



Vegetable Garden Maintenance & Management

Spring Into Vegetable Gardening

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Jamie Upson

Collin County Master Gardener

How to Keep Your Vegetables Growing



- Vegetables Are Less Forgiving of Neglect
 - Can Lead to Lower Yields and Inferior Vegetables
- Vegetable Plants Expend Enormous Energy Blooming & Producing Fruit That Never Really Gets to Mature
- Our Job As Gardeners is to Make Sure Plants Have Necessary Health and Vigor to Keep on Producing
- Today's Presentation:
 - Weed Control
 - Pest and Disease Management
 - Crop Rotation
 - Feeding
 - Succession Planting

Weed Control



Why?

- Weeds compete with plants for sunlight, water, nutrients and space

How?

- Hoe regularly to keep annual weeds under control
- Reduce perennial weeds before planting
 - Solarization with black plastic
 - Herbicides
 - Tilling
- Sanitation
 - Dispose of seed heads

Mulching

Benefits

- Weed suppression
- Temperature moderation
- Soil moisture moderation
- Sanitation
- Adds nutrients



Types of Mulch

Organic

- Straw
- Leaves
- Wood Chips
- Grass Clippings

Inorganic

- Plastic
- Newspaper
- Cardboard



**Avoid Herbicide Treated
Clippings!**

Controlling Insect and Disease Problems By Avoidance and Prevention

- Plant crops and varieties that are well-suited to the soil and climate
- When seeding directly, use disease-free, certified seed, if available
- Select for maximum insect- and disease-resistance vegetable varieties
- Select healthy, sturdy transplants with well-developed root systems
- Buy plants from a reputable grower

More.....

- Avoid over/under irrigation and fertilization
- Practice regular garden sanitation
- Remove and destroy heavily infested plants
- Water in the morning so plants have time to dry before the cool evening
- Space plants properly and thin young vegetables to a proper stand
- Keep down weeds and grass

Even More.....

- Use mulch to reduce soil splash
- Avoid injury to plant
- Stake tall flower and vegetable plants or plant them in wire cages
- Inspect plants for egg clusters, beetles, caterpillars, and other insects as often as possible. Hand pick as many pests as you can
- Rotate plantings with unrelated species

Crop Rotation

Why Rotate Crops?

- Insect & disease management
- Weed management
- Avoid nutrient deficiency
- Benefits of the preceding crops
 - Improved physical condition of soil
 - Increased microbial activity
 - Increased release of CO₂
 - Excretion of beneficial substances



Plant Families



- Cucurbits – cucumber, melons, pumpkin, squash



- Crucifers – broccoli, cauliflower, Brussel sprouts, cabbage



- Solanaceous – tomatoes, potatoes, peppers, eggplant

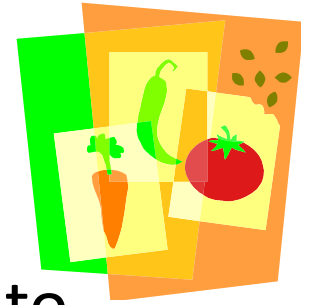


- Legumes – beans, peas



- Alliums – onions, garlic, shallots, chives

Fertilization



- ✓ Rarely will soil have enough nutrients by itself to encourage the kind of growth we want to see
- ✓ Soil sampling tells us what we need to know about our individual gardens by analyzing the availability of essential nutrients
- ✓ By enriching the soil with plenty of compost and organic matter, you will use less fertilizer

Benefits of Compost



- When organic material is broken down by organisms that live in the soil such as bacteria and earthworms, the decomposition process produces the best fertilizer you'll ever find!
- Compost can also:
 - clean up and repair contaminated soil
 - help prevent erosion
 - improve soil structure
 - Increase the amount of moisture the soil retains

Fertilizers



- Slow-release is best
- Balanced and complete fertilizers are ideal
- From a strictly fertilizer standpoint, there is no difference between organic and inorganic fertilizers
- Organic fertilizers tend to work better as weather warms
- Fertilization is best accomplished by replenishing deficient nutrients *in the soil*

Common Organic/Natural Fertilizers

Plant-Based Fertilizers

Alfalfa Meal – Balanced fertilizer

Cottonseed Meal – Good source of nitrogen

Soybean Meal – Good source of nitrogen

Animal-Based Fertilizers

Bone Meal – Low nitrogen and very high phosphorus

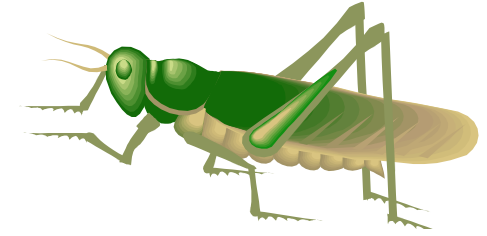
Fish meal – High nitrogen

Blood Meal – High nitrogen

Natural Fertilizers

Greensand – High in potassium

Insecticides

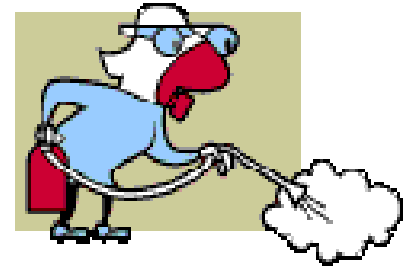


There's a big difference between spraying ornamental plants and vegetables. You're going to eat the vegetables!!!!

Warning!!!!!!

Insecticides can kill valuable beneficial insects and breed resistance in pests. They can end up in pollen and nectar, killing bees and butterflies all of which are needed as pollinators for successful vegetable gardening.

If You Must Treat



- Read the whole label and follow directions exactly
- Use a low toxicity product
- Use insecticides only when the air is still
- Avoid spraying in the morning when pollinators are most active
- Treat only the affected portions of the plant
- Observe the pre-harvest interval (PHI)

Active Ingredients That May be Acceptable in Insecticides for Organic Gardening

- Bt Kurstaki
- Spinosad
- Insecticidal Soap
- Neem Oil
- Azadirachtin
- Pyrethrin

Succession Planting



Planting methods that increase crop availability during a growing season by making efficient use of space and timing such as:

- Planting warm season crops after cool season crops have been harvested.
- Planting different cultivars with different maturity dates
- Multiple plantings of a single crop

Succession Planting

Cool Season Crops

- Asparagus
- Beets
- Broccoli
- Brussel sprouts
- Cabbage
- Carrots
- Cauliflower
- Garlic
- Kale
- Lettuce
- Onion
- Peas
- Potatoes
- Radishes
- Spinach

Warm Season Crops

- Beans
- Corn
- Cucumbers
- Eggplant
- Melons
- Okra
- Peppers
- Potatoes
- Pumpkin
- Squash
- Tomatoes
- Sweet Potato



"The gardener's work is never at end; it begins with the year, and continues to the next: he prepares the ground, and then he sows it; after that he plants, and then he gathers the fruits...."

- John Evelyn, *Kalendarium Hortense*, 1706

Postseason Duties

Sanitation

- Remove debris
- Destroy diseased tissue
- Eliminate source of weed seed

Seed Collection

Soil Preparation

- Plant green manures
 - Reduces erosion
 - Adds nutrients to soil



Record Keeping



- Planting map, varieties planted, planting dates
- Weather conditions, frost dates
- Seed sowing and transplanting times
- Pest problems: types, extent of damage, yield losses
- Management strategies taken & effectiveness
- Harvest dates, yields and quantity