



# High Ground Organics Community Supported Agriculture

April 13<sup>th</sup> and 14<sup>th</sup>, 2011

## Potatoes to the Rescue, by Steve Pedersen

Among the hundreds of pests and diseases that make organic farmers regularly consider changing careers, perhaps the worst of the worst is the garden symphylan. These soil dwelling, root-feeding critters are no more than ¼ of an inch long and have the appearance of an albino centipede. What makes them such a vile pest is that the classic practices of good organic soil stewardship—cover-cropping, reducing tillage, and adding compost—create the ideal conditions for them. Symphylans love loose soils, rich in organic matter. They feed on decaying plant matter and the roots of nearly every type of crop we grow.

Stories abound of massive crop losses and fields so badly infested that ultimately they had to be abandoned. Infested fields commonly have localized circular areas where crops are so stunted that they never grow out of the seedling stage. These areas increase in size and number year after year. And while conventional growers fumigate or apply chemical soil drenches to obtain control, organic growers have few treatment options.

It was quite a blow when I first discovered symphylans in one of our fields at the Redman House site. I had attributed weak spots in the strawberry patch that had occupied the same field the season prior to verticillium wilt, a fungal disease that attacks a plants roots and vascular system. When broccoli and cauliflower transplants in those same spots failed to grow out of the transplant stage and eventually withered and died, I knew something else was wrong. When I pulled up the root ball of one of these stunted plants and shook it out on my palm, several tiny white centipede-like critters scurried about. I didn't need to look them up in a book—I knew exactly what they were.

One person who has seen a lot more symphylans scurry across his palm than I have is Jim Leap, the Farm Manager at the Center for Agroecology and Sustainable Food Systems, where they train apprentices from around the globe and carry out numerous research projects. After decades of cover-crops and heavy compost applications, the soils at the center were very high in organic matter and symphylans became a serious problem. After trials with numerous organic control options proved totally inconclusive, Jim began to notice that in the fields that had been planted to potatoes during the previous season the symphylan populations were greatly reduced. In time, by monitoring and charting symphylans throughout their farm, they were able to document that a potato rotation does in fact reliably take symphylan populations way down.

Now as it turns out, we grow potatoes. Nearly for as long as I have been farming, potatoes have been one of my favorite crops. If I time my cultivation and hilling passes correctly, they require little if any hand labor. And in the deep silty-clay soils at the Redman site, they literally grow like weeds. They are also one of my favorite foods and I've always known that a well grown new

potato of some great heirloom variety is something that our CSA customers could find in few other places.

Potatoes haven't been grown on a commercial scale here in the Pajaro Valley for a long time, and as small as we are, the 4,000 lbs or so of seed potato that we planted this year probably makes us one of the biggest potato growers in the county. So when my friend Joji Muramoto, who is a researcher who also works out of CASFS, mentioned Jim's successes with potato rotations, it wasn't a hard decision to give it a try.

The following spring we planted nearly an acre of five different types of potatoes in the worst hit part of the field. The crop was spectacular—tall, lush and uniform. After we finished harvesting the amazing bounty of potatoes the field produced in mid-July,

we worked the field up into beds to plant a fall vegetable crop. In the days after we transplanted out lettuce, cauliflower, cabbage and fennel plants, I watched the field nervously. The last vegetable crop we had planted in that field prior to the potatoes was a disaster—nearly 40% of the plants were stunted and eventually died. To my amazement, after 10 days or so, all of the transplants appeared to be growing uniformly. And in the end we harvested beautiful crops, completely unaffected by symphylans.

This is just another case where growing a diverse range of crops serves us well. If I were a dedicated berry, or lettuce, or artichoke grower who had a symphylan problem, I wouldn't have had this as an option. Figuring out how to grow potatoes would be one thing, figuring out how to sell them would be a larger problem still. (Commercial potatoes are marketed on a large scale in places where land is cheaper.)

After that initial success, we developed a plan to rotate potatoes through all of the affected areas. We are currently in the second year of that plan and after next year, most of the worst areas will have received the "potato treatment". According to

Jim, the symphylans will eventually re-enter so we will probably rotate the potatoes through every 5th or 6th year on an ongoing basis.

But, how does it work? Well it just so happens that Jim cooperated with a researcher who secured a sizable grant to answer just that question. And their conclusions? Well, they didn't really have any. They suspect that the potato plant roots exude some sort of a phytotoxin that kills symphylans, but they haven't been able to isolate it. I guess despite all of our abilities to dissect and analyze, some things in nature will always remain mysterious.

*(This article was originally printed in 2009.)*

## Notes and Recipes from Chef Andrew

Hmm. What have we here? Scotch kale? Did you know that "Come to kale" is the same as saying "Come to dinner" to a Scot? Kale is that important in Scotland. This is probably because it grows so well there, and also because it is good for you and tastes good, too. I like this kale for how easy going it

## This Week

Chard

Lacinato or Scotch  
Kale

Green Garlic

Radishes

Broccoli\*

Carrots\*

Baby Lettuces\*

Mystery

Flowers: Tulips OR ?

is, too. Easy to prep-just make a ring of your thumb and forefinger and, starting with the stem end, just pull the leaf through the “ring” and the leaf separates. Then, there is kales forgiving nature in the pot- it takes to long cooking without a lot of effort on my part. It also keeps well in the refrigerator for up to a week. Just keep it wrapped in a paper towel in a loose bag. I have even stripped the stems and then bagged the kale a couple days ahead of use. Sure made the vegetable dish quick that night. I like kale braised straight from the pan (with scads of garlic), but it goes great mixed in with grains, or mushrooms, or in eggs. The other possibility is lacinato kale, also known as cavolo nero, Tuscan kale, or black cabbage. Did you know these are both non-heading cabbages? Lacinato can be stripped from the stems in the same manner, and if you wish to prep ahead, just go ahead and stack the leaves and roll up before storing in the same way as the Scotch kale. Lacinato has the most pronounced flavor generally, and garlic is its best friend. It also plays well with full-bodied oils, red wine, beans, sausage, chewy grains, and is great for soups. Try braising some with garlic, red wine, Italian sausage, and farro for a hearty one-dish meal. Riffing on that, add some of liquid, spring onion, and green garlic for a stew. Add more liquid, keep or pull the sausage, and add some garbanzo and kidney beans and you are approaching a minestrone. Besides tasting good, these greens are good for you. They are good sources of beta-carotenes, calcium, vitamin C, and vitamin E. A typical “serving”(3½ ounces raw) can contain up to 200% of the US RDA of vitamin C, 17% of your calcium, and around 50% of your vitamin E. They also provide useable iron -- up to 20% per serving.

Another leafy green here is chard. I find the gold is mildest, and the red sometimes seems to have a more tannic quality to me that calls for more oil and garlic to mitigate that. The earthiest, to my palate, is the green chard. In Europe, it used to be that this chard was grown for the stems, which was cooked into gratins with cream or béchamel sauce and cheese, and the leaves were used for fodder. I like the whole plant, using the stems sautéed with onions and garlic as a base for gratins with the leaves on top, all covered with breadcrumbs and baked golden. I like chard for frittatas and for stuffings as well. I also like to use big chard leaves as a wrapper for things. I think my favorite is where I blanch the leaves and then fill them with a mixture of French lentils and minced vegetables and mushrooms. These packages are assembled in small soufflé cups, and they can be made and then frozen. They look elegant, taste great, and are perfect for company as they take a short amount of time to finish once they have been prepared. Chard is also a good candidate for that minestrone I was talking about earlier.

Green garlic will go into things where I would normally use regular garlic. Or, I might cook up a green garlic and onion jam and use it to top some rounds of puff pastry for a tart. Add some Gruyere to that, or a drizzle of good balsamic vinegar for a treat. This would go great with a green salad. I have been enjoying being able to just reach into the refrigerator and pull out a salad ready to go. I have been grating or dicing carrots into it, topping it with some roasted beets, or mixing in some leftover roasted broccoli shoots. Maybe I will just slice the radishes over the salad and try out my new creamy dressing. I have been playing with dressings, too. Perhaps I will work on a “dressing of the week” theme for a while. I like to do things like this as a way of learning. I focus on one ingredient or

technique for a while in an effort to push myself in new directions. I recommend you try this as well. Just remember, not everything will work, and this is part of the learning also.

### Basic Braised Kale, from Chef Andrew Cohen

1 bunch of curly kale	1 TBS extra virgin olive oil+1 TBS more
2 cloves of garlic, de-germed and minced	1 cup red wine, or white wine, or whatever is left over from the night before...
Salt and freshly ground black pepper	

Strip the kale leaves from the stems. While you are doing this, bring a quart of water to boil in a 2-quart chefs pan or saucepan. Chop the kale into smallish bits. Rinse the kale in cold water, submerging and lifting it out to leave any grit in the bottom of the bowl. Repeat. When cleaned, transfer drained kale to the pot of boiling water. Stir until all the kale is submerged. If the kale will not remain submerged, add water to cover. Cooking the kale above the waterline could make for leathery greens. Cook covered. Lower the heat to a simmer and let the kale cook gently for a half-hour to 45 minutes, or until they are tender. Drain off all but a Tbsp or two of the water, then use a spatula or spoon to make a well in the center of the greens down at the pan bottom. Add 1 Tbsp olive oil and heat until shimmering. Add the minced garlic and cook until fragrant and softening. Stir the mess (this is a technical term for greens, mind you...) to evenly distribute the garlic. Add the wine, then re-cover the pot. Cook down until most of the wine is gone. Again, make a well in the center of the greens, turn up the heat to medium-high, and add the remaining oil. Stir to amalgamate with the remaining liquid and make a “sauce”. Stir the mess around to incorporate the sauce into all the greens and season with salt and pepper if you wish. (Do not salt sooner as the salt will wilt the greens too much, and may help them turn an unappetizing khaki.) Serve hot, or cool and reheat later.

### Lemon Sautéed Chard with Parmesan Cheese, from Chrissi Brewer

2 TBS butter	2 TBS olive oil
1 tablespoon minced garlic	½ small red onion, diced
1 bunch chard, stems and center ribs cut out and chopped together	½ cup dry white wine
1 TBS fresh lemon juice, or to taste	2 TBS freshly grated Parmesan cheese
salt and pepper to taste	

Melt butter and olive oil together in a large skillet over medium-high heat. Stir in the garlic and onion, and cook for 30 seconds until fragrant. Add the chard stems and the white wine. Simmer until the stems begin to soften, about 5 minutes. Stir in the chard leaves, and cook until wilted. Finally, stir in lemon juice and Parmesan cheese; season to taste with salt and pepper if needed. Easy and yummy, the lemon gives a great tang.

Everything in your box and the flowers are certified organic. Everything is grown by High Ground Organics unless otherwise noted. This week the carrots and the broccoli are from Lakeside Organics. Baby Lettuce is from Coke Farm. Flowers are grown by the Thomas Farm.