

Vegetable Gardening in Florida

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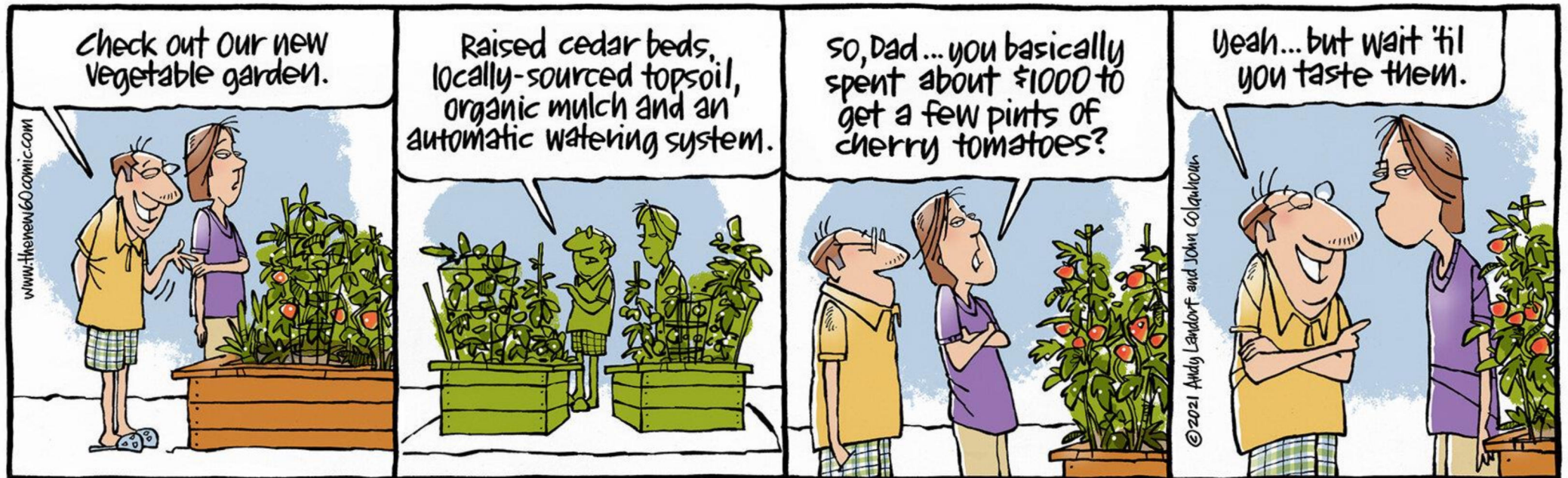
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The New 60



Objectives for Today

- Discuss factors required for a successful garden
- Understand why soil pH matters and how to test/amend soil pH, as needed
- Identify crops to grow in spring in central Florida
- Manage pests responsibly
- Determine good bugs vs. bad bugs

- Take these and apply them in the garden! 😊

Why Grow Your Own Produce?

Fresher food

Tastes better

Grow what you like

Save money

Control what's being put on the crop

Harvest at various stages and different parts of the crop

Grow items you can't find in stores

Promotes healthier eating

Improves emotional wellbeing

Teaches a sense of responsibility

Reduces danger of food contamination

Starting a Garden – Site Selection

- Full Sun
- Near Water Source
- Convenient
- Level Ground
- Manageable Size



Plan your Garden

- Determine what you will grow
- Draw a garden plan that includes name, location, and planting dates of vegetables
- What plants should be transplanted vs. direct sowing?

Florida Vegetable Gardening Guide¹

Sydney Park Brown, Danielle Treadwell, J. M. Stephens, and Susan Webb²

Vegetable gardening offers fresh air, sunshine, exercise, enjoyment, mental therapy, nutritious fresh vegetables, and economic savings, as well as many other benefits (Figure 1). Vegetables can be grown year-round in Florida if attention is paid to the appropriate planting dates (Table 1). Planting times are also available on any device from <https://floridafresh.ifas.ufl.edu>. To use, simply enter your zip code and a list of vegetables is generated for the time of year and your location in the state.

While this guide provides recommendations primarily for traditional home gardens, the information may be useful in other situations, such as community gardens, market gardens, and unconventional approaches like container and raised bed gardens (see EDIS publication ENH1211, *Gardening in Raised Beds* [<https://edis.ifas.ufl.edu/ep472>]).

Steps in Gardening

Site

For convenience, locate the garden near the house on a well-drained site close to a source of water and in a location that receives at least six hours of direct sunlight daily. With proper care, vegetables may also be included in the landscape among ornamental plants. Coastal sites are also suitable. Where possible, rotate the garden from place to place to help control soil diseases and other pests.



Figure 1.
Credit: kazoka30/iStock/Thinkstock.com

Plan

Before planting, draw a garden plan that includes the name, location, and planting date(s) of the vegetables you want to grow. Use the planting guide (Table 1) to develop your plan. Make a list of supplies and order or purchase seeds early if you intend to grow your own transplants. The planting guide lists which vegetable seedlings transplant easily and which do not. Vegetables that are difficult to transplant should be seeded directly into the garden or started in containers first.

1. This document is SP 103, one of a series of the Horticultural Sciences Department, UF/IFAS Extension. Original publication date December 1999. Revised October 2015, January 2016, May 2018, September 2020, and September 2021. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.

2. Sydney Park Brown, associate professor emerita, Environmental Horticulture Department, and adjunct professor, Center for Landscape Conservation and Ecology; Danielle Treadwell, assistant professor, Horticultural Sciences Department, and organic farming specialist; J. M. Stephens, professor

The Foundation - Soil Preparation

- Prepare soil early – pull weeds, check for pest, fertilize **if needed**
- If using un-composted organics, such as grass clippings, it takes about 6-weeks for green material to breakdown in the soil



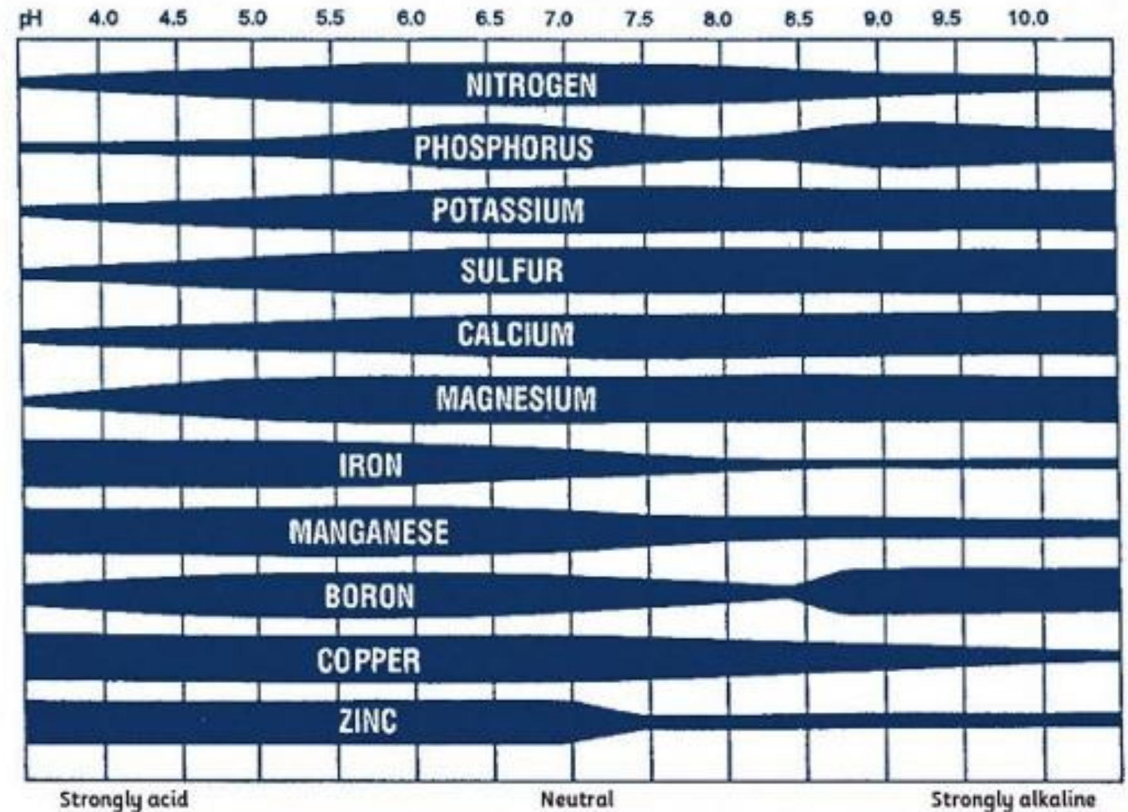
The Foundation - Soil Preparation

- Prior to amending the soil, check what's currently in your soil:
 - UF/IFAS Extension Marion County: \$2/sample (pH only)
 - UF Soil Diagnostic Lab - \$10/sample (pH and nutrient analysis)
 - **Soil Kit** - \$30



Soil pH – Why does it matter?

- Vegetables prefer a general soil pH of 5.5-6.5.
- If pH is too low, most macronutrients cannot be absorbed.
- If pH is too high, most micronutrients cannot be absorbed.



Soil pH Amendments

- Lime – raises soil pH
- Elemental sulfur – lowers pH
- Compost (Organic matter)
 - Increases water holding capacity
 - Provides additional nutrients
 - Will also lower pH
- Composted Manure
 - Improve texture of soil
 - Increase ability to hold water
 - Add nutrients to soil
 - Generally lowers pH

*****NOTE** - Do not add pH amendments until soil pH is checked!



Composting

- **Compost:** A dark crumbly material created when micro-organisms decompose organic matter.
- When composting, remember to keep your compost material balanced between “green” and “brown” composting materials.
- “Green” - Kitchen scraps, farm manure, grass clippings
- “Brown” - Fallen Leaves, twigs, newspaper, tea bags, coffee grounds

Composting

- Place compost bin in a shaded area close to a water source
- Alternate equal layers of “greens” and “browns”
- Lightly water each layer
- No need to purchase Compost Starter
- Turn or mix-up about every 7 days



Mulch

- Helps soil to retain moisture
- Suppress weeds
- Improves soil

- Do not mulch around citrus



Fertilizer

- Balanced fertilizer – equal percentages of Nitrogen (N), Phosphorus (P), and Potassium (K)
 - Follow label instructions for application
 - Do not over fertilize



Irrigation

- There's not “right” frequency in watering
- Ideally ½-1” of water per week
- Water in the mornings, between 7am – 11am
- Directly water plants' root zones
- Avoid wetting the foliage






Planting

- Plan your garden layout
- Rotate crops each season
- Run rows North/South
- Use string to get straight rows
- Check depth between and within row spacing
- Plant seeds or seedlings – make sure to give proper spacing
- Consider using UF/IFAS monthly recommended guides
 - Example on next slide



EDIBLES TO PLANT IN February



	North	Central	South
 EASY TO TRANSPLANT	Arugula, Beets, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Chinese Cabbage, Collards, Eggplant, Endive, Kale, Kohlrabi, Lettuce, Peppers, Swiss Chard, Tomatillo, Tomatoes	Arugula, Beets, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Chinese Cabbage, Collards, Eggplant, Endive, Ginger, Kale, Kohlrabi, Lettuce, Peppers, Sugarcane, Swiss Chard, Tomatillo, Tomatoes	Arugula, Chinese Cabbage, Eggplant, Endive, Ginger, Kohlrabi, Lettuce, Peppers, Sugarcane, Swiss Chard, Tomatillo, Tomatoes, Tropical Spinaches
 TRANSPLANT WITH CARE	Celery, Mustard, Potatoes, Spinach	Boniato, Celery, Mustard, Pineapple, Potatoes, Spinach, Sweet Potatoes	Amaranth, Calabaza, Celery, Long Squashes, Luffa, Papaya, Passionfruit, Pineapple, Seminole Pumpkin, Spinach, Sweet Potatoes
 USE SEEDS	Cantaloupe, Carrots, Corn, Cucumbers, Onions (bunching), Peas (English), Radish, Squashes, Turnips, Watermelon	Beans (bush, pole, lima), Cantaloupe, Carrots, Corn, Cucumbers, Okra, Onion (bunching), Peas (English, Southern), Radish, Squashes, Turnips, Watermelon	Beans (bush, pole, lima), Cantaloupe, Carrots, Corn, Chayote, Cucumbers, Okra, Onions (bunching), Peas (English, Southern), Radish, Squashes, Watermelon



Plant These Herbs

SPRING

Coriander

Annual, use seeds as needed

Basil

Annual, use leaves as needed

Lemon Balm

Perennial, use leaves as needed

Chives

Perennial, use leaves as needed

Sage

Perennial, use leaves as needed

Dill

Annual, use seedheads as needed



Parsley

Biennial, use leaves as needed

Tarragon

Perennial, use leaves as needed

Lavender

Perennial, use leaves as needed

Oregano

Perennial, use leaves as needed

Thyme

Perennial, use leaves & flowers as needed

Marjoram

Perennial, use leaves as needed

For more information, please visit GardeningSolutions.ifas.ufl.edu

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Gardening SOLUTIONS

An Equal Opportunity Institution

February 2023

Seedling Selection

- Buy from a reputable supplier
- Variety suitable to area
- Insect and disease free
- Healthy roots
- Six-weeks to start your own seedlings



Pest Management – Have a Plan!

- What are some common garden pests?
 - Birds
 - Insects
 - Nematodes
 - Mites
 - Weeds
 - Mammals (including humans)



Pest Management – Have a Plan!

- Less than 0.5% of insects are considered pests.
- Preventative treatment will always be the cheapest and safest way to control pests.
- Keep in mind there will always be pest pressure. One or a few pests does not mean you need to chemically treat.



Integrated Pest Management (IPM)

- Use of a combination of strategies to control pest in the following order:
 - Cultural
 - Mechanical
 - Biological
 - Chemical



Cultural Control

- Altering the environment to deter pest
 - Irrigation cycles/timing
 - Garbage/debris removal
 - Mulching
 - Weeding
 - Soil amendments for drainage
 - Others?



Mechanical Control

- Devices, machines, and other physical methods of pest control
 - Traps, cages
 - Tillage equipment
 - Hand labor
 - Mowers, pruners
 - Bug zappers
 - Sticky cards
 - Others?



Biological Control

- **Ecological** – natural action of parasites, predators, or pathogens to maintain another organism's acceptable population levels.
- **Applied** – Introduction of parasites, predators, or pathogens to maintain another organism's acceptable population levels. Population of bio-control organism cannot maintain itself.



Chemical Control - Pesticides

- Chemical compound that provides control, either through direct kill or suppression of activity/reproduction.
- What is a pesticide?
 - Insecticide
 - Fungicide
 - Herbicide
 - Rodenticide
 - Plant Growth Regulators
 - Nematicide
 - The list goes on...



Chemical Control - Pesticides

- Prior to spraying, accurately identify the pest(s)
- Is the pest population at or reaching uncontrollable levels?
- Are there beneficial insects present?
- Read and abide by the **entire** label!



Pesticide Safety
Checklist



- ✓ Read the label before purchasing
- ✓ Buy only one season's worth
- ✓ Calibrate equipment carefully
- ✓ Plan around weather conditions
- ✓ Locate mixing/loading site away from wells, streams, and lakes
- ✓ Carefully fill tank
- ✓ Empty tank properly
- ✓ Store at proper temperature
- ✓ Always follow the label
- ✓ Don't exceed the label's application rate



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Good Bug or Bad Bug?



Lady Beetle – Good!

Good Bug or Bad Bug?



Leaf Footed Bug – Bad!

Good Bug or Bad Bug?



Tomato Hornworm – Bad!

Good Bug or Bad Bug?



FJ SANTANA

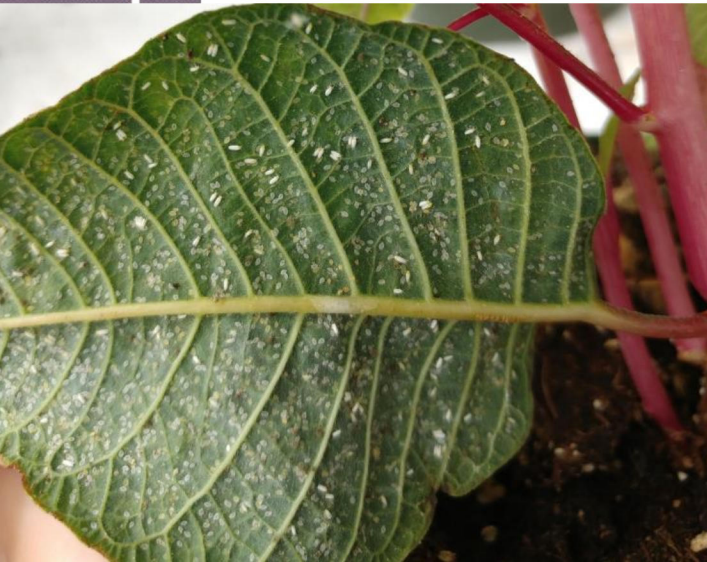
Aphids – Bad!

Good Bug or Bad Bug?



Praying Mantis – Good!

Good Bug or Bad Bug?



Whiteflies – Bad!

Good Bug or Bad Bug?



Lady Beetle Larva – Good!

Good Bug or Bad Bug?



Leafminer – Bad, but essentially harmless.

Good Bug or Bad Bug?



Spider Mites – Bad!

Good Bug or Bad Bug?



Wheel Bug – Good!

Good Bug or Bad Bug?



Paper Wasp – Good!

*Window
Panning*



Thrips – Bad!

Good Bug or Bad Bug?



Lacewing – Good!

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Understanding Soil pH



SoilKit.com



Questions?

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