates that hold water. They go dormant and given enough stress, can die. At that point, the soil is so depleted of life and structure that a farmer can't get a decent crop without chemical fertilizers...." If the relationship that makes nutrients available to plants is absent, then farmers must add more and more fertilizer each year to maintain or increase yields, which in turn creates a new set of problems. The nutrients that the plants cannot absorb runs off into waterways, where it causes algal growth. This depletes the water's oxygen which kills aquatic life.

As I read this book, again and again I marveled at the interconnectedness of all living things. In 2015, Robert Waldinger gave a TED Talk about the 75-year Harvard study on human happiness. Waldinger is the fourth director of this study which began with 724 men in 1938. Using questionnaires, medical records, blood tests, brain scans, interviews and more, the study continues today with 60 of the remaining men, and has expanded to include wives and some 2,000 children of the original participants. So what has the Harvard study uncovered about the secrets to human happiness? People who are more connected to family, friends and community live longer, Waldinger says. "Good relationships keep us happier and healthier. Period." This was also the idea that stood out to me most in Ohlson's excellent book. The key to health is relationships, whether human or microbial. Our future depends on our ability to nurture relationships, and we need to nurture them everywhere.

Note from Farmers Richard & Andrea: *Soil is one of the most important components of what we do and is an essential part of life for all of us. Even after all these years of farming we continue to learn more about soil and how to care for it....and are continually amazed by the complexity of its system. We hope you'll consider reading this book to gain even just a glimpse into the world of soil and continue to learn along with us. In next week's newsletter, we'll introduce you to Sandy Syburg. Sandy is the owner of Purple Cow Organics, the company that makes our potting soil mix for the greenhouse as well as compost for our fields. Sandy is passionate about soil, loves teaching others about it and has even created a "Soil Bus" that he uses in his efforts to spread the good word about soil. He'll be bringing the bus to our Harvest Party on September 25! See the Harvest Party Invitation sent via email for more details.*

Pickled Witch Stick Peppers

Yield: 1 quart

- 5 witch stick peppers
- 3 medium carrots
- 1 medium or two small onions
- 3-4 cloves garlic, peeled
- 1 ½ cups white wine vinegar
- 1 cup water
- 2 Tbsp sugar
- 1 tsp dried thyme
- 2 bay leaves

1. First prepare all the vegetables. To prepare the peppers, trim the stem off the top. Tear the top of the pepper a little bit and then run your finger down the pepper to open up the pepper all the way to the tip. Lay the pepper down on a cutting board, spread out the flesh and remove all the seeds and ribs. Curl the pepper back into its original shape and set aside.
2. Peel the carrots if desired and cut into ¼" thick slices. Peel the onion, cut in half and slice thinly.
3. Next, pack the onions, carrots, peppers and garlic cloves into a clean and sterilized 1-quart canning jar and set aside.
4. In a small saucepan over medium heat, heat the vinegar, water, sugar, thyme and bay leaves. Stir until the sugar has dissolved, then let the mixture come to a simmer. Remove the vinegar mixture from the heat and carefully pour it into the jar with the vegetables. Fill the jar almost to the top, leaving about a ½" to 1" headspace.
5. Put a lid on the jar and refrigerate for 24-48 hours. Store the pickles in the refrigerator and eat them within a few weeks.

Serving suggestions: Pickled vegetables are a tasty addition to sandwiches, either on the sandwich or serve them on the side. They are also delicious served alongside eggs, tacos, on top of steaks, etc.

Recipe by Chef Andrea

Vegetable Feature: Witch Stick Peppers

By Chef Andrea

Every winter the seed catalogs tempt us with pretty pictures of vibrantly colored vegetables. We're always looking for new things to try, and this past winter this unique pepper caught our attention. Richard, always the practical grower, surprised me when he said he thought it would be fun to try these new witch stick peppers, a red, corkscrew pepper that is mostly sweet but sometimes reveals a hot one. I agreed and added it to our seed order.

Fast forward 9 months and here we are, harvesting these cool peppers! The long, skinny, slightly twisted red peppers in your box are this unique pepper. As I mentioned, they are sweet most of the time, but occasionally you might find a hot one. The seed is produced by a Japanese company, so I thought maybe there was a traditional way to use the pepper. However, if you Google this pepper, you won't find much regarding how to use it since it is seemingly new to the US market and perhaps the world! So, I was faced this week with the challenge of figuring out what to do this pepper. I called the seed company to see if they had any recommendations for how to use this pepper. They suggested using them in sauces and stews. Ok, that sounds fine, but the beauty of this pepper is its shape....it just seems like we should find a way to use it other than just chop it up! So I set out to discover this pepper, and here is what I found.

First, this pepper has a very thin skin and a thin wall of flesh. This is an attribute that makes it a good candidate for drying. If I weren't looking for a culinary use for this pepper, I'd tell you to dry them and use them as a Christmas tree ornament! This pepper also has a pretty extensive seed cavity which extends about three-quarters of the way down the pepper. If the pepper is raw, I found that it's easiest to cut the stem off the top of the pepper. Next, use your finger to create a small tear starting at the top of the pepper. Run your finger down the pepper following the natural separation of the pepper. I was intrigued to find that the pepper skin followed a corkscrew pattern as I ran my finger down the side of the pepper. Once you've opened up the pepper, lay it flat on a cutting board and remove all the ribs and seeds. Now you have a usable piece of pepper.

I also tried cooking them—both sautéed on the stovetop and roasted in the oven. I actually prefer the flavor of the pepper better when cooked as it has a fruity and sweet profile. I found it easiest to remove the seeds before sautéing, but the same is not true if you're going to roast them in the oven. I roasted them at a temperature of 375°F for about 25 minutes. Before I put them in the oven I brushed them lightly with oil. About halfway through the cooking time I flipped the peppers over. I considered them done when the skin was starting to turn golden and had a shiny, translucent appearance. Once they are cool enough to handle, carefully pull the stem end and you can fairly easily remove the entire section of seed nearly entirely intact. Once the seeds are removed you can use the roasted pepper flesh however you wish to.

I have to admit, I don't feel like I've mastered this vegetable. I am looking for a way to use this pepper that really maximizes the uniqueness of its shape. It just seems like it would be a shame to just chop it up and treat it like any old pepper! So the idea I kept coming back to was pickled peppers, which is the recipe I included in this week's newsletter. I did find that it is easier to use the peppers if you seed them out first. Even if you end up chopping up the pickled peppers to serve them, at least you can enjoy their beautiful appearance in the jar for awhile!

So I am passing the challenge on to you. If you find a fun way to use this pepper that takes advantage of its unique shape, please share your recipe with us! Send it our way along with a picture (csa@harmonyvalleyfarm.com). We'll offer a \$20 gift certificate for the most creative idea for using this pepper! Have fun!