GARDEN PROJECT

GARDEN BEET

August 2017

TOOLS & TECHNIQUES:
Pest & Disease Management

VEGGIE of the MONTH:
Brussel Sprouts
Swiss Chard

KID’S CORNER:
All That Summer Squash!
Pest & Disease Management

By Kylie Lewis

We’re not the only ones interested in the bounty of the backyard garden. There are various pests and diseases that are known for eating through our vegetable patches. It is important to identify and treat these problems. Integrated pest management is less about having a war with your garden’s inhabitants and more about keeping your plants healthy and happy.

The first step in effective pest & disease management is characterizing the problem. With our mild winters and wet climate we are faced with high pest pressures and many regional plant diseases. Adequate spacing and pruning goes a long way as we head into the fall. Reference books are extremely helpful in characterizing or identifying the culprits behind plant damage or decay. Our local library has many to choose from. Additionally, Washington State University Whatcom County Extension’s Diagnostic Plant Clinic is an excellent resource. The clinic is run by Master Gardener Volunteer Educators who can help identify pest or disease in your garden. They are trained to offer science-based preventative and corrective measures to help you keep your garden healthy. You can bring in a sample of the pest or diseased plant (leaf, branch or flower) in a sealed plastic bag. They are located at 100 North Forest Street in Bellingham and are open Monday – Friday 9 am – noon and 1 - 4 pm. You can also email your plant problem with digital photos attached. For more information on the Diagnostic Plant Clinic and how to collect and package samples visit their website.

Leaves that are peppered with holes, chewed or left bare are most likely skeletonizing pests. These chewing pests include caterpillars, cutworms, slugs and snails. Hand removal and relocation is a simple, though sometimes time consuming method. Timing can be hard since many of these pests come out at night. Placing “beer traps” around the garden is another method. You need a wide mouth receptacle to fill with beer (or a mix of baking yeast with sugar and water) and strategically place around your garden beds. You will undoubtedly catch many slugs and snails. Check regularly and remove slugs and snails. Renew the mixture every few days.

Leaves that are dotted or pocked or have severe infestations are suffering from sucking and stippling pests. The best way to deal with aphids, flea beetles, spider mites etc. is to remove the infected leaves. Do not put the infected plant matter in your own compost (unless you are using a hot composting method). Monitor the new plant growth and spray off the stems with a strong spray of water.

Rolled leaves, spit-like gobs and webbing are signs of leaf miners, web worms and spit bugs. Wash away the spit and remove infected plant parts. These low tech methods can prevent explosions in insect populations.

If you have wilted plants despite regular watering or are seeing black holes on your root crops then root eating pests are the culprits. These unwanted, root dwellers are the carrot rust fly, cabbage maggot, cabbage moth maggot and root weevil larvae. Using floating row cover is one of the only reliable solutions when dealing with these pests. Place the row cover over freshly sown seeds so the pests never have the opportunity to get in. If you are transplanting, be sure to inspect the young plants carefully for any larvae before putting the row cover on top. Many of these pests are very small or green (such as the cabbage moth larvae). Preventative practices such as the row cover can make all the difference for your crops.
You’ll know its fungal problem if you find powdery coatings, orange blister spots, dark blotches or green/gray molds on your plants. You can prevent a lot of fungal disease by practicing good garden hygiene. Try and stay on top of removing plants that are past their prime and by regularly cleaning out dropped, wet foliage. Watering at the base of the plant and not the leaves is always the best practice.

If you have infected plant matter take it far from your garden area and avoid composting it at home. Bellingham residential recycling Food Plus! is a great place for diseased plant matter. This industrial composting system uses very high temperature which will eliminate the disease. This helps to keep organic matter out of the landfill, while providing a way to deal with garden waste you don’t want in your home compost.

Remember a healthy garden will always be home to beneficial and frustrating insects, as well as local birds. We are not eradicating pests; we are optimizing our plants health. If that is always the focus, we will be successful!

Below are some great web resources for pest and disease identification and management:

- WSU Hortsense:
  [http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx](http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx)
- Plant Disease & Insect Identification Leaflet Series:
  [https://puyallup.wsu.edu/plantclinic/pls/](https://puyallup.wsu.edu/plantclinic/pls/)
- Approved Clinic Resources:
  [http://mastergardener.wsu.edu/approved-references-for-pest-management-recommendations/](http://mastergardener.wsu.edu/approved-references-for-pest-management-recommendations/)
Chances are that if you have not yet grown Brussels sprouts, you may envision the Brussels sprouts plant the way I once did: as an impossibly large field of the tiniest cabbages you’ve ever seen. Not until about five years ago did I realize that Brussels sprouts actually grow upon a tall stalk, with each tightly-packed mini-cabbage bud located in the leaves’ armpits. Traveling friends have reported that in northern Europe, where Brussels sprouts seem to be more beloved than they are here, these sprouts are always sold on their stalks rather than cut individually and packaged into small bags—and actually this is one of two ways in which you can harvest and store your sprouts—cutting the stalk and storing it in an upside-down hanging position in a cool, dry location.

Brussels sprouts are definitely not a taste that everyone enjoys, and as my childhood’s epically long sulky spells at the dinner table with the requisite two sprouts awaiting consumption may indicate, children in particular are not fans. This vegetable has a strong, specific taste and certain varieties can tend towards bitterness—although harvesting after a frost or two is strongly recommended in order to bring out the sweetness of flavor. But for those diehard fans, there is no vegetable like Brussels sprouts, or as delicious—particularly roasted in olive oil with a gentle flavoring.

**Planting & Care**

Planting Brussels sprouts is an exercise in timing. A huge range in maturation rates and cold hardiness means that you’ll want to pay close attention to the recommendations that surround each variety. In particular, you will want to note length of time to maturation (which can vary between 80-200 days!) and whether the Brussels sprouts is a dwarf or tall variety. In the Maritime Northwest, there are two recommended time frames for planting.

**First Planting:** The most common planting time is to move transplants out into the garden between mid-June to mid-July. This is when you might try some of the later-maturing varieties, as well as tall varieties that are less cold hardy. During this time frame, the temperature is ideal for sprouts growth, but it’s also when some of Brassicaceae’s potential pests (flea beetles and cutworm) should have tapered off. When you sow your seeds indoors, for later transplanting, depends on your variety: if it is a late producer, sow the seeds earlier, and vice-versa. This first planting should lend itself to a fall harvest (Sept-Nov). Varieties recommended for this region are Catskill, Falstaff, Purple and some of the English or Dutch hybrid seeds.

**Second Planting:** But don’t panic that it’s too late for this year! Local literature suggests that for our mild winters, it’s possible to have a winter harvest of Brussels sprouts, or to even overwinter them. For a winter harvest, you can either direct sow seeds in mid- to late- July, or transplant up until mid-August. For winter Brussels sprouts, you should select faster maturing plants and dwarf varieties, since they are more cold hardy and will tip over less with the heavy frost on their leaves (although you can stake tall varieties if they are looking tipsy). As of the end of July, the Bellingham co-op had transplants of the variety Oliver, which is an easy, fast maturing variety that you can use for a second planting. They may still have that available in early August.
Here are a few more planting suggestions:

Brussels sprouts are a large plant and need considerable space to grow—about 1.5-2 feet on all sides is recommended. Fortunately, each plant will produce a number of sprouts, so you don’t need many of them to supply your family.

They like highly fertile soils, with compost that has had time to settle. You might apply and mix in rich compost about two weeks before planting. Because Brussels sprouts are tall, they prefer heavy soil to hold their roots in place, so if you have light, loose soil and tall plants, plan on staking up each plant. They also prefer a higher pH, so you can apply lime to cheer them up.

Because members of this family attract the same problematic pests and diseases such as clubroot, you shouldn’t plant Brussels sprouts where you’ve grown other members of this family such as cabbage, broccoli, and cauliflower. They also do not like living with strawberries, kohlrabi, tomatoes, or beans. They do, however, like sharing space with thyme and clover, and you could also use plants like nasturtiums to distract the aphids.

Brussels sprouts are fairly easy to care for. They like moist but not damp soils, and full sun. They will grow well in warm days, but thrive when the nights are cooler. Sprout production is triggered by shorter daylight hours.

That said, as a Brassica, Brussels sprouts can be susceptible to slugs, aphids, cabbage maggot and leaf-eating caterpillars. For each of these, you should regularly check the leaves, buds and stalk and wash or pick off any pests you find. At certain times of year, flea beetles can be a problem, which can be helped by using row covers. In Whatcom, I’ve found that aphids are the main nemesis, and I keep an eye out for these wicked beasts and attack them brutally with the hose as soon as they appear.

You also need to be cautious of root pests and diseases. Clubroot will destroy the roots, and cutworms can be a problem as well. You can place a homemade cutworm collar around each plant and crop rotation will help with diseases.

Harvesting, Storing & Eating

As mentioned earlier, you can cut the Brussels sprouts stalks and store them in a cool place until you are ready to consume the buds. If you select this method of harvesting, you should pinch off the top of the growing tip about a month before you plan to harvest the plant. This will encourage the buds to develop simultaneously.

The other way to harvest sprouts is more frequently used in small gardens, which is to harvest the sprouts as they develop, starting from the bottom and moving up. You can either use a sharp knife at the base of the bud or pull up to snap the buds off. Some gardeners remove the leaves from the base up as they do this. Sprouts that overwinter will produce flowers that can be eaten before opening, much like broccoli.

The most common way I’ve seen Brussels sprouts prepared is roasted—with bacon or thyme—but here is another recipe to tantalize your tongue.
Grilled Cheese with Havarti, Brussels Sprouts & Apple

**Preparation**
- Heat medium skillet, medium heat
- Add oil, shallots & cook until soft (~1 minute)
- Add Brussels sprouts, salt, pepper & increase heat slightly
- Cook until sprouts are crisp and slightly browned (~5 minutes) & set to the side
- Heat skillet again
- Spray or put oil on both sides of each slice of bread
- Top two slices with 1 oz of cheese & divide the Brussels sprouts evenly on top
- Add layer of apple and remaining bread
- Cook until the bottom is golden (~4-5 minutes), flip & repeat

**Remove and enjoy!**

**Ingredients**
- 1 tsp. olive oil
- 1 tbsp. chopped shallot
- 2 cups shredded Brussels sprouts
- ¼ tsp. sea salt
- freshly ground black pepper
- olive oil spray or mister
- 4 slices whole wheat Tuscan bread
- 2 oz. Havarti cheese
- 1 crisp apple

**References**

Photo Credit: ashleyeberlein.com
Swiss Chard: An Ornamental Edible By Kylie Lewis

Beets and their tender green leaves have been providing food since ancient Grecian times. Centuries of selection have led to the chards of today. Chard varieties are beets that are grown for their greens rather than for roots. Chard is in the same plant family as beets, spinach and quinoa. Chard has been called perpetual spinach because it can produce for up to 8 months in the Pacific Northwest. It is time to simultaneously be harvesting and sowing chard.

In the case of Swiss chard, beauty is far from just leaf deep. It is one of the healthiest greens you can grow. The amazing variety of nutrients is quickly recognizable in its vibrant colors, including its rich, dark leaves and rainbow of reds, purples and yellows in its stalks and veins. Harvest when leaves are sized up to your liking and cut leaves from the sides of the plant, leaving the central crown to keep producing. When harvesting, I recommend using smaller, younger leaves for salads and using larger, more mature leaves for cooked dishes. Experiment by using chard in any dish that calls for spinach. Below you’ll find a quick and tasty recipe.

Chard that is planted in August can be picked as early as October. You can direct seed or transplant chard into your garden. Chard can also thrive in container plantings when allowed plenty of room. Sow seeds ½ inch deep and 3 inches apart. Be sure to thin out your seedlings if they appear overcrowded. As the seasons change, it is important to clear out your spring chard and other non-producing plants to minimize pests and disease. Chard planted in early August can be overwintered. When over-wintering crops, floating row cover is a useful tool to provide warmth. Mulching your crops for overwintering will also help them survive the cold temperatures. Chard is one the hardiest and tastiest vegetables in any PNW garden. You can enjoy its beauty and nutrition all year.

Sautéed Swiss Chard & Parmesan Cheese

**Ingredients:**
- 3 tablespoons of butter or olive oil
- 1 tablespoon of fresh lemon juice
- 1 tablespoon of minced garlic
- 1/2 lb of chard with the stem & leaves chopped coarsely
- 2 tablespoons of grated Parmesan
- Salt to taste

**Optional:** toasted pine nuts or walnuts.

**Preparation:**
- Melt the butter/olive oil on medium heat in a skillet
- Stir in the garlic & cook for 30 seconds until fragrant.
- Toss in your beautiful chard stems & cook until tender.
- Add in leaves and cook for a minute or two. *Don’t overcook to retain the garden freshness.*
- Stir in your lemon juice.
- Top with Parmesan and nuts if desired.
All That Summer Squash!

by Allie Bishop Pasquier

An abundant garden is a beautiful thing! Around this time of year, many people find that they ended up with a bit more summer squash than they expected. And you may be thinking about how to cope with it! Donating extra food to the Food Bank or giving it to your neighbors is a wonderful option, but what about that squash you’re keeping for yourself?

People usually picture zucchini when they think of summer squash. It is a bit more common than yellow squash, or the smaller patty pan squashes. Zucchini is high in potassium and vitamin C, so it is a great food to pack into as many meals as you can in late summer. Growing up, the zucchini at my house was always boiled, then seasoned with a bit of butter, salt and pepper. Now I like to use zucchini in more creative ways: sautéed, baked into something sweet, or grated raw into a salad. Cooking should be fun, so this month, we’re sharing something a bit different: Zucchini-Crusted Pizza!

I first made this in college while I was cooking my way through my very first cookbook, Mollie Katzen’s, The Moosewood Cookbook. All of the recipes highlight vegetables, grains, and other whole foods. This is an adapted...

**Ingredients:**

- olive oil & cornmeal for the pan
- 2 medium zucchini, grated (about 2 cups)
- 2 eggs, beaten
- ¼ cup flour
- ½ cup grated Mozzarella cheese
- ½ cup grated Parmesan cheese
- 1 TBSP olive oil

**Directions:**

1. Preheat the oven to 400 degrees. Brush a sheet pan with olive oil and sprinkle some cornmeal onto the pan, concentrating the cornmeal mostly onto a 10-inch circle in the middle of the pan.
2. Combine all of the other ingredients in a bowl and mix well.
3. Press the mixture into a circle on the prepared pan. It should be about 10 inches in diameter. Be sure that it is packed together well! Brush it with a touch more olive oil.
4. Bake for 15 minutes, then rotate the pan. Bake for another 10-15 minutes, until the top is golden brown.
5. Remove from the oven and loosen the crust with a spatula. Add your toppings of choice (maybe more veggies from the garden!) and then put it back in the oven for about 10 minutes, when the toppings are heated through.

You can also make your own frozen pizzas for nights when your family is busy by letting the baked crust cool down, adding toppings, then freezing the whole pizza. When you want to cook it, just preheat the oven and pop the whole thing in until it is heated through.