

This Thursday we concluded our discussion of Cole Crops. It is tempting to think of these crops as cold crops because we are planting and growing them during the cooler time of year, but that would be missing the more scientific reason for their classification. The classification of Cole crop is reported to have been derived from the Latin word *Caulis* which has a number of meanings such as stem, stalk, cabbage, cabbage stem, cabbage stalk. And that is more commonly the reason, I think, we call Cole crops 'from the cabbage family'. But that really isn't much of a scientific reason is it? It turns out the story is more interesting than that and is based on more scientific observations such as their leaf patterns, and their flower physiology not to mention a number of other points that botanists use. One way in which to spot a Cole crop member is to identify them by their flower shape- 4 opposing petals and sepals. Their flowers are shaped like crosses – four opposing petals and sepals in the shape of a plus-sign or cross. The challenge for us is most Cole crop veggies are harvested before the flowering stage for instance cauliflower and broccoli are harvested before they present their full flower. That is the heads of cauliflower and broccoli are clusters of flower buds before they open up into flowers. Turnips are also considered a Cole crops due to their cross shaped flowers, but here the vegetable is both the root as well as the leaves. Other Cole Crop members are Arugula, Bok choy, Broccoli, Brussel sprouts, Cabbage, Cauliflower, Collard greens, Horseradish (roots and leaves), Kale, Kohlrabi (roots and leaves), Mizuna, Mustard (seeds and leaves), Radish (root and leaves), Rutabaga (root and greens), and Wasabi Watercress. It doesn't seem like there is much of a common thread to this classification does it? So while cabbage is an easier thing to remember maybe stem is important too?! What do you think?

We re-planted some spinach and lettuce in the main garden this week because the first planting didn't take probably because we planted the seeds too deep. We also planted lettuce seeds in the orchard bed O2 holes. We also harvested yard long beans and collards, and turnips from the main garden this week. Maybe you noticed that we are recovering from some damage done by very hungry caterpillars. With the rain experienced during the past week we had to spray with a soap mixture a couple of times to keep the caterpillars off the spinach, lettuce, and even our tomatoes. If you had looked very closely under the leaves that had many holes in them you would see various sizes of caterpillars munching away. As you know we are an organic garden and so we don't spray with pesticides or herbicides. We can't remove these pests effectively enough manually such as collecting all these caterpillars by hand as that would take days to do and they would stay ahead of us. So how do we deal with this problem? Well one way is to spray with biodegradable dishwashing soap such as Dawn. The insects don't like this because the soap is an irritant and they move on. So maybe you saw that we were spraying to reduce the damage that was being done, no one likes to share their spinach leaf with another critter!

Next time we will begin learning about onions, page 22 in your manuals.

[https://www.ofegrowers.org/uploads/8/7/5/2/87524472/ofe\\_5th\\_grade\\_science\\_and\\_math\\_gardening\\_manual\\_2022\\_-\\_2023.pdf](https://www.ofegrowers.org/uploads/8/7/5/2/87524472/ofe_5th_grade_science_and_math_gardening_manual_2022_-_2023.pdf) ).

Thanksgiving break is almost here and so we wish you all a very happy Thanksgiving holiday!

We are happy to take clean leaf/grass clippings and pine needles, if you are looking for a place to get rid of them. There is a sign at the big tree by the water tower (East parking lot) showing where to drop off the clippings or pine needles. We use them in the gardens and orchard so please feel free to drop off your bags at the drop off spot. Thank you,

We're looking forward to seeing you all in a few weeks, but until then Happy Thanksgiving!