

REEMS CREEK NURSERY

# Organic Gardening Basics

## A Garden Guide

- *Organic gardening is people & kid-friendly, pet-friendly, and planet-friendly.*
- *Adequate sun and water are key to successful vegetable gardening.*



## WHY GARDEN ORGANICALLY?

It's people-friendly, pet-friendly, and planet-friendly. From our farms and gardens come our food; our very source of nourishment and health. Gardening itself can be deeply satisfying, bringing us more in tune with the rhythms of nature. Gardening organically is nothing new. There are very legitimate concerns about exposure to agricultural chemicals ~ in the tiny bodies of our children, our pets, in our bodies, in our environment, & in our waterways.

**SIZE:** Realistically determine how much time you have to devote to gardening. A very small plot can actually produce quite a bit of food. You can even grow in containers on your deck or balcony.

**SITE:** Site your garden for success. Vegetable gardens generally need 8 good hours of full sun, especially plants like tomatoes and peppers. Lettuces, greens and spinach can get by on a little less sun. Proximity to your home is important too, because when you are in a hurry you can easily harvest to make dinner: it's also easier to squeeze in a little garden upkeep. If possible, place your garden midway down a slope rather than at the bottom of a hill – frost flows to the lowest area, and settles in depressions. Good air circulation is important for disease prevention.

**SOIL:** Creating good soil is the foundation of organic gardening. Organic matter adds nutrients and structure to the soil, and should be added to the garden at least annually. You probably won't have perfect soil the first year. With the annual addition of organic matter, compost, and various soil amendments, your soil will be in a state of constant improvement. You can also improve your soil through green manures (cover cropping). pH is an important factor in nutrient uptake as well. The organic gardener's

long-term investment in their soil pays off with healthier & more drought-resistant plants.

- *One centimeter of soil takes between 100 and 1000 years to form. One teaspoon of healthy soil contains about one BILLION organisms of different species.*

**WATER:** Site your garden near a water source if possible. Gardens need about **1 inch of water per week**. Use a rain gauge to determine how much rain has fallen, and to determine how long to leave the sprinkler running. One single DEEP watering is more beneficial than multiple shallow waterings. Deep watering encourages deep rooting - and deep roots are more *drought resistant*. If your garden is on a slope, 2 or 3 short waterings spaced slightly apart will allow water to seep into the soil rather than running off. Be conscientious about protecting our waterways, and conserving water. It is a precious resource.

**WHAT TO GROW:** Grow things you and your family like to eat. The more limited your space and time, the more particular you should be about what to grow. To maximize your harvest think multiple and sequential plantings. Consider planting crops you can preserve or store over the winter like potatoes. Keep in mind how much room a particular plant will take up in your garden space. For instance, watermelon takes up lots of room, so it's not your best bet for a small garden.

### **Plant Nutrients: What is N-P-K?**

**N = Nitrogen** - Green top growth makes for healthy green growth & rapid vegetative growth.

*Too much N=Fewer flowers, poor root growth, succulent foliage that is susceptible to disease.*

**P = Phosphorus** - stimulates root growth, promotes flowering & fruit set, and disease resistance. Moves slowly. *Too much P=Extensive roots, fewer shoots, stunted growth.*

**K = Potassium** - promotes flowering, promotes overall vigor, fruit ripening, improves disease resistance & drought tolerance, helps photosynthesis

*Too much K=Reduced Calcium & Magnesium uptake, low disease resistance, scorching of leaves*

### **OTHER NUTRIENTS:**

**Magnesium (Mg)** = Green leaves, vegetative growth, sugar formation. *Too much Mg = Plant toxicity.*

**Calcium (Ca)** = Plant structure and strength, new cells, growth, disease resistance.

*Too much Ca = Interference with other nutrients.*

**Sulfur (S)** = Fruit & seed maturity, green leaves. *Too much S = Plant cells destroyed.*

**Iron (Fe)** = Green leaf color. *Too much Fe = Plant toxicity.*

**Other micronutrients** = Growth, leaf color, starch formation. Natural sources include greensand, kelp/seaweed, Azomite and vermicompost. *Too much micronutrient = Plant toxicity.*

### **The Importance of pH:**

pH affects the availability of ALL nutrients. Since it affects the availability of nutrients to the plant, it is a critical piece of the picture. pH measures a spectrum of acidity to alkalinity on a scale from 1 to 14. The only way to know for sure is to test your pH - use one of our pH soil test kits or go thru NC Cooperative Extension for more accurate test results (free you just mail your soil sample to Raleigh).

- **6.5 to 7 pH is ideal** for gardens, most soils range from 4.5 (very acidic) to 8 (sweet); 7 is neutral.
- Lime sweetens soil.
- Sulfur acidifies soil...blueberries & blue hydrangeas.
- Most veggie gardens and lawns in our area need regular additions of lime.

**SOIL AMENDMENTS:** Soil testing is free though NC Cooperative Extension. Test early in the season for the quickest return with your results.

If no amendments have recently been added, this would probably be a safe bet:

#### **For a 1000 sq. ft. garden:**

- 50-100 lbs. of Lime
- 200 lbs. Organic Matter (dry Manure) or compost
- 25 lbs. Soft Rock Phosphate
- 30 lbs. Dry soil fertilizer (such as Harmony, Symphony, Plant-tone, or Bio-tone).

*“When the soil is rich it bids defiance to droughts, yields to abundance, and of the best quality. I suspect that the insects that have harassed you have been encouraged by the febleness of your plants.”* - Thomas Jefferson, 1793, in a letter to his daughter

Version 2.0, Jan 21

