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Cultivating Community  
*This institution is an equal opportunity provider*

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CLASS OUTLINES

– Class 3 “Growing Healthy Plants”

Goal: The goal of this class is to teach the new farmers all of the elements that work together to grow healthy plants in Maine. We will talk about healthy plants in general and then focus in on the specifics of one crop (radishes) to give a more focused and practical look into what a farmer needs to do to produce a healthy crop in Maine.

* Plants need a handful of basic needs met in order to stay healthy.
  + That handful of needs are basically the same as the basic needs of children.
  + People and plants need sunshine
    - How do you feel in the winter when you don’t get enough sunshine or in the summer if you work inside all day?
  + People and plants need food
    - Plant food looks different than people food
      * In Maine, it is more work to feed the soil than it is in Africa.
        + In Maine, we feed the soil with compost, manure, fertilizers, and straw/hay
  + People and plants need water
    - Too much water and not enough water are not good things for people or plants.
      * People and plants get sick and weak when they don’t have enough water
      * People and plants are more susceptible to disease when there is a lot of standing water or when their environment doesn’t dry out for many days at a time
  + People and plants are more susceptible to damage if they are sick, malnourished, or dehydrated.
    - A strong healthy plant can resist pest damage much better than an unhealthy plant.
  + People and plants are more likely to get sick when they are very crowded.
    - Refugee camp
    - Plants planted too close together or crowded out by weeds
  + It is very important to pick the right varieties for Maine.
    - Most of what we grow on our farm is not native to Maine, so we have to be careful to plant the varieties that are known to survive and flourish here.
    - One way to be sure is to order from a catalogue based in Maine (Johnny’s and Fedco). If you have a question about a variety, ask a staff member before planting.
  + In Maine, we have to be careful about how, when, and where we transplant.
    - Many vegetables that we like to eat can only be grown from transplants in Maine.
      * The three most important crops that fit in this category are tomatoes, peppers, and eggplant
    - Start with healthy transplants – if you start with a weak or unhealthy plant, it will always be weak and unhealthy and is likely to spread disease to other plants in your field.
      * Transplant when the soil is warm enough
      * Create the correct spacing
        + A dibbler is a good way to do this
      * Water your transplants before planting them
      * Make sure that the person who grew your transplants has been hardening the plants off before giving them to you.
        + A greenhouse is a controlled environment – no wind, temp controlled, perfect amount of water, etc….the plants doesn’t know how to deal with a new environment yet.
      * The transplants are carefully pulled out of their cells without ripping the roots. The roots should look well-formed but not tangled and turned into a solid mass. If the roots have become tangled, they have been in their cell for too long. You can still plant these transplants, but they will not be as strong and healthy as a plant that spent less time in a tray.
      * Transplant early in the morning or in the evening.
        + Hot, mid-day sun is very stressful for transplants and they can become damaged or even die.
        + The soil that you are planting into should be moist.
      * Some plants should be mulched after or while transplanting to keep down weeds and moderate soil moisture
      * Some plants should be covered with row cover to moderate temperature and prevent pest infestations.
    - Keep your plants well weeded and/or well mulched
    - Use your planting guide or ask a staff member if you can’t remember when/where/how to plant something.
    - Good healthy soil helps to keep plants healthy.
      * We have good soil on the farm
    - With these tips and cooperation from the weather, you should be able to grow an abundance of healthy vegetables.
* Growing Healthy Radishes
  + Radishes are very quick and easy to grow in Maine. They like our weather.
  + They are originally from China and have been eaten in that part of the world for thousands of years
  + Row cover makes growing radishes much easier
    - What is row cover
    - Protect radishes from cold nights
    - Protect radishes from the insects that like to eat them
  + Radishes can be grown very close together compared to most vegetables.
    - 3 rows/bed; 1 inch between seeds
    - They can be planted too close together! They don’t grow very well as a mass planting, better in rows
  + Even though they take only 3 to 4 weeks to grow, the weeds still grow faster!
  + If they are too crowded in a row, they will never grow big and healthy – instead, small and stunted with bad flavor.
  + They don’t like hot weather, so we plant them in May and August
    - You can plant them every week if you want to
  + Row cover is mostly used to fend off flea beetles
    - Flea beetles like to eat everything in the radish family
    - They do a LOT of damage to these crops. These crops still taste good, but they don’t look good and can become so eaten that they die
  + There are many kinds of radishes
  + Radishes mature very, very quickly but become too old even more quickly. An old radish cracks open, tastes bitter/spicy, bolts, and becomes tough.
    - Radishes do not like to be in very wet soil; they will have many problems
  + If a crop of radishes has gone by, don’t think of it as a waste, think of it as cover crop – you are feeding your soil.
  + It is very tempting to plant all of your radish seeds in one day. Don’t do it! Make your packet of radishes last for the whole season. Plant just one short row every two weeks or so in May, June, and late August.
    - Calculate how many bunches of radishes you really want every week.
* Recap of the important principles