Beginning Gardening

Milton Public Library
April 6, 2021
A Few Key Questions to think about!

- What foods do my family and I love to cook and eat with?
- What is easy to grow for a beginner?
- How much sunlight do I have?
- Where should I plant the garden?
- Do I want to use containers, mounded beds or wooden raised beds?
- What is the quality and composition of my soil?
- What are the first and last frost dates in my area?
- When do I plant each type of crop?
- How much time and energy do I have to devote to this endeavor?
- Radishes, tomatoes, peppers, carrots, chard, lettuce and beans are easy to grow for a beginner.
- Broccoli, carrots, kale, mustard, beet and turnip greens, spinach, winter squash, tomatoes are the most nutrient dense.
- Carrots, parsnips, winter squash, dry beans, onions, herbs (dried) and potatoes store well.
Where Oh Where will my garden grow?

It’s all about Location, Location, Location!

- Choosing a site
  - Sunlight - 6 to 8 hours a day
  - Soil - well drained fertile soil
  - Surrounding vegetation - Trees and shrubs compete with moisture and nutrients
  - Convenience - Water source, ease of maintenance and harvesting
Sunlight in the garden

6+ hours of full sun for warm season crops
4-6 hours full sun for cool season crops

Note the position of the sun and how it might change over the course of the growing season.
Soil and Soil Types

Soil is formed when rock is broken down by climate and vegetation over a period of time. Soil is weathered rock fragments and decaying remains of plants and animals also known as organic matter (OM). It contains varying amounts of air, water, and micro-organisms and furnishes mechanical support and nutrients for growing plants.

- Soil types are defined by the texture of the soil or the fineness/coarseness of the mineral particles in the soil.
- Sand has coarser mineral particles and feels rough when rubbed between the thumb and fingers.
- Clays are the finest soil particles. They feel extremely smooth when dry and become slick and sticky when wet. Clay will hold the form into which it is molded.
- Silt is fine soil particles that feels smooth and floury. When wet, silt feels smooth but not slick or sticky. When dry, it is smooth and if pressed between the thumb and finger, will retain the imprint.
- Loam is a textual class of soil that has moderate amounts of clay silt and sand. Loam contains approximately 7% to 27% clay, 28% to 50% silt and 50% sand.
Sand

- Sandy soil is easy to spot by its feel. It has a gritty texture and when a handful of sandy soil is squeezed in your hand, it will easily fall apart when you open your hand again.
Clay

- **Clay soil** has the finest soil particles so it has good water storage qualities. It's sticky to the touch when wet, but smooth when dry. ...

- If moistened **soil** feels sticky, rolls up easily, and forms into a ball or sausage-like shape, then you've got yourself **clay**.
Silt

Silt soil is fine and feels almost floury to the touch when dry. When wet, it becomes a smooth mud that you can form easily into balls or other shapes in your hand. When silt soil is very wet, it blends seamlessly with water to form fine, runny puddles of mud.
Loam is soil composed mostly of sand, silt, and a smaller amount of clay. By weight, its mineral composition is about 40-40-20% concentration of sand-silt-clay, respectively.
Why is soil texture important?

- The texture of a soil is important because it determines soil characteristics that affect plant growth. Three of these characteristics are water-holding capacity, permeability, and soil workability. Water-holding capacity is the ability of a soil to retain water.

- Permeability refers to the movement of air and water through the soil, which is important because it affects the supply of root-zone air, moisture, and nutrients available for plant uptake.
Soil Drainage

• Water drains quickly indication of a sandy soil. Trouble keeping your garden moist.
• Water drains very slowly indication of clay. Water puddles when wet and cracks when dry.
Simple Percolation Test

- Dig a hole 12 inches deep and 12 inches across.
- Fill the hole with water and let it drain.
- Fill the hole again with water and measure the change in water level every hour.
- Ideally a well drained soil will drain 2 inches every hour.
Amending the Soil

Organic Matter

- Improves plant growth
- Has high water holding ability
- Good for storing nutrients and is useful for micro-organisms
- Binds tiny soil particles and improves soil structure
- Brownish/black color that absorbes heat
What is Organic Matter or Humus

- Soil organic matter (SOM) is made up of living plants and animals (roots, fungi, bacteria, macro fauna and micro fauna), plant litter, and all the degraded material from decomposing plant and animal material (manure).
Other considerations for location of your garden

- Location of trees and shrubs around the garden area - Competition for moisture and nutrients.

- Convenience - Water source
  
  - Ease of maintenance
  
  - Harvesting

- History of Site

- Septic system and leach field
Soil Testing

Soil PH -measures the degree of acidity or alkalinity of the soil
6.2 to 6.8 ideal for most gardens
Add lime to raise PH
Add sulfur to lower PH (Blueberries)

Soil test by UVM lab- Measures soil fertility or organic matter (OM) in the soil.

https://www.uvm.edu/newsstories/news/does-your-soil-get-passing-grade
Garden Ideas
Inground gardening

- Start small
  8 x 10 ft space is a good size
- Digging your beds
  Loosen the top 6-12 inches of soil
  > Rototill, sod cutter, by hand or
  > Mow close and cover with
    cardboard, tarp or old rug
    for 3 to 4 weeks
- Amend the soil by adding organic matter (manure, leaf mold, compost)
Raised bed gardening
Raised beds

• Shallow or poor soil - 1 cubic yard of purchased garden loan will adequately fill 2 3 X 5 ft beds
• Easier on back and clearly defines area
• Size should be not more than 4 ft across so that you can reach to the center without stepping in the bed and the bed can be as long as you want it to be. Depth should be at least 6 inches deep, but 12 inches is better for the deep -rooted vegetables.
• Start by choosing your site and defining the area of the garden with a built raised bed or material of your choice.
• In most cases, **cedar** is the best wood to use for garden beds because **cedar** is naturally rot resistant. **Western red cedar** is commonly used, but Vermont white **cedar**, Port Orford (yellow) **cedar** and Juniper are also high-quality choices for outdoor construction projects. Hemlock is also an appropriate wood to use and is cheaper than cedar. DO NOT use pressure treated wood.
• Layer newspaper or cardboard at the bottom right on top of the grass and fill bed with 60% **topsoil**, 30% **compost** and 10% Potting soil (a soilless growing mix that contains **peat moss**, **perlite** and/or **vermiculite**).
• [https://www.gardeners.com/how-to/raised-bed-buying-guide/9564.html](https://www.gardeners.com/how-to/raised-bed-buying-guide/9564.html)
Layer Gardening
No Dig, No Till

• Start 6 months before planting.
• Can use either raised beds or in ground gardening
• Place Newspaper or cardboard at the bottom and soak with water. No glossy print.
• Layer with nutrient rich layers of compost, manure and grass clipping alternating with a carbon rich layer of straw, newspaper and shredded leaves.

• joegardener.com/podcast/easy-no-dig-gardening-charlie-nardozzi/ or
• “The Complete Guide to No Dig Gardening” by Charlie Nardozzi
Container Gardening

- Need a site that gets lots of sun
- Need to water more frequently
- Do not use garden soil by itself
- Soilless media
- Compost up to 25%
- Fertilize regularly using a water-soluble fertilizer
Tips for Container Gardening

- Good drainage
- Choosing varieties of plants that are compact and suitable for containers
- Choose the correct container size for the vegetable you are growing
This will vary with area, the first frost date in fall in USDA hardiness zone 5 is around the first week of October, about 10 days earlier in zone 4. In the spring, the last frost date is around the second week of May in zone 5, and about 10 days later in zone 4. These zones refer to average annual minimum temperatures.

Since cold air is heavier than warm air, it tends to sink into valleys. Mountaintops, too, are generally colder than lower elevations. For these reasons, frosts usually come first in these areas while hillsides remain frost-free. Similarly, on even a smaller or “microclimate” scale, some parts of a particular property such as low areas may be more prone to frost than areas near warmer pavement or buildings.
Planting Time!

A soil thermometer is a helpful tool especially in the spring as it can help you determine which crops to plant depending on the soil temperature.

- 40 – 50 degrees F
  Peas, radishes, carrots, beets, swiss chard, potatoes, onions, kale, lettuce, spinach, broccoli, cauliflower
- 50 - 60 degrees F
  Cilantro, corn, tomatoes (transplants) cucumbers
- 60 - 70 degrees F
  Snap beans, eggplant, pepper, melons, pumpkins, squash, zucchini, basil and other herbs

https://www.uvm.edu/sites/default/files/Extension-Master-Gardener/Planting_the_Garden.pdf
Materials

Visit your local nursery and ask for recommendations for organic seeds, plants, compost, and fertilizer.

- Soil test - UVM Soil Test [UVM Agricultural and Environmental Testing Lab](#)
- Tools
- Fertilizer - LD Oliver Seed Company in Milton - North Country Organics Pro-Gro, Pro Start and Pro Holly
- Compost - Green Mountain Compost for large quantities (Trucking available)
- Hose or irrigation line or water lines and extra faucets
- Watering can
- Seed and seedlings High Mowing and Johnny's Hudaks [UVM Greenhouse Gardener's Supply](#)
- Labels
- Fencing
- Loam to fill raised beds
- Framing Materials
Flowers in the Vegetable Garden

- Attracts pollinators
- Helps with managing weed
- Pest and disease control
- They are beautiful!
Recap

• Pick a site that gets enough sun
• Check your soil texture and drainage
• Submit a soil test
• Start killing grass and prep your site as early as possible
• Other options include raised beds and container gardening
• Initial investment
• Most important - Have Fun!!
Questions and Resources

• UVM HELPLINE  https://www.uvm.edu/extension/mastergardener/helpline
• https://www.uvm.edu/extension/mastergardener/gardening-resources
• https://extension.umaine.edu/gardening/manual/vegetables/
• National Gardening Association  magpie@nationalgardening.org
• https://www.gardeningwithcharlie.com/how-to-grow-no-dig-gardening/
• University of Iowa and Cornell University are excellent online resources
• love2gardenvt@gmail.com  That’s me!
THE LOVE OF GARDENING IS A SEED THAT ONCE
SOWN NEVER DIES
BUT GROWS TO THE ENDURING HAPPINESS THAT
THE LOVE OF GARDENING GIVES
GERTRUDE JEKYLL