

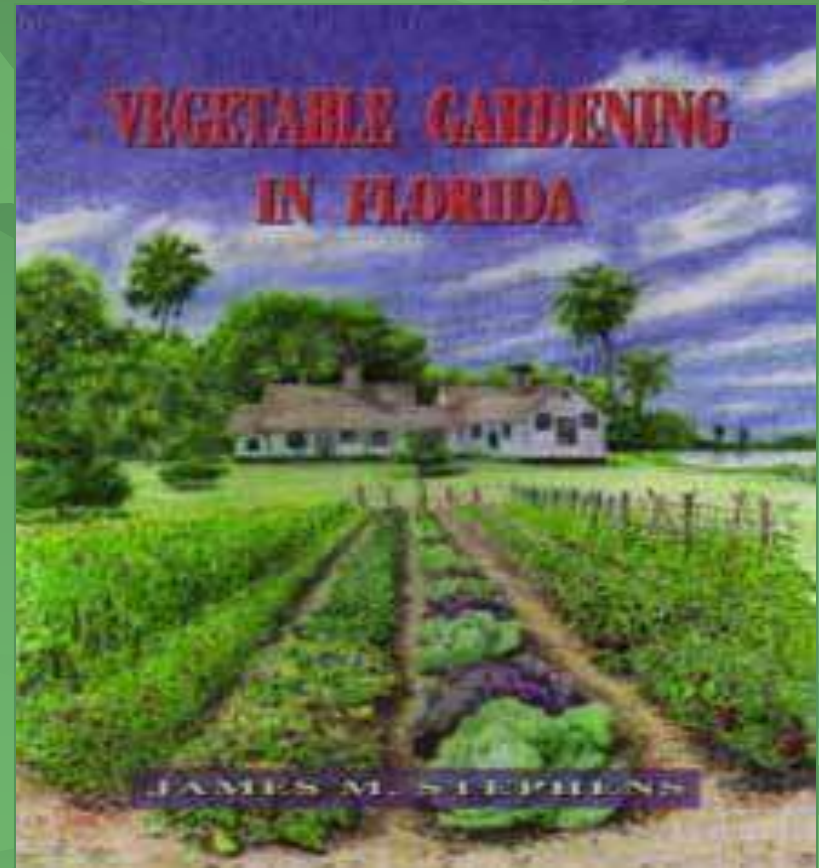


Vegetable Gardening

Pam Brown, Gardening Coach
pamperedgardeners.com

A Great Resource...

Author: Jim Stephens
University Press of Florida
www.upf.com
~\$17.00



Vegetable Gardening in Florida

- ✧ Spring most popular
- ✧ Fall/ winter great time
- ✧ Summer least popular
- ✧ Major problems: infertile soils, pests, and disorders related to weather



Planning Your Garden

Considerations

- ❧ Where will the garden be?
- ❧ What type of garden?
- ❧ Which vegetables do you like?
- ❧ What will you do with surplus?
- ❧ Do you have the right tools?
- ❧ Do you have time?
- ❧ What will it cost?





Finding the Right Spot

- ❧ Near your house
- ❧ In good soil, containers, or raised bed
- ❧ Irrigation close by
- ❧ Sunny spot (5 - 6 hrs/day)
- ❧ Avoid tree roots and septic lines
- ❧ Need a fence?



Preparing the Garden

2-3 weeks prior to planting...

Garden plot

- Clear the ground
- Till or spade the soil to depth of 12 inches
- Apply amendments
- Collect soil for pH test



UF/IFAS Extension
Land Grant University of Florida

UF/IFAS Analytical Services Laboratories
Extension Soil Testing Laboratory
2190 Highway Road/PO Box 133700/White Building 601
Gainesville, FL 32613-6740
Email: soiltest@ufl.edu Website: <http://soiltest.ufl.edu>

LANDSCAPE & VEGETABLE GARDEN TEST FORM
Note: This lab only tests samples from Florida.
Direct any questions about this test or the interpretation of the results to your nearest UF/IFAS Extension agent.

Client Address (please print): _____
City _____ State _____ Zip _____
Phone _____
Email _____
These provide an exact address to send test materials.

Signature _____
Signature must be signed by UF/IFAS agent for approval of the test request.

Notes:

- Consult an expert to determine if plant growth problems require soil testing.
- These samples will not be tested for nematodes, disease organisms, or chemical safety (other than those listed on this form).
- Commercial producers should use the Professional Soil Test Form AE-135 (<http://soiltest.ufl.edu/ae135>).

Step 1: Collect samples from your landscape or garden. See the instructions at the bottom of this page.

Step 2: Choose EITHER Test A or B, but not both, for all samples.

For Microelements (Ca, Mn, Zn) add \$5 per sample.

Test A: The pH and Cation Requirement Test provides the following information:

- Soil pH
- Cation Requirement

Test A is appropriate if you do the following:

1. Use only complete fertilizers (such as 16-4-8).
2. Follow the generic fertilizer recommendations found in UF/IFAS landscape and vegetable garden publications.
3. Need only the soil pH test.

Test B: The Soil Fertility Test provides these cation analyses:

- Soil pH
- P
- Ca
- K
- Mg

Test B will enable you to tailor your use of single element fertilizers based on existing soil fertility status. However, if you use a complete fertilizer such as 16-16-16, the same rates for nitrogen, P, K, Mg, and Ca are of little value.

Fill in all requested information, using one line per sample. Use additional forms for more than 5 samples.

Lab Use Only	Sample ID	County	Crop Code(s) (See back of form)	Estimated Acreage	Cost of Test A (Circle appropriate amount.)	Cost of Test B (Circle appropriate amount.)	Micro- elements
					\$5	\$7	\$5
					\$5	\$7	\$5

Remember: Choose either Test A or B for each sample.



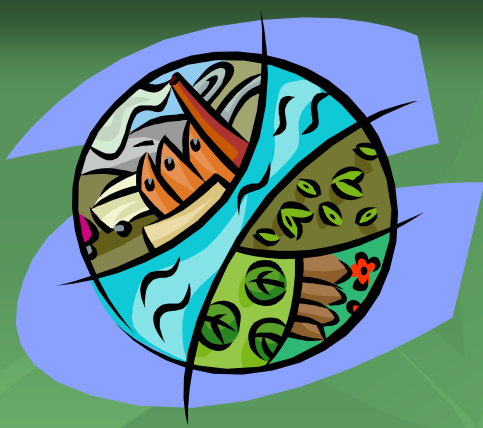
Soil Amendments

Organic matter-

- ❧ Compost
- ❧ Coffee grounds
- ❧ Rotted leaves
- ❧ Grass clippings
- ❧ Horse manure or cow manure
- ❧ Fine mulch



Add complete fertilizer right at planting time (4-6-8 or 6-6-6)



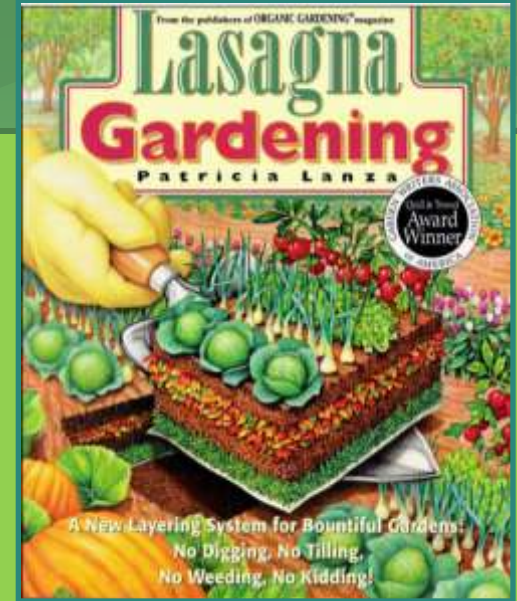
Organic Gardening

- ❧ No synthetic chemicals (pesticides and fertilizers)
- ❧ Soil building
- ❧ Nature's way
- ❧ Environmentally safe

- Composting
- Mulching
- Animal manures
- Green manures
- Crop rotation
- Home remedies
- Natural predators
- Resistant varieties
- Certified Organic pesticides (OMRI)

Lasagna Gardening

- No dig – no till gardening
- Layering organic materials on top of the ground
- Sheet composting
 - Cardboard or newspapers on top of existing soil, grass, weeds, etc.
 - Layer browns and greens
 - Wet down each layer



Lasagna Gardening

Green (Nitrogen)

- Vegetable scraps
- Fruit scraps
- Coffee grounds
- Seaweed
- General garden waste
- Aged chicken manure
- Fresh weeds (no seeds)

Brown (Carbon)

- Leaves (shredded best)
- Straw or Hay
- Nut shells
- Egg shells (wash & crush)
- Newspaper (black & white)
- Tea leaves
- Saw dust/wood ashes
(use sparingly)

Lasagna Gardening

Don't Add

- Meat & Bones
- Poultry & Fish
- Fatty Food Waste
- Whole Eggs
- Dairy Products
- Human & Pet Feces
- Pernicious Weeds
- Pressure Treated Wood

Final Layer – Compost or manure.

Repeat steps 2-5 until your lasagna garden is about 2 feet deep.

Layer 5 – Your “brown” layer, shredded leaves, hay, shredded newspaper, and other similar material

Layer 4 – Your “green” layer, peat moss, manure, vegetable scraps, and/or lawn/garden clippings

Layer 3 – Your “brown” layer, shredded leaves, hay, shredded newspaper, and other similar material

Layer 2 – Your “green” layer, peat moss, manure, vegetable scraps, and/or lawn/garden clippings

Layer 1 – Cardboard or several layers of newspaper that have been soaked in water.

Raised Beds

Construction

- ✧ Approximately 4 feet wide
- ✧ 5-8 feet long
- ✧ At least 10-12 inch high
- ✧ 24 inches high for wheelchairs
- ✧ Materials variable
- ✧ Fill with soil or potting medium & amendments or Lasagna layers
- ✧ Collect soil for pH



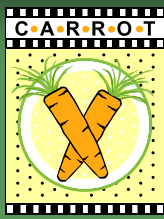
Container Gardening

- ✧ Pots and cans
- ✧ Buckets and baskets
- ✧ Styrofoam ice chests
- ✧ Plastic bags
- ✧ Barrels and drums
- ✧ Earth boxes
- ✧ Up-side-down tomato planter



Common Containers





Garden Design

Garden Planning - Crop Arrangement

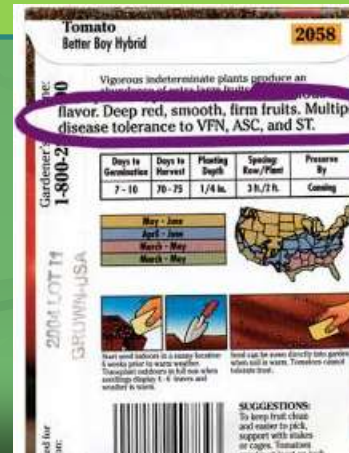
- ✂ Group by family (for crop rotation)
- ✂ By planting/maturation dates
- ✂ Inter-planting
- ✂ By plant size (tall, medium, short)
- ✂ Similar spacing (ex: diff beans/same row)
- ✂ Herbs and long season crops together

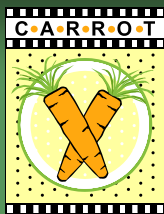


Choosing What to Plant

Considerations

- Time of year (consult FL Gardening Guide)
- Space available (might need dwarf plants)
- What do you like to eat
- Time to maturity
- Disease or pest resistant varieties





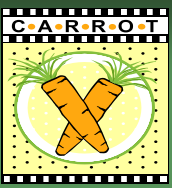
Garden Design

Ways to Maximize Space: Trellis

Tip:

- ✍ Putting the trellis on the north side of a garden minimizes shading of the garden.
- ✍ Peas, Beans, Cucumbers

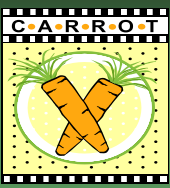




Garden Design

Ways to Maximize Space: Wide Rows





Garden Design

Ways to Maximize Space: Inter-planting



Inter-plant short- and long-season vegetables
Example: Carrots and Radishes



Corn Tips



✂ Corn should always be planted in blocks for good pollination.

✂ Corn requires large amounts of fertilizer and space (1 sq ft/plant)



Companion Planting

- ✧ Compatibility
- ✧ Attracting pollinators & beneficial insects
- ✧ Pest repellency
- ✧ Nitrogen fixation?



Planting Seeds



If your seed is very tiny-

- ✧ Mix seed with builders sand 1:1
- ✧ Make a ¼ inch deep dent in the soil
- ✧ Sprinkle seeds in the row
- ✧ Dust soil on top



If your seed is large like a bean –

- ✧ Make a trench in the soil the size of the seed



A good rule of thumb-

Plant the seed as deep as the seed is big

Planting Transplants & Growing Transplants



Tomato
Peppers
Lettuce
Eggplant
Cucumber
Strawberry
Broccoli
Cabbage
Cauliflower

1. Gently remove seedling - push up on the bottom of the container.

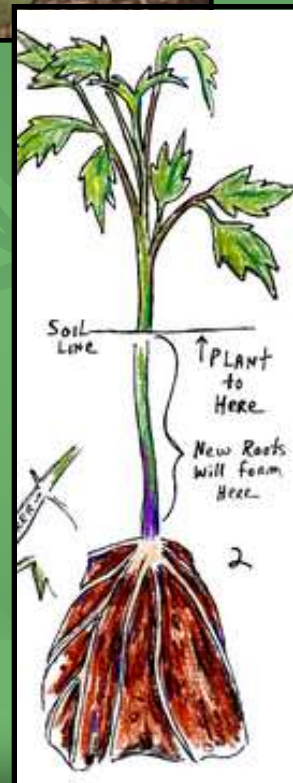
2. Dig the hole a little larger than the ball

3. Place transplant in the soil at the same depth as in the container.

4. Gently fill in with soil & water as you go.



Tip:
**Some transplants can be
planted much deeper-
tomatoes, peppers**



Watering Your Garden

- Water in the mornings everyday for a week
- Second week every other day if the seeds sprouted- if not, continue every day
- Taper off to about every 5 or 6 days
- Consider drip or trickle irrigation
- Reclaimed water is safe for vegetables **only** if you peel them or cook them.

Seeds need constant moisture to germinate



Pests in the Garden

Types of Pests

✧ Insects

- ✧ Piercing/sucking insects
- ✧ Chewing insects
- ✧ Insects in the soil

✧ Animals

- ✧ Birds
- ✧ Deer/Rabbits/Raccoons
- ✧ Rodents
- ✧ Armadillos



Piercing/Sucking Insects



Leafhopper



Whitefly



Aphids



Stinkbug



Leaf-footed bug



Thrips



Spider mites



Control with Insecticidal soap, Neem oil, Fish oil, Sevin , Spinosad

Chewing Insects

Beetles/Weevils



Mexican Bean beetles



Colorado Potato beetle



Cucumber beetles



Flea beetle



Pepper weevil



Caterpillars



Fall Armyworm



Corn Earworm



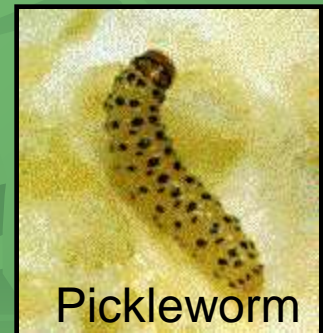
Cut worm



Tomato hornworm



Cabbage looper



Pickleworm

Control with *Bacillus thuringiensis* (Bt), Spinosad, Sevin

Soil Borne Pests



Cutworm



Wireworm



Sweet Potato weevil



White Grub



Lesser Cornstalk borer



Root-knot nematodes

Control with crop rotation/
Summer soil solarization



Slug

Control with Iron Phosphate granules

Control with *Bacillus thuringiensis* (Bt), Spinosad, Sevin

Nematodes



Strategies

Crop rotation

- ⌘ Group crops by family
- ⌘ Move to different location each year

Heavy applications of Organic Soil Amendments

- ⌘ Improved conditions of fertility and water holding capacity

Solarization

Red plastic mulch

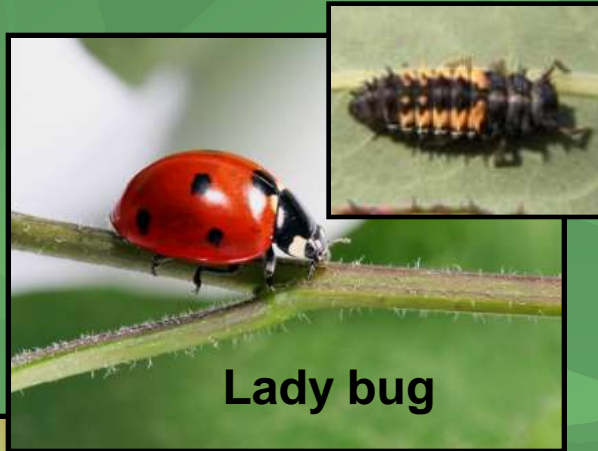
Grow Marigolds during Summer

- ⌘ Suppress buildup in the soil

Beneficial Insects



Parasitic wasp



Lady bug



Green Lynx spider



Honey Bee



Lace wing



Praying Mantis



Wasp



Dragonfly

Diseases of Vegetables



Damping off Fungus



Early Blight



Late Blight



Powdery mildew ↑ ↓



Rust



Blossom End Rot



Tomato Yellow Leaf Curl Virus

Control Fungal Diseases with Neem Oil rotated with Copper Fungicide

Pest Control

- ❧ Not necessary to eliminate all pests
- ❧ Management is the key
- ❧ Scouting
 - Look for pests at least weekly
- ❧ Use least toxic methods first
- ❧ Read chemical pesticide labels carefully
 - Follow directions to the letter – it's the law!

Fertilizing Your Plants

**4-6-8 or 6-6-6- Organic fertilizers
preserve beneficial soil microbes**

Broadcast over whole garden prior to planting

When the plants get 6 inches tall -

- Band one side of the row of plants about 3 inches away from stem
- 3 weeks later band the other side
- Single plants - band in a circle



DO YOU ALSO
EAT THESE
WITH THAT
MASK ON?!



?

?

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Questions

? ?



The background of the slide is a solid green color with a faint, stylized pattern of large, overlapping leaves. The leaves are rendered in a lighter shade of green, creating a subtle texture. The overall aesthetic is clean and nature-themed.

Winter Annuals

Great for Planting Among Veggies

Winter Annuals

Like spring in the north!

<u>Popular Winter Annuals</u>	<u>Plant</u>	<u>Remove</u>
Pansies	Nov. - Feb.	May
Nasturtium	Nov. – Jan.	June
Snapdragons	Nov. – Feb.	May
Petunia	Nov. – Feb.	June
Geranium	Oct. – Feb.	June
New Guinea Impatiens	Oct. – Feb.	June
Calendula	Nov. – Feb.	June
Foxglove	Nov. – Dec.	May
Alyssum	Feb. – Mar.	May
Carnation	Nov. – Feb.	May
Ornamental Kale	Nov. – Feb.	May
Dianthus	Jan. – Feb.	June

* Pansies, Nasturtium, Calendula and Petunia flowers are edible and add color to a salad.

Winter Annuals

Growing Tips

- Prepare bed – or plant among the veggies
- Fertilize with a slow-release fertilizer once established –then again 1-2 months later
- Mulch
- Deadhead flower heads for extended blooming
- Scout weekly for early signs of pest insects
- Water early in the morning to avoid diseases
- Hand pull any weeds

