

# **GARDENING 101**

## **Successfully Starting Your Garden**

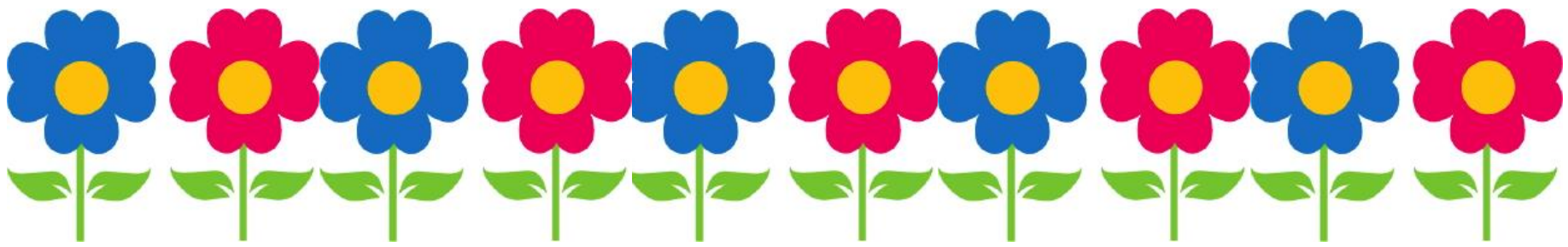




# THE BASICS OF GROWING

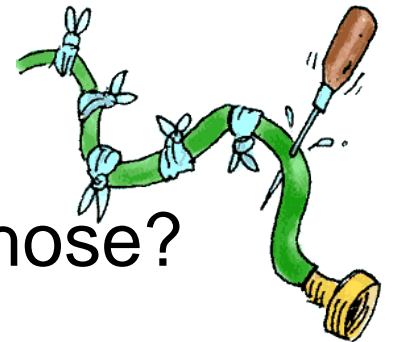
These are the topics we'll cover

- Rows, square foot gardening, raised beds, and containers
- Location
- Preparing to plant
- Seeds and seedlings
- Caring for your garden



# Gardening in Rows

- Traditional method of gardening
- Suitable for large garden areas
- Easier to see plants when they first break through the soil
- Allows for paths between crops for walking or cultivators
- Requires good soil. Test your soil and amend accordingly.
- Weeding is a necessity
- Can you reach all rows with a garden hose?



# Square Foot Gardening

- Works on the theory that certain plants go well together and benefit each other
- Intense and close planting crowds out the weeds
- Allows you to have many plants in a smaller area- great if your space is limited
- Can be difficult to tell if the first leaves belong to something you planted- or if it's a weed!
- Popular for raised beds and can also be used directly on the ground.



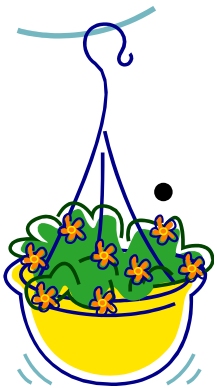
# Raised Beds



- Warm up faster than the ground in the spring
- Can be built to the height you prefer
- Four feet wide is typical and allows you to easily reach in from both sides
- Can easily be made into hoop houses
- Ideal for square foot gardening. Can also be planted in rows.
- Easier to amend the soil and control the soil quality
- A great choice if you don't wish to deal with rocks, standing water, or slope.
- Kits are available or you can build your own.

# Containers

- Ideal for anywhere you can place a pot
- Can be moved to different locations- if they aren't too heavy!
- Drainage is very important- drill more holes if needed. Don't rely on shards to improve the drainage.
- Ideal if you only want a few vegetables, or only one tomato plant.
- Choose the largest pot that you can handle. Soil depth is important for plants that are tall and/or have deep roots.
- Larger pots also hold more moisture in the soil.





# LOCATION

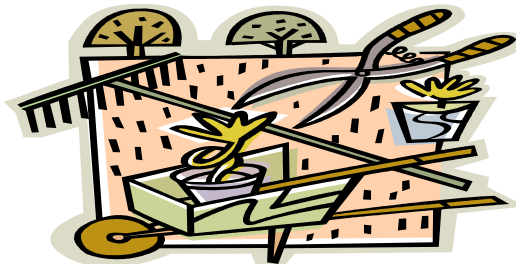
- Easy access
  - Watering & weeding won't happen if the garden is hard to access
  - Out of sight can mean out of mind!
- Avoid low spots
  - Drainage problems- standing water is bad for roots
  - Low spots are slow to warm up, as cold air sinks
- Choose an area that is protected from the wind
- Sun
  - Most vegetables need full, unfiltered sunlight (at least six hours/day)
  - Conduct a “sun survey” before you plant or build your raised bed
  - Flowers have much more variation in their sunlight needs



# PREPARING TO PLANT



- Testing your soil
  - Home test kits- very basic- pH, N, P, K
  - Comprehensive analysis – send a soil sample to UMO
- Amendments
  - Add lime, nutrients, and organic matter as needed
  - Compost- it's a good thing, as long as it's good compost!
  - The Square Foot Gardening recipe (Mel's Mix)
    - 1/3 each vermiculite, peat moss, and compost by volume
  - Decide whether you want to be organic or not. There are many organic amendments available.
- Use potting medium for containers
  - Lighter than loam, provides some nutrients, holds moisture longer





# TEST YOUR SOIL!

## If you're not testing, you're guessing

- ❖ Home test kits give you a snapshot of your garden's overall levels, while an in-depth soil analysis gives you information about **what** to add and **how much**
- ❖ **Soil analysis test kits are available through garden centers and your local Cooperative Extension office. Samples are mailed to Orono.**
- ❖ Test your soil early in the spring or in the fall so that amendments have time to “marinate.” This allows the amendments to be more bioavailable in the soil.
- ❖ A soil analysis is recommended every three years, more frequently if you have a particular problem
- ❖ Test results can save you money and prevent over-application of fertilizers and other amendments. This helps prevent run-off that can lead to water pollution.
- ❖ Home test kits can be used during the off years
- ❖ In the State of Maine, home and lawn soil analyses also test for the presence of lead
- ❖ The University of Maine Soil Lab isn't as busy in the fall







# PREPARING TO PLANT Nutrients

## Primary nutrients

- N = Nitrogen: vigorous growth and dark green color
- P = Phosphorous: growth and seed production, blooming
- K = Potassium: essential for many of the plant's metabolic processes, strength of the plant
- Problems can develop if there is too much or too little

Secondary nutrients: sulfur, magnesium, calcium

Micronutrients: iron, manganese, zinc, copper, etc.



# Temperature



## Early crops

- Germinate in cooler soil temps
- Cold crops- peas, spinach, broccoli
- Root crops, such as potatoes

## After the danger of frost

- Typically after the full moon near Memorial Day
- Consider the timing
  - Too early- seed won't germinate until the soil reaches a certain temperature
  - Too late- watch the maturity dates- the growing season in Maine is short!
  - Too wet- seeds will rot in the ground and won't germinate



# Seeds and Seedlings



## Start with quality seed and seedlings

- Starting seeds inside
  - Consider the timing- starting too early can yield spindly plants
  - Growing conditions- seeds like to be warm and moist, but not wet
  - When to transplant (outside soil temp should be 60-65°)
  - Hardening off- transition plants from inside to outside
- Starting seeds outside
  - Temperature of soil- different veggies have different preferences, and these range from 50-70+ degrees
  - Length of season- some, like melons, need a long season to mature
- Starting with purchased seedlings outside
  - Examples are broccoli, lettuces, cauliflower, tomatoes, peppers
  - This is a great way to start with healthy plants
  - Can control how many plants you have in your garden
  - Some plants, such as peas and beans, don't transplant well and need to be started from seed.

Check the growing calendar at [www.burpee.com/growingcalendar](http://www.burpee.com/growingcalendar)

# Reading the Seed Packet

Seed packets give good – and brief – information on successfully starting the seeds, such as:

- Annual, perennial, or herb
- A brief description of the plant
- How much light is needed
- Timing, or when to start the seeds
- How deep and how close together to plant the seeds
- Care of the seedlings







# Caring For Your Garden

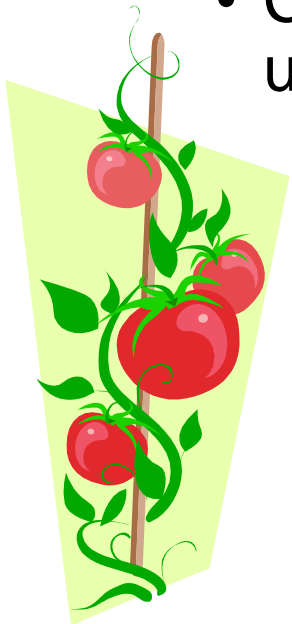
- **Water...water...water!**
  - Dry finger test- if it feels dry, it needs water
  - Water containers until water flows out from the bottom (drainage is important!)
- **Hot and cold temperatures**
  - Tender young plants need protection from the frost. Cover with a sheet or frost cover on cold nights, remove during the day.
  - Bolting- some plants, such as lettuce, will bolt and go rapidly to seed during hot weather. The taste will change too, usually becoming bitter.



# Caring For Your Garden

- Fertilizer

- Organic vs. chemical- there are lots of options for each
- Compost as top dressing
- Containers need fertilizer because they quickly use up their nutrients
  - Liquid- use every 2-3 weeks
  - Slow release- mixed in with potting medium- good for 8-10 weeks
  - Watch the amount- more is NOT better!
  - Lower N is recommended for veggies
  - Fish emulsion is good for adding trace elements



# Caring For Your Garden

- Pest controls
  - Organic vs. chemical- many options are available
  - For best results, follow the directions!
  - Read the label carefully. To be effective, the control must be effective FOR your plant, be effective AGAINST the pest, and must be used in the correct concentration.
  - Not all pests are bugs...
  - ...and not all bugs are pests!
- Weeding is inevitable. Weeding is frequent too.
- Succession planting
  - Quick crops followed by slower crops
    - Example: Radishes and carrots- by the time the radishes are done, the carrots are starting.
  - Cool season crops followed by warm season crops
  - Plant cool season crops in spring and late summer
    - Peas, beans, lettuces, cukes



# A PLEA FOR POLLINATORS

*If you ate today, thank a pollinator!*

- ❖ Roughly 75% of the world's fruit and nut crops consumed by humans depend in part on pollinators
- ❖ Pollinators are responsible for one of every three bites of food
- ❖ Choose natural products and treatments when possible
- ❖ Avoid neonicotinoids and systemic pesticides!
- ❖ Don't spray any products (even organics and natural products) when pollinators are active
- ❖ Avoid treating pollinator-friendly plants





# More Info

- <http://www.espoma.com/>
- <http://urbanext.illinois.edu/containergardening/>
- <http://squarefootgardening.org/square-foot-gardening-method>
- <http://umaine.edu/gardening/>
- <http://www.southernstates.com/articles/garden-index.aspx>
- [www.burpee.com](http://www.burpee.com)
- <https://www.almanac.com/gardening>