



# GROW YOUR OWN

## 2022 Workshop Series

### APRIL: Preparing Your Garden Space

#### April is the time for:

- Analyzing soil test results
- Getting the needed soil amendments
- Shopping for seeds
- Preparing your space
- **GET IN ON OUR BULK COMPOST PURCHASE**

#### Workshop Notes

Results of a soil test are important. In this class, we discussed what a soil test can tell you, what soil amendments are, types of irrigation, and types of garden structures and orientation. Seed starting versus transplanting and direct sowing. Also, what types of supports you might need for your plants.

#### SOIL PREPARATION

Start with a soil test. The soil test report will tell you the pH of your soil. A pH of 6.5 is best for growing vegetables. The report should also give you the levels of various elements such as calcium, sulfur, etc.

- **If your pH too acidic** you can apply sulfur, acidic salts of iron, aluminum or ammonium.
- **To raise the pH**, apply limestone or dolomitic lime, soluble calcium products, compost. Add Organic Matter no matter what the pH is. Organic matter will help retain soil moisture and as it breaks down it will add nutrients. Finished compost usually has a pH of 7, so if added regularly it will bring the pH closer to neutral.
- General use fertilizers contain nitrogen (N), phosphorus (P) and potassium (K). Requirements vary for different types of vegetables, e.g. leafy, root or legumes and fruit.
  - **Nitrogen** is important for leafy growth.
  - **Phosphorus** is important for flower and root development.
  - **Potassium** is important in photosynthesis and development of sturdy stems. Other elements are important.
  - **Magnesium** promotes green leaf formation, vegetative growth and carbohydrate formation. Too much nitrogen or potassium may make it harder for plants to absorb magnesium.

- **Calcium** promotes strong cells and root growth. Blossom end rot may show up on tomatoes if they are not absorbing enough calcium.
- **Sulfur** promotes healthy roots and lowers pH.
- **Soluble fertilizers** can be side dressed throughout the season. We will discuss more about this in later workshops.

If you have grown in the same spot for years and added fertilizers and compost, you could actually have **excessive nutrients** that can lead to lots of leaves and less or no fruit. If you have raw manure, wait at least 2 weeks before planting to let it break down. It is better to add it to your compost pile. Nutrients will not be available yet for the plants and the manure could actually harm them.

### When making Compost . . .

- Include a wide range of ingredients: manure, leaves, grass, straw, kitchen waste
- Don't add diseased plants or weed seed.
- Start with some soil (microbes) and wet it.
- Brown to Green ratio 2 parts brown to 1 part green, Have a turning schedule.

### Construction Materials

- Store bought, barrel, pallets, blocks, pile

Aside from a soil test, check the makeup of the soil in your garden plot. Soil texture is important to understand because certain plants are more adapted to certain soil texture. Soils with a high percentage of sand will drain quickly and plants that prefer dryer soils will grow best under these conditions. Soils with a high clay content will hold more water and are better for plants that need more water. To find out about your soil you can check online resources such as USDA Natural Resources Conservation Service - soils, [www.nrcs.usda.gov](http://www.nrcs.usda.gov).

### Soil Composition Test

A quick way to learn about what soil texture you have is to put a shovelful of soil into a strainer and strain into a glass jar, fill with 1 tbs powdered detergent and water, cover and shake and let settle. The soil will separate over time and you can get a rough percentage of the clay, sand, silt and organic matter in your soil. **Grow It Build It's YouTube video** shows you how to do this. <https://www.youtube.com/watch?v=77kQPlx-sIQ>.

**Soil structure can be changed.** It is the overall arrangement of the particles that form aggregates. Compaction of these aggregates, moisture level and amount of organisms in the soil all affect plant growth and health. Your soil is made up of mineral matter (sand, silt, clay), organic matter, air and water. Its structure is affected by tillage, foot or vehicle traffic, moisture level, freezing and thawing, root growth and soil organisms. If you take a handful of soil and squeeze it, it should compress down to about half its volume because 50 percent of your soil is air space and water. Very compacted soil or very wet soil prevents plant roots from getting oxygen. Soils that are too dry will not retain water and plant roots won't have it available. Disturbed soil or soil lacking organic matter will not have a good network of microbes to make nutrients available to the roots.

**Speaking of microbes**, there are more microbes in the soil than one can count! Two groups that you might be familiar with are bacteria and fungi. Bacterial organisms are favored when the soil pH is closer to neutral and fungal organisms are favored when the soil pH is more acidic.

**Preparing your soil for planting** requires loosening the top 2 inches of soil after you have added amendments and compost. Disturbing the soil any deeper than that actually breaks up the fungal networks that help the plant roots take up nutrients. If you are preparing a new plot, there are several ways to prepare it without deeply turning over the soil. However, if you are converting a grassy area, you may want to use a tiller to make a shallow till will to break up the grass or try the double digging method. This involves removing the top 6" of soil onto a tarp. Then digging out another 6" of soil to loosen the bottom layer. Add organic matter and mix it in. Remove rocks and now add the soil on the tarp on top. Rake smooth without stepping on this newly loosened soil.

Another way to prepare a new area is to layer cardboard all over the new plot to kill any grass or weeds. Weigh it down with some soil or compost so it doesn't blow away. This will take several weeks but requires much less labor. The double digging method is better if you are planting in an area that was very compacted. OR...build raised beds and fill them with hardware cloth on the very bottom to prevent rodents from digging in. Layer straw, leaves, seaweed or any organic matter you have. Fill them with compost and good soil to the top and layer lots of straw, shredded leaves or other organic matter on top of that.

## **WATERING/IRRIGATION**

- Watering should take place when about 50% of the soil water is left.
- Don't wait until the soil is dry and plants are wilting.
- Water about one inch per week from rain and irrigation.
- Water should moisten down to 12 in. When watering with a sprinkler or hose, place an empty Tuna can on top of the soil near your plants to measure one inch of water. Water until the can is full.
- Avoid frequent shallow watering.
- Roots will develop at the surface.
- Water should soak in slowly and deeply.
- Puddling water is an indication that water is infiltrating too slowly.
- Too much water in the soil will cause reduced oxygen and root rot.
- Water in the **morning** so leaves dry.

## **Sprinkler Irrigation**

- There are a wide variety of overhead sprinklers.
- Can, oscillating, rotating, cone
- This system can be time consuming if it needs to be moved around.
- This is the cheapest system.
- This is most likely to promote disease by getting the plant leaves wet.

## **Soaker Hose**

- Water oozes out of very small holes.
- Conserves water from evaporating

- Waters area only around the plant
- Can be used under mulches
- You need quite a bit to do the whole garden
- The cost - \$20 for 100 feet
- Can be connected to a timer

## **GARDEN STRUCTURES**

- Raised beds
- Orientation of beds to North/South or East/West? Find the most sun!
- Pathways
- Trellises
- Fencing to keep animals out.

## **SEEDS AND PLANTS**

### Choosing Varieties

- Zones and microclimates determine types and varieties - choose hardy varieties
- Northern catalogs tend to specialize in north hardy varieties. e.g. Johnny's or Fruition
- What is important to you: disease resistance, high yield, flavor, size
- Try new things

### Choosing Transplants

- Grow your own or buy?
- Buying transplants is easier but less variety
- Growing your own is time consuming and you need the right equipment

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## **RESOURCES**

Gardeners Supply - <https://www.gardeners.com>

Johnny's Seeds - <https://www.johnnyseeds.com>

Fruition Seeds - <https://fruitionseeds.com>

Provided by **Real Food CT**, Newtown, Connecticut  
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