

Gardening Newsletter

by Linda Gilkeson

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Plant Diseases, Garlic Harvest, Sad Tomatoes

As this strangely cool and wet summer proceeds, thanks to the stalled jet stream, gardeners have noticed more plant diseases, fewer insects, lots of slug damage, excellent growth among the leafy greens and cabbage family, hardly any growth among the melons. At this point, it is time to take stock and 'edit' the garden, removing crops that aren't going to produce well in the months remaining and replanting wherever gaps open up. When this cool weather pattern finally shifts, which it may start to do in the next week, you could see your lush vegetables wilting in the bright sun, even when it isn't particularly hot. This is normal for plants that have been growing large, soft leaves in cooler weather as they need time to adapt to the drier, brighter weather. Check the soil moisture, of course, but if it is adequate, don't overwater to prevent the wilting. If a heat wave shows up, be immediately on top of shading cabbage family, leafy greens, seedlings and other plants to avoid sunburn injury to leaves.

Questions about tomatoes are starting to come in, mostly on why plants don't have fruit/are not ripening/have discoloured leaves. Well folks, it has just been too cool outdoors for good tomato growth this season in many gardens, especially those closer to the ocean or Straits or at higher elevations. The same goes for peppers, eggplant, some winter squash, cucumbers, melons, beans—all of which may be growing slower than usual with the cool nights and room temperature days. If the stems and undersides of leaves of tomatoes have a purplish look (more marked in some varieties than others), that is a sign that plants are not taking up enough phosphorus due to the cool weather and not necessarily that there is a deficiency in the soil. When consistently warm weather shows up, the plants should have normal dark green leaves. Depending on the weather the rest of the summer, large-fruited, indeterminate (vining) varieties that need a long, warm season to ripen might not produce much of crop this year. Determinate (bush) varieties for short seasons should fare better.

Diseases du jour: With this prolonged damp weather, the proliferation of plant diseases has been quite remarkable. Conditions for rusts (garlic, raspberries), apple scab, *Botrytis* diseases (strawberries) have been perfect. [Photos of these diseases are shown on my web site]. The best defense against disease is choosing disease resistant varieties whenever possible. True immunity to disease is rare and varieties listed as resistant to certain diseases vary in how well they stave off infections. When conditions are not particularly favorable for a particular pathogen, such as the fungus that causes apple scab, disease resistant varieties produce a crop without a speck of scab. When conditions are perfect for repeated generations of the scab fungus, however, even resistant varieties may have some apples with scab spots, usually in parts of the tree with dense foliage and the least air circulation. Under such conditions, apples of scab susceptible varieties can be so covered with scab spots that the fruit is stunted and cracked. A few scabs on apple skins are no problem and it is safe to consume juice from scabby

apples, but scab infections do shorten the length of time apples can be stored fresh (so use up scabby apples for applesauce, cider, dried apples, etc.).

I have been sent several photos of diseased tomatoes with what look like early blight (Alternaria), which is a leaf disease that spreads quickly in wet conditions. This year do the best you can to stake and prune tomatoes to improve air circulation so leaves dry quickly. I really can't emphasize how important it is this year to keep tomato leaves dry to avoid infection with late blight, which is rapidly fatal if plants are infected (for details, see my June 20, 2017 newsletter http://www.lindagilkeson.ca/gardening_tips.html).

To reduce losses from Botrytis/Gray Mold in strawberries, try picking berries a little early to avoid having one side a berry becoming overripe and open to fungal attack. Pick while the least ripe side is still orange or light red and let the berries finish ripening on the kitchen counter for a few hours or overnight. This also reduces damage from pillbugs and millipedes that also dive into the overripe side of berries.



Strawberries with Botrytis

Garlic: This crop has generated a lot of questions: about rust (the bright orange dust on the leaves), root diseases and harvest timing. Re leaf rust: There is nothing to be done at this point, but after the crop is harvested and cured, destroy (burn, bury or garbage) the leaves and stalks. Rust infections can reduce the size of garlic bulbs somewhat, but the good news is that it is not on the roots. Rust doesn't affect the storage ability of the crop and you can plant cloves from your garlic this fall without worrying that you are spreading the disease. Rust overwinters on living leaves of Alliums (onion family plants), but different strains of the rust attack some Alliums and not others. To reduce the chance of rust on next year's crop, remove all rust infected Alliums that could live through the winter. If the rust on your garlic is also on leeks (including Elephant garlic, which is actually a leek) or it is also on chives or perennial onions, then you need to remove those plants before the next crop of garlic starts to send up shoots. Since garlic shoots can appear as early as December, break the cycle by harvesting infected leeks (they can be chopped and frozen) and destroying other infected plants in November. Rust spores blow for many miles on the wind, therefore cleaning up your own garden doesn't guarantee no rust in your garlic next year, but it can delay when shows up and diminishes severity of infections.



Garlic leaf rust

Root diseases in garlic are common, especially where people have not been rotating their onion family crops. If

garlic is planted in the same place for a few years, odds are very high that soil-borne root diseases will build up. There are many root disease organisms that can infect garlic, but starting with disease-free bulbs and practicing 4-year crop rotations work to prevent most of them. Leaving 4 years before a bed is planted to Allium crops again allows dormant spores die out in the absence of their Allium host plants. One much feared disease, White Rot, has dormant spores that can last many years in the soil. Diagnosing White Rot really must be done by a plant pathologist (e.g., at the BC Ministry of Agriculture Plant Health Laboratory or WSU Plant Pest Diagnostic Clinic) because several root diseases also produce whitish mold growth. If the garlic bulbs you harvest this month show signs of disease (soft spots, discoloured or rotting cloves), then salvage and clean cloves that look OK and freeze or preserve them for later use. Don't plant any cloves from an infected crop this fall, even from healthy looking bulbs that were in the same bed.

Timing of garlic harvest has been delayed this year and while early varieties, such as Early Red Portuguese, are finished, main crop varieties are lingering. Here is how to tell when to harvest: If the lowest 4 leaves on the plant have shriveled and dried up, go ahead and harvest. Or, if you pull a sample bulb and the outer skin is thin and papery, rather than feeling thick and crisp, then the bulbs are ready. It is generally recommended that you stop watering a couple of weeks before harvest to help the bulbs begin to cure, but if it rains or you can't turn off part of your irrigation system to allow that, don't worry: just cure the bulbs longer and they will be fine. Curing means holding the harvested bulbs, with their tops still on, in very warm, dry conditions, out of the direct sun, for 3 weeks or longer. The plants can be tied in bunches and hung up or spread out in trays one layer deep. Clean the soil off bulbs after they have been cured and not at harvest time when the soft skins are easily scratched and could allow rot organisms to get in.