

We have completed our root crops lessons set now and will start the white and sweet potatoes lesson set this Thursday. You might be asking why aren't potatoes considered root crops? If you had been reading the newsletters you might already know but in case you missed that newsletter, let's see if we can figure out why root crops and potatoes are considered different categories of vegetable. Recall that a root crop is considered a vegetable in which the root stores carbohydrates as part of the root. A beet for instance has a root system that is often referred to as a tap root. A single root that grows deep into the ground and has root hairs branching off of the main or tap root but no significant other roots. The beet or energy storage organ becomes part of the tap root. This is the energy source the beet plant will use to grow flowers and eventually seed. In essence this is the way the plant builds up and stores energy for the rapid growth needed to allow for the emergence of flowers, their subsequent pollination, and then the maturation to seed. Botanists make a distinction between root crop carbohydrate storage and tubers in that the tuber arises from lateral root growth off the main roots. The tuber grows as an extension of these lateral roots and serves pretty much the same purpose as that discussed above. What are some of the obvious differences that you might have already observed? One is that the root crop such as the radish or beet gives rise to only one organ of carbohydrate storage per tap root. The tuberous vegetable gives rise to multiple lateral carbohydrate storage organs per root as it can support many lateral roots.

This past week we continued to plant fall crops such as the radishes, sugar snap peas, kale, and collards and lettuce. We also are in the process of removing the last of the summer's okra which has stopped producing. Why do you think the okra and yard long beans are no longer good garden crops for this time of year? One thing that might immediately come to mind is it is getting cooler. And you would be right, it is. But there are other important reasons too! What about day length? When you think about day length, do you think the sun is as strong as it was in the summer? A clue can be seen in the trees, their leaves are changing aren't they? Is it because of the cold or day length? If you said day length you'd be right. The reason for the color change is due to the sun's light energy not being strong enough to keep the chloroplasts making chlorophyll (as evidenced by the green color). And so we are treated to the other pigments that still getting enough energy from the sun. But with the changing day length the tree is no longer getting enough energy to support vigorous growth and the tree begins to shut down for the winter. The energy needed to live through the winter has been and continues to be stored in the trees roots as the leaves shut down and eventually drop off the tree. So there is a common theme here isn't there? Plants store energy in their roots for their future needs.

We will study potatoes for the next two weeks leading up to the Thanksgiving break. Please remember that we are always interested in the materials that will eventually make up compost such as the leaves that are now beginning to drop from the trees. We have a drop off point for those bagged leaves near the orchard. The drop off location is marked by a couple of jack-o-lantern plastic bags. We ask that the lawn and leaf material be what we call clean which means no limbs or large twigs in the mix. We also love pumpkin (preferably whole) for our compost as they really add to the composting process.

Stay safe and we look forward to working with you this Thursday, remember we start the potato lessons.