



GIFT GARDENS
(Gainesville Initiative For Tasty Gardens)
GROWING GUIDE



Successfully growing a vegetable garden is an ongoing process of experimentation, trial and error. Developing proper timing, knowledge of crop habits, an understanding of the soil and organic methods often takes many years of first-hand experience. We hope this guide is a valuable resource to help you get the maximum benefit from your GIFT Garden!

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DIRECTOR'S MESSAGE

Our hope is that this guide may help in the growth of your garden. Your garden, with due care, will be a source of fresh food, joy, exercise and beauty for generations to come. Heartfelt thanks to the people, government entities and businesses helping to make this project possible and take root through donations and support.

So get up, get out, plant some seeds or plants, and, after investing your time and care, enjoy the bounty that your garden will produce. We stand ready and able to furnish information and ongoing assistance.

May you receive a gentle rain when you need it, sunshine when you don't and experience all the benefits and joys from your time in the garden.

Sincerely,



Marty Mesh
Executive Director
Florida Organic Growers

GAINESVILLE INITIATIVE FOR TASTY GARDENS (GIFT GARDENS)

GIFT Gardens recipients receive:

- ∞ Free vegetable seedlings each season for one year after initial garden installation
- ∞ Raised-bed vegetable garden filled with fertile soil
- ∞ Free seeds
- ∞ Free organic fertilizer after the second growing season
- ∞ Ongoing assistance and gardening advice when needed

GIFT Gardens recipients commit to:

- ∞ Plant the gardens each season
- ∞ Maintain the gardens
- ∞ Harvest vegetables
- ∞ Take a follow-up survey in spring
- ∞ Ask FOG or other organic gardening professionals for assistance and advice when needed

If you move from your current location, can no longer maintain your GIFT Garden or wish to have your garden removed, please contact a FOG GIFT Gardens Coordinator at 352.377.6345 to remove your garden and redistribute it to another program participant.

If you have any questions or need on-site assistance with your GIFT Garden, please call FOG at 352.377.6345 or e-mail fog@foginfo.org.

*“There can be no other occupation like gardening in which, if you were to creep up behind someone at their work, you would find them smiling.”
- Mirabel Osler*

“A garden is never so good as it will be next year.” - Thomas Cooper

“No occupation is so delightful to me as the culture of the earth, and no culture comparable to that of the garden. But though an old man, I am but a young gardener.” - Thomas Jefferson

ABOUT GIFT GARDENS

- ☞ Each raised bed should last for at least 10 years.
- ☞ Our fertile soil mix comes from Soil Enrichment Products (Custom Compost) in Alachua. Each raised bed contains 1 cubic yard of soil mix. The soil mix may include compost, cow manure, worm castings, sand and clay.
- ☞ The cardboard that lines the bottom of the raised-beds will choke out weeds for at least six months after installation. The cardboard will eventually break down in the soil with the help of worms leaving a loamy substrate that plants will favor.
- ☞ Vegetable starts are grown by high school students in Loften High School's Magnet Academy of Agricultural Science and Environmental Resources. Vegetable starts are grown with disease resistant and high quality seed varieties to organic standards.
- ☞ Seeds are donated by Southern Exposure Seed Exchange, High Mowing Organic Seeds and National Gardening Association. Thanks to Nature Safe for generously donating fertilizer.
- ☞ We would like to thank GIFT Gardens Sponsors and Funders including: City of Gainesville Community Development Block Grant, Alachua County Community Agency Partnership Program, NALITH Foundation, Newman's Own and a generous private donor. A special thanks to Loften High School for providing the program with free storage!



ADVANTAGES OF RAISED BEDS

Soil Control – Raised-bed gardeners have control over soil mix and fertility. Growing plants in raised beds is a logical choice for gardeners with poor and degraded soils.

Little Soil Compaction – Raised beds offer oxygen more readily to plant roots, retain more water and are easier to plant, weed and maintain. Soil compaction is minimized because you do not walk on the garden.

Better Drainage – Raised beds permit plant roots to develop in soils that are prone to flooding or compaction. This provides a more optimum soil environment for root growth.

Higher Yields – Intensive planting in raised beds means more plants can be grown in a smaller area than with conventional row-cropping techniques.

Expanded Growing Season – Better drainage speeds soil warming and allows earlier spring planting. In wet seasons, soil dries out faster, permitting planting to proceed between rains.

Easy Maintenance – Because plants are growing above the level of walkways, less stooping is required for weeding, watering and other chores. Intensively planted raised beds provide dense foliage cover, shading out much weed growth.

Garden on Difficult Sites – Raised beds make gardening possible on sites where growing plants would otherwise be impossible.

Eliminates Wasted Nutrients – No need to add compost, manure or fertilizer to the entire garden site, just the raised-bed growing areas.

Easy to move – Raised-bed frames are built so that they can easily be picked up and moved around the yard or to new sites.

Conserve Water – You only have to water the actual garden itself, no water is wasted on the exterior.

Easy Reaching – The design allows for easy reaching so there is no need to strain or stretch to tend the garden.

HUMAN NUTRITION AND GARDENING

Let food be thy medicine and medicine be thy food
-Hippocrates

Fruits, vegetables and whole foods are better for your health than processed foods. Processed or refined foods, such as white flour used in bread, pastry and pasta, often lack essential vitamins, minerals, fiber, precious oils and other components that support full immune function.

Missing nutrients are extracted from the bones, tissues and nerves as a result of consuming refined foods. Unbalanced food consumption may lead to cravings, addictions, emotional turmoil and diseases like diabetes, cancer, heart disease and arthritis.

Food and agricultural traditions from around the world can inspire us with an amazing variety of wholesome foods that can be grown for needed nourishment.

Foods that can be grown in North Central Florida for their nourishing and healing properties:

- ∞ **Blueberry:** Medicinal for the blood and liver, bittersweet blueberries are a cooling food, support eye function and have bacteria-fighting capabilities effective in countering urinary-tract infections. Blueberries are an excellent source of vitamin C and manganese and a good source of vitamin A. Blueberry leaves effectively lower high blood sugar in adult-onset diabetes.
- ∞ **Carrot:** Carrots support the lungs, pancreas and liver, and tonify the kidneys. They support the elimination of waste, preventing constipation, lowering blood sugar, purifying the blood and treating indigestion. Carrots relieve menstrual pain and premenstrual irritability. They contain B vitamins, phosphorus, iodine, calcium and the phenol coumarin, which helps prevent blood clotting and has anticancer properties.
- ∞ **Collards (and other cabbage family members):** Cabbage family members like collards, kale, mustards, arugula, etc. aid the enzymes that ward off carcinogens and other outside invaders; they also inhibit cancer formation, detoxify carcinogens and protect against colorectal, stomach and respiratory cancers. Most dark, leafy vegetables in this family are exceptional sources of calcium, magnesium, vitamins A and C, and beta carotene; collards contain nearly the same amount of calcium as does milk.

∞ **Winter Squash (pumpkin, acorn, butternut, calabaza, etc.):** Squash is a warming food that is medicinal to the pancreas and stomach; it improves energy circulation. Winter squash is exceptionally high in complex carbohydrates and is medicinal for diabetics and for those with digestive problems. It provides vitamins A and C, potassium, iron, riboflavin and magnesium and is very low in sodium. It is an excellent source of pre-vitamin A and often carotenoids, and therefore has anti-cancer properties. Pumpkin and squash, and especially their seeds, destroy intestinal worms. The seeds of pumpkin and winter squashes are highly nutritious and contain valuable amounts of zinc and omega-3 fatty acids.

Discover the amazing nutritional and medicinal value of the foods you grow—your inspiration for gardening will increase even more! Share knowledge of the healthful properties of home-grown foods with family, friends and neighbors. Children are bombarded with advertisements for processed foods and snacks that can cause health problems in youth and later in life. Young people will benefit their entire lives by learning how to grow and prepare wholesome foods.

PLANNING AND DESIGNING YOUR GARDEN

Interplanting

Growing two or more types of vegetables in the same place at the same time is known as interplanting. Interplanting can help keep insect and disease problems under control. An interplanted garden should take into account: length of each plant's growth period, its growth pattern (tall, short, below or above ground), possible negative effects on other plants, preferred season and light, nutrient and moisture requirements. Interplanting can be accomplished by alternating rows within a bed (plant a row of peppers next to a row of onions), by mixing plants within a row or by distributing various species throughout the bed.

Long-season (slow to mature) plants like carrots and short-season (quick to mature) plants like radishes can be planted at the same time. The radishes are harvested before they begin to crowd the carrots. An example of combining growth patterns is planting smaller plants close to larger plants, radishes at the base of beans or broccoli. Shade tolerant species like lettuce, spinach and celery may be planted in the shadow of taller crops.

Using a Trellis

A trellis will increase your yield per square foot because you can fit more plants into your garden area. Other advantages of using a trellis include:

- ∞ Easier monitoring and control of pests because they are at eye level.
- ∞ Easier harvesting because there is less stooping or bending over.
- ∞ No more waste due to overripe fruits that are hidden under lush growth.
- ∞ Vertical gardens increase accessibility for gardeners with disabilities because they can easily tend and pick from a chair or garden seat.

Plants that could be trained to grow up a trellis include: cucumbers, squash, pumpkins, peas, beans and tomatoes. Plant these seeds and seedlings a few inches away from the trellis. When they are large enough, train the plants to grow up the trellis by wrapping the vine around the twine. The plants will continue to grow up the trellis on their own. Remember that a vertical planting will cast a shadow, so be sure to situate the trellis on the north-facing side of the garden and take advantage of the shade by planting shade-tolerant crops near the vertical ones.

Square Foot Gardening Method

Square foot gardening is an easy method for intensive growing and bountiful harvests in small spaces for beginner or experienced gardeners. To try out this method, on top of each frame place a permanent grid that divides the box into one foot squares. The grid is the unique feature that makes the whole system work so well. To make a square foot grid:

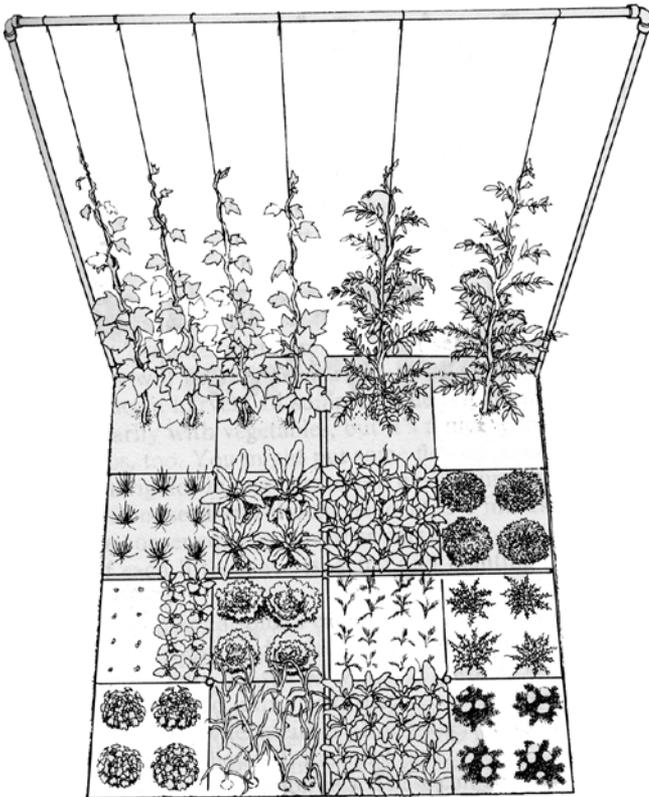
- ∞ On top of the raised bed, measure and mark the entire length and width of the box at 1 foot intervals.
- ∞ Hammer nails at each 1 foot marking.
- ∞ To make the square foot grid, attach string or twine to each nail and make a straight line to the nail across from it.

Depending on the mature size of the plant, grow 1, 4, 9 or 16 equally spaced plants per square foot. If the seed packet recommends plants be spaced 12 inches apart, plant one plant per square foot. If 6 inch spacing is recommended, plant four per square foot. If 4 inch spacing is recommended, plant nine per square foot. If 3 inch spacing is recommended, plant 16 per square foot.

Mix and match crop. The following is a basic guide for planting square-foot gardens. In each 1'x1' square, you can plant:

- | | | |
|----------------------|------------------------|--------------------------|
| 1 Basil | 4 Corn | 8 Peas w/ trellis |
| 8 Beans with trellis | 2 Cucumbers w/ trellis | 16 Radishes |
| 16 Beets | 1 Eggplant | 1 Pepper |
| 1 Broccoli | 4 Garlic | 9 Spinach w/ |
| 1 Cabbage | 4 Kale | 1 or 2 Squash w/ trellis |
| 16 Carrots | 4 Lettuce | 4 Tomato, Bush |
| 1 Cauliflower | 1 Melon | 1 Tomato, Vine |
| 4 Celery | 2 Okra | 1 Watermelon |
| 1 Collard | 16 Onions | 1 Zucchini w/ trellis |

Harvest continually and when a crop in one square is gone, add some new compost and plant a different crop in that square. For more information about square foot gardening, read *Square Foot Gardening Method* by Mel Bartholomew.



rendering courtesy: *Square Foot Gardening Method* by Mel Bartholomew

Succession Planting

Careful planning will allow you to plant a succession of crops in the same space. To obtain a succession of crops, plant something new in spots vacated by spent plants. First, plant crops that mature early. As soon as these have been harvested, pull them up and have a second crop ready to be planted.

Perennial Crops	Crops that occupy the ground only the first part of the season	Crops that occupy the ground the major portion of the season	Crops to be planted in July or later for fall and winter gardens
Chives	Early Beets	Bush and Pole	Bush Beans
Horseradish	Early Cabbage	Beans	Beets
Winter Onions	Lettuce	Lima Beans	Broccoli
	Onion Sets	Cabbage	Chinese Cabbage
	Peas	Celery	Carrots
	Radishes	Sweet Corn	Cauliflower
	Early Spinach	Cucumbers	Endive
	Mustard	Eggplant	Kale
	Turnips	Okra	Kohlrabi
		Peppers	Radishes
		Potatoes	Spinach
		Pumpkin	Turnips
	Squash	Collards	
	Tomatoes	Lettuce	
	Watermelon		
	Swiss Chard		

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Ideas, Tips and Considerations

∞ Grow Some Crops In The Shade

Some crops, like lettuce, grow well in shade. Beans, beets, broccoli, cabbage, kohlrabi, peas, potatoes, rhubarb and turnips will grow in light shade but not produce as large a crop as plants growing in full sun. Light shade is also a good place to grow perennial herbs.

∞ Plant What You Like To Eat

Think about what you (and your family) like to eat and in what amounts when planning what to plant.

∞ **Rotate Crops**

Make sure crops you plant are from a different botanical family than was planted there within the past year. Crop rotation breaks the continuing cycle of pests and disease that may occur when a particular type of plant is put repeatedly in the same spot in the garden. Rotation also helps to vary the nutrient demands on your plots.

∞ **Plant Vine Crops and Taller Plants on North Side of Garden**

This insures larger plants do not shade out smaller plants.

∞ **Use Vertical Space**

A simple, low-tech trellis situated on the north side of your garden will help grow crops like beans, peas, cucumbers and squash using very little space.

∞ **Refurbish Soil and Replant Quickly After Each Harvest**

Be sure to replenish the soil with organic matter each time you replant. When planting vegetable transplants, deposit a handful of compost into each hole. Compost will provide transplants with an extra boost that lasts throughout the growing season. Refer to the sections on Succession Planting and Soil Fertility for more details.

∞ **Plant Frost Hardy Vegetables In Winter**

Some vegetables actually become better after a first frost, including kale, cabbage, parsnips, carrots and brussel sprouts.

∞ **Plant Crops That Repel Pests**

Garlic, chives, onions, coriander and anise will repel aphids and mites. Nasturtium and marigold will repel squash bugs, whiteflies, beetles, nematodes, potato beetles, cabbage moths and armyworms. Check out the book *1001 All-Natural Secrets to a Pest-Free Property* by Dr. Myles H. Bader for other great tips for fighting pests with natural solutions.

∞ **Direct Seed Some Crops**

Plant seeds of crops like carrots, radish, parsnips, beets, beans and peas directly into your garden.

∞ **Companion Plant**

Some plants assist each other to grow well, repel pests and repel weeds while other plant mixes deter healthy growth.

- Plant nasturtiums, onions, garlic and chives next to brassicas (broccoli, cabbage, cauliflower, collards, kale) to repel aphids.
- Brassicas do well with aromatic herbs, potatoes, beets and onions. Never plant brassicas with tomatoes, pole beans or strawberries.
- Beets grow well near bush beans, onions or kohlrabi but are turned off by pole beans and mustard greens.

- Carrots are good to grow with tomatoes, lettuce, chives, onions, leeks, radish, rosemary and sage.
- Tomatoes are good to grow with basil, chives, onions, carrots, parsley, marigold and nasturtium. Tomatoes do not like potato, kohlrabi, fennel or cabbage.
- For more information about companion planting, read *Carrots Love Tomatoes: Secrets of Companion Planting for Successful Gardening* by Louise Riotte.

Perennial vs. Annual

Annual plants are those whose life cycle lasts for only one growing season. Their life cycle begins with the germination of the seed followed by the production of flowers, fruits and seeds. The plant eventually dies after fruits or flowers are harvested. Re-sow the seeds that come from annual plants. Some examples of annual crops include lettuce, broccoli, collard greens, tomatoes and peppers.

Perennial plants will grow and live for more than two years. Perennials grow and bloom, then may die back every autumn and winter and return in the spring from their root-stock. Deciduous perennials shed their leaves seasonally and put on new growth in the spring. Some perennials like rosemary are hardy year round.

Edible Perennial Herbs suitable for our area:

Cranberry Hibiscus	Spearmint and Peppermint	Lemon Verbena
Anise	Tumeric	Tarragon
Lemongrass	Ginger	Oregano
African Blue Basil	Cilantro	Rosemary
Chives	Sage	Stevia
Thyme		

Edible perennial vegetables suitable for our area:

Arrowroot	Okinawa Spinach	Multiplier Onions
Katuk	Sunchoke	Watercress
Chicory	Nopale Cactus	Winged Bean
Chaya or Spinach Tree	Yuca Cassava	Sorrel
Moringa		

Fruiting edible perennial trees suitable for our area:

Mulberry	Pomegranate	Loquat or Japanese Plum
Fig	Low Chill Peaches	Pecan
Avocado (cold tolerant varieties)	Citrus (cold tolerant varieties)	Banana & Plantain (cold tolerant/short season varieties)
Improved Flawoods or Chickasaw Plum	Pinapple & Strawberry Guava	Thornless Blackberry
Muscadine Grape	Black Walnut	

Native edible perennials

In North Central Florida, there are a number of native (wild) fruit and nut bearing trees including wild persimmon, mulberry, blueberry, plums and walnut.



PLANTING

Seedlings

Using vegetable seedlings for your garden can often be more advantageous than direct seeding. The primary advantage is earlier fruit production. Keep in mind that seeds can often be expensive, so it makes sense to use each seed as efficiently as possible. Transplanting seedlings also gives the crops a competitive advantage against weeds. Additional advantages for the use of seedlings:

- ☞ Produce seedlings when you want and in the quantity needed.
- ☞ Control seedling growth and assure high quality, vigorous plants.
- ☞ Many crops, like tomatoes, perform better when planted as a seedling.
- ☞ Keeping your garden space full and busy is very important when practicing home gardening. Transplants fill up a bed faster, which makes for less weeding and more efficient use of water.
- ☞ Spacing plants is easier when you use seedlings.
- ☞ Avoid pests and unwanted pesticides. When planting seedlings, you run the risk of introducing pests to your garden. Many conventional seedlings are also sprayed with chemicals prohibited in organic gardening.

Vegetables to Transplant from Seedlings

Become familiar with vegetables that can be planted as a seedling and those that should be directly seeded.

TABLE 1. Common vegetable seedling for starting a home garden

Broccoli	Chard	Kohlrabi	Squash
Brussels sprouts	Collards	Leek	Tomato
Cabbage	Cucumber	Lettuce	Turnips
Cantaloupe	Endive	Onion	Watermelon
Cauliflower	Eggplant	Mustard	
Celery	Kale	Pepper	

Growing Seedlings

Transplants can be started by using various types of growing containers. Common growing containers include pots, seed trays or a seedbed. The type of container used to sow seeds and grow seedlings can influence the quality of the seedlings, so research the advantages and disadvantages for the various types of containers before purchasing.

The seed tray is one of the most commonly used containers for growing seedlings. Use any small, shallow, wooden or plastic box as a seed tray (3-5" deep, 12" wide, and 18" long) to sow seeds. The seed tray should not be heavy or hard to handle. Make sure the tray has small holes or cracks in the bottom to provide adequate drainage. Plastic seed trays are available in most gardening stores.

Use a multipurpose organic medium or experiment with mixing your own planting mix by combining garden soil, sand and compost to start your seedlings in the seed tray. After filling the seed tray or growing container with soil mix, lightly firm it so it is less likely to become compacted when watered.

Transplanting

Most vegetables are ready to be transplanted into the garden 4-6 weeks after sowing. Make sure to plant seedlings that are strong and free of pests and diseases. If possible, transplant seedlings when the weather is not too hot and the conditions are best (e.g. early morning or late afternoon and before or after rain). Do not compress the soil around the roots when setting the plant into the soil. Gently water around the transplant to settle the soil around the roots.

To successfully transplant vegetable seedlings:

- ☞ Loosen soil in the planting area.
- ☞ Make a hole with a hand trowel or hand-dig. The hole should be about an inch deeper than the length of the plant's roots.
- ☞ Gently squeeze the plant out of the container and pull up by the stem.
- ☞ While holding the plant at the level of the soil, sprinkle soil around its roots until the hole is full.
- ☞ When the hole is filled with soil, press the soil lightly around the base of the soil.

TABLE 2. Guidelines for starting and transplanting vegetable seedlings

Crop	Days to Germination	Days to Transplant (Weeks)
Broccoli	2	35 (5 wks)
Cabbage	3	35 (5 wks)
Cauliflower	3	35 (5 wks)
Cucumber	2	15 (3 wks)
Eggplant	5-6	42 (6 wks)
Lettuce	3-4	21 (3 wks- 4 wks)
Onion	4-8	56 (8 wks)
Pepper	5-7	49 (7 wks)
Squash	2	15 (3 wks)
Tomato	3-5	42 (6 wks)
Watermelon	2-4	28 (4-5 wks)

Direct Seeding

These crops thrive best when seeded directly into gardens following the guidelines on seed packets: carrot, beet, radish, parsnip, corn, zucchini squash, peas, beans, potatoes, sweet potatoes, watermelon and melon.

Planting Schedule

Obtain information about the needs of the crops being grown when planning a garden. Vegetables require adequate light, space, watering and nutrients. Most vegetables crops grow best during certain times of the year. Tables 3 and 4 provide guidelines about when to plant common cool and warm season vegetables in North Central Florida.

TABLE 3. Planting and Harvesting Guide for Cool Season Vegetables in North Central Florida

Crop	Planting Dates	Days to Harvest
Beets	Oct-Mar	50-65
Broccoli	Aug-Jan	60-90
Cabbage	Sep-Jan	70-100
Carrots	Oct-Mar	65-80
Cauliflower	Oct-Jan	60-90
Collards	Aug-Mar	70-90
Kale	Oct-Feb	
Lettuce	Sep-Mar	40-90
Onions	Sep-Dec	110-150
Potatoes	Jan-Feb	85-110
Spinach	Oct-Nov	45-60
Strawberries	Oct-Nov	90-100

TABLE 4. Planting and Harvesting Guide for Warm Season Vegetables in North Central Florida

Crop	Planting Dates	Days to Harvest
Beans	Feb-Apr	50-60
Cantaloupes	Mar-Apr	65-90
Corn	Feb-Mar	60-95
Cucumbers	Feb-Mar	40-65
Eggplant	Jan-Mar	75-100
Okra	Mar-Aug	50-75
Peppers	Jan-Mar	70-90
Pumpkin	Feb-Mar/Aug	80-100
Squash	Feb-Mar	35-55
Sweet Potatoes	Feb-Jun	120-140
Tomatoes	Jan-Mar	75-100
Watermelon (Small)	Jan-Mar	80-90

Crop Rotation

Vegetables often tend to be associated with specific weeds, pests and diseases. One way to give your vegetables a better chance of competing against weeds, pests and diseases is to use a crop rotation plan. Avoid planting the same crop families in the same location every season. Vegetable families generally share the same pest problems. Table 4 provides examples of different crop families.

TABLE 4. Vegetable Families

Beetroot family	Cucurbit family	Brassicas
Beetroot	Cucumber	Broccoli
Spinach	Melon	Brussel Sprouts
Swiss Chard	Pumpkin	Cabbage
Spinach Beet	Squash	Cauliflower
Solanaceae family	Leguminosae (Fabaceae)	Collards
Pepper	Broad Bean	Kale
Potato	Snap beans	Kohlrabi
Tomato	Pea	Mustard
Eggplant		Radish
Apiaceae (carrot) family	Onion family	Turnip
Carrot	Garlic	
Celery	Leek	
Fennel	Onion	
Parsley	Shallot	

Individual Crop Needs for North Central Florida

FALL, WINTER AND SPRING CROPS

Lettuce

Planting Dates: September-March

Spacing: 8-12 inches between plants

Planting Depth for Seeds: 1/2 inch

Hardiness: Tolerant of frosts and light freezes up to 20 degrees F.

Sun/Shade Requirements: Prefers part-shade; avoid full blast of sun in the middle of the day, which will cause lettuce to bolt.

Companion Plants: Carrot, Radish, Strawberry, Cucumber, Carrots, Celery, Onions.

Harvest: Harvest leaf lettuce by cutting the individual leaves when needed or harvest whole head when plant reaches maturity. Lettuce plants reach full maturity within 40-90 days.

Major Pests: Aphids, Green Loopers, Leafhopper, Snails, Slugs.

Recommended Plants per Person: 12

Considerations: Lettuce varieties may be seeded directly into your garden and thinned, but for best results use seedlings at recommended spacing. Lettuce may turn bitter and/or bolt if left in the ground past maturity or if weather is too hot or dry. Good crop for intensive planting – baby lettuce is highly desirable, tender and delicious!

Broccoli

Planting Dates: August-January

Spacing: 12-18 inches between plants

Planting Depth for Seeds: 1/2 - 1 inch

Hardiness: Tolerant of cold weather up to 25 degrees F, but not severe freezes.

Sun/Shade Requirements: Full to part sun

Companion Plants: Beets, Aromatic Plants (dill, sage, rosemary), Onions, Oregano, Potatoes.

Anti-Companions: Pole Beans, Strawberries, Tomatoes.

Harvest: Usually 60-90 days; cut large flower heads from tops of plants before green buds open to yellow blooms. Allow plants to continue growing and side shoots will develop into small heads.

Major Pests: Catipillars, Aphids

Recommended Plants per Person: 3-5

Considerations: Broccoli does not tolerate hot weather.

Kale

Planting Dates: October-February

Spacing: 8-16 inches between plants

Planting Depth for Seeds: 1/4 - 1/2 inch

Hardiness: Tolerant of frosts and light-medium freezes

Sun/Shade Requirements: part-full sun

Companion Plants: Beets, Aromatic Plants (dill, sage, rosemary), Onions, Oregano, Potatoes.

Harvest: Ready to harvest when leaves reach usable size, usually 50-60 days; can harvest or thin baby kale as needed.

Major Pests: Caterpillars, Cutworms, Aphids

Recommended Plants per Person: 10-12

Considerations: Good crop for intensive planting

Collards

Planting Dates: August-March

Spacing: 10-18 inches between plants

Planting Depth for Seeds: 1/2 - 1 inch

Hardiness: Tolerant of frost and light-to-medium freezes up to 18 degrees F.

Sun/Shade Requirements: Full sun or part shade

Companion Plants: Basil, Bean, Cucumber, Dill, Garlic, Hyssop, Lettuce, Marigold, Mint, Nasturtium, Onion, Potatoes, Radish, Rosemary, Sage, Thyme

Anti-companions: Grapes, Rue, Tansy

Harvest: Usually 70-90 days; harvest leaves when they are up to 10 inches long, dark green and still young. Old leaves may be tough or stringy. Pick the lower leaves first, working your way up the plant.

Major Pests: Caterpillars, Aphids

Recommended Plants per Person: 8-10

Considerations: Flavor greatly improves after a period of cold weather

Chard

Planting Dates: October-March

Spacing: 4-5 inches between plants

Planting Depth for Seeds: 1/2 - 1 inch

Hardiness: Survives light frost; will bolt in freezing temperatures

Sun/Shade Requirements: Prefers full sun early/part shade when it's warm

Companion Plants: Bean, Onion, Cabbage family, French marigold

Harvest: Begin harvesting when leaves reach usable size (8-12 inches long.) Remove a leaf or two from each plant, or cut plants an inch or two above the soil for cut-and-come-again harvest.

Major Pests: Leaf Miners, Aphids

Recommended Plants per Person: 8-10

Considerations: As plants age, older leaves get tough. Cut plants back to about 3-5 inches tall to encourage a flush of new, tender growth.

Cabbage

Planting Dates: September-January

Spacing: 8-12 inches between plants

Planting Depth for Seeds: 1/2 - 1 inch

Hardiness: Tolerant of frosts and light freezes up to

Sun/Shade Requirements: Full sun

Companion Plants: Strong-scented Herbs, Basil, Beets, Beans, Chamomile, Celery, Chard, Dill, Garlic, Hyssop, Larkspur, Lettuce, Marigold, Mint, Nasturtium, Onion, Rosemary, Sage, Spinach, Thyme, Tomato

Anti-Companions: Strawberry, Grapes, Rue

Harvest: Usually 70-100 days

Major Pests: Caterpillars

Recommended Plants per Person: 6-10

Cauliflower

Planting Dates: October-January

Spacing: 18-24 inches between plants

Planting Depth for Seeds: 1/2 - 1 inch

Hardiness: Tolerant of frosts

Sun/Shade Requirements: Requires Full Sun

Companion Plants: Basil, Bean, Garlic, Hyssop, Lettuce, Marigold, Mint, Onion, Rosemary, Sage, Thyme

Anti-Companions: Grapes, Rue

Harvest: Usually 60-90 days; cauliflower forms a head in the center of the plant. Cut when compact and pure white.

Major Pests: Caterpillars, Cutworms, Cabbage Loopers, Aphids

Recommended Plants per Person: 4-6

Considerations: Even moisture supply is needed for transplants to become established and to produce good heads. Flavor improves and becomes sweeter with cooler temperatures. Excessive heat can damage the quality of cauliflower.

Onion

Planting Dates: September-December

Spacing: 4-6 inches between plants

Planting Depth for Seeds: 1/2 inch

Hardiness: Tolerant of frosts and light freezes

Sun/Shade Requirements: Full Sun

Companion Plants: Beets, Broccoli, Brussels Sprouts, Cabbage, Carrot, Cauliflower, Celery, Chamomile, Collard, Cucumber, Dill, Kale, Lettuce, Pepper, Potato, Radish, Rose, Savory, Squash, Strawberry, Tomato. Repels cabbage moth, aphids, weevils, carrot flies, spider mites, moles and some nematodes in soil.

Anti-Companions: Beans, Peas, Rue, Sage

Harvest: Usually 110-150 days; onions can be harvested at any stage.

Harvest young green stems as scallions. Gather mature bulbs in late spring after tops fall over. To dry for storage, spread out bulbs in an airy location away from direct sun.

Major Pests: Thrips, Leaf Spot

Recommended Plants per Person: 15 for eating fresh; 60 for storing

Considerations: Florida onion varieties often do not store well. Keep in a spot with low humidity to extend shelf life. Save extra bulbs to plant in fall.
Variations: Bunching Onions, Leeks, Garlic, Chives, Shallots

Beets

Planting Dates: October-March

Spacing: 3-5 inches between plants

Planting Depth for Seeds: 1/2 - 1 inch

Hardiness: Tolerant of frosts but damaged by freezes.

Sun/Shade Requirements: Full Sun or Part Shade

Companion Plants: Bush Beans, Cabbage family, Lettuce, Onion

Anti-Companions: Pole Beans

Harvest: Usually 50-65 days; Harvest beet greens and prepare like spinach.

Harvest when roots are 1-2 inches in diameter. Beets larger than 3 inches in diameter become woody and tough.

Major Pests: Caterpillars, Stem Rot

Recommended Plants per Person: 20-30

Considerations: Grow beets only from seed. The best color and flavor develop under cool conditions and bright sun. Cover plants with loose hay, leaves, or other mulch when temperatures are expected to drop below 30 degrees F.

Radish

Planting Dates: September-March

Spacing: 1-2 inches between plants

Planting Depth for Seeds: 1/2 - 3/4 inch

Hardiness: Tolerant of frost and light freezes

Sun/Shade Requirements: Full to Part Sun

Companion Plants: English Pea, Lettuce, Cucumber, Beets, Carrots, Spinach, Beans; repels cucumber beetles

Anti-Companions: Hyssop, Cabbage, Cauliflower, Brussels Sprouts, Broccoli, Kohlrabi, Turnips

Harvest: Usually 25-30 days; radishes grow and mature quickly.

Major Pests: Aphids

Recommended Plants per Person: 35-50

Considerations: Grow only from seed. Radishes need consistent moisture throughout development. Radish fruit will become bitter and mealy tasting if soil dries out during their growth. They will become spicy and tough if grown in too much heat with sporadic watering.

Edible Pod Peas (Snap Peas)

Planting Dates: October-February

Spacing: 2-3 inches between plants

Planting Depth for Seeds: 1-2 inches

Hardiness: Tolerant of frosts and light freezes

Sun/Shade Requirements: Full Sun

Companion Plants: Carrots, Cucumbers, Corn, Turnips, Radishes, Beans, Potato, Aromatic Herbs

Anti-Companions: Onions, Garlic, Leek, Shallots

Harvest: Usually 70-90 days after sowing; harvest when pods are filled out and peas inside are full size.

Major Pests: Aphids

Recommended Plants per Person: 60-70

Considerations: Grow from seed and train up a trellis or fence. Snap peas become sweeter as pods fatten. Shelling isn't necessary since pods and peas are eaten together. Flowers are also edible.

Spinach

Planting Dates: October-November

Spacing: 3-5 inches between plants

Planting Depth for Seeds: 3/4 inch

Hardiness: Tolerant of frosts and light freezes

Sun/Shade Requirements: Full sun to part shade

Companion Plants: Cabbage family, Strawberry

Harvest: Usually 45-60 days; begin to harvest when leaves are 3-4 inches. Cut individual leaves for a cut-and-come-again harvest.

Major Pests: Caterpillars

Recommended Plants per Person: 30-40

Considerations: Plant from seed. Will bolt and go to seed quickly if weather is too hot or dry.

Carrot

Planting Dates: October-March

Spacing: 1-3 inches between plants

Planting Depth for Seeds: 1/2 inch

Hardiness: Tolerates frosts and light freezes

Sun/Shade Requirements: Full Sun; tolerates light shade, but won't produce as well.

Companion Plants: Beans, Chive, Delphinium, Pea, Lettuce, Pepper, Radish, Rosemary, Onion, Sage, Tomato

Anti-Companions: Dill

Harvest: Usually 65-80 days; when about finger size, baby carrots can be thinned and eaten fresh. Harvest remaining crop when roots are less than 1 1/2 inch in diameter. Larger carrots tend to be tough.

Major Pests: Caterpillars, Leaf Hoppers

Recommended Plants per Person: 60-70

Considerations: Grow only from seed. Carrots need deep, well-drained soil to grow best. Carrots will grow sweeter and be less fibrous in soil that remains moist. Carrots need lots of potassium. Lightly sprinkle wood ashes over the planting area before you sow the seeds. This will add the right amount of potassium for you crops. Make sure the carrot roots stay completely covered with soil to prevent green tops and bitter carrots.

Cutting/Leaf Celery

Planting Dates: September-February

Spacing: 9-12 inches between plants

Planting Depth for Seeds: 1/4 - 1/2 inch

Hardiness: Tolerant of frosts and light freezes

Sun/Shade Requirements: Sun to Part Shade

Companion Plants: Bean, Cabbage family, Tomato

Harvest: Cut stalks and leaves as needed in soups, salads and other recipes that call for celery. Cutting (or Leaf) celery will continue to grow until mid-summer.

Major Pests: Caterpillars, Leaf Hoppers

Recommended Plants per Person: 7-9

Considerations: This is a long living variety of celery that is very easy and rewarding to grow in this climate.

SUMMER CROPS

Cucumber

Planting Dates: February-March

Spacing: 12-24 inches between plants

Planting Depth for Seeds: 1-2 inches

Hardiness: Tender, damaged by frost

Sun/Shade Requirements: Full Sun; can tolerate partial shade

Companion Plants: Corn, Beans, Sunflowers, Peas, Beets, Carrots, Dill, Nasturtium.

Anti-Companions: Sage; Avoid planting where onions have been planted

Harvest: Usually 40-65 days; Harvest when fruit is first noticed or anytime before it starts to lose its green color. Remove old large fruit to encourage new fruit growth. Harvest only in morning prior to afternoon sun.

Major Pests: Downy Mildew, Caterpillars, Pickleworms

Recommended Plants per Person: 3-4

Considerations: Direct seeding is advised as cucumbers are difficult to transplant. Vines grow rapidly and need a lot of space to run. Can be trained to run vertically along wire cages and trellis, this allows for straighter more uniform fruit.

Winter Squash

Planting Dates: June-August

Spacing: 36-48 inches between plants

Planting Depth for Seeds: 1-2 inches

Hardiness: Tender, damaged by frost

Sun/Shade Requirements: Full sun

Companion Plants: Corn, Melon, Pumpkin

Harvest: Usually 80-100 days; Harvest Winter squash varieties when

Major Pests: Caterpillars, Downy Mildew, Powdery Mildew, Vine Borers

Recommended Plants per Person: 4-6

Considerations: Varieties that produce well in this region include

Seminole pumpkin, butternut, spaghetti and acorn. These varieties need a lot of space to grow and will spread considerably. Plant on the perimeter of the raised bed and direct their growth outward. Consider trellising or training to grow up a fence.

Summer Squash

Planting Dates: June-August

Spacing: 24-36 inches between plants

Planting Depth for Seeds: 1-2 inches

Hardiness: Tender and damaged by frost

Sun/Shade Requirements: Full Sun

Companion Plants: Corn, Melon, Pumpkin

Harvest: Usually 40-55 days; For sweet harvests, pick zucchini and yellow squash varieties when immature (6-8 inches long). Will lose flavor if allowed to grow too large.

Major Pests: Caterpillars, Powdery Mildew, Vine Borers

Recommended Plants per Person: 4-6

Considerations: Squash blossoms are edible and make a delicious addition to salads, soups and stir-fry dishes.

Okra

Planting Dates: March-July

Spacing: 6-12 inches between plants

Planting Depth for Seeds: 1-2 inches

Hardiness: Tender and damaged by frost

Sun/Shade Requirements: Full Sun

Companion Plants: Sweet Pepper

Harvest: Usually 50-75 days; Harvest when pods are young, at about 3-4 inches, 4-5 days after bloom opens. Pods will quickly become fibrous and tough if left to grow long. The more often okra is harvested, the better it will produce.

Major Pests: Stinkbugs, Caterpillars, Nematodes, Mites

Recommended Plants per Person: 8-12

Considerations: Grow from seed. Soak seed overnight to hasten germination. Prune lanky growth or non-productive plants to 1-2 feet to allow new shoots to form.

Tomato

Planting Dates: March-July

Spacing: 10-24 inches between plants

Hardiness: Tender and damaged by frost

Sun/Shade Requirements: Full sun (at least 7 hours of direct sun)

Companion Plants: Asparagus, Carrot, Celery, Cucumber, Onion, Parsley, Pepper, Marigold, Borage, Chives, Basil

Anti-Companions: Corn, Dill, Kohlrabi, Potatoes

Harvest: Usually 75-100 days; For best flavor, pick when color has fully

developed.

Major Pests: Caterpillars, Hornworms

Recommended Plants per Person: 3-5

Considerations: Transplant seedlings deeply, burying about 75% of the plant all the way up to a few top leaves. Tomatoes are able to develop roots all along their stems. Grow plants upright, staked, or in cages. Keep soil moist, but not wet. Water soil around base of plant and try to minimize watering the foliage. Pinch and remove suckers that develop in the crotch joint of two branches. They won't bear fruit and will take energy away from the rest of the plant.

Pepper

Planting Dates: March-August

Spacing: 12-24 inches between plants

Planting Depth for Seeds: 1/2 inch

Hardiness: Tender and damaged by frost

Sun/Shade Requirements: Full sun

Companion Plants: Carrot, Eggplant, Onion, Tomato

Harvest: Usually 70-100 days; Snap fruit off of plants as needed. Harvest by lifting fruit and snapping it from plant with a twisting motion.

Major Pests: Aphids, Caterpillars, Pepper Weevil

Recommended Plants per Person: 3-5

Considerations: Stake tall plants/ Most sweet green peppers will turn bright red if you leave them on the plant a little longer and the vitamin C is greatly increased once they turn color. Many colored peppers like the purples, browns and yellows will start out green. Most hot peppers are most powerful once they are in full color.

Eggplant

Planting Dates: April-July

Spacing: 12-24 inches between plants

Planting Depth for Seeds: 1/2 inch

Hardiness: Tender and damaged by frost

Sun/Shade Requirements: Full sun

Companion Plants: Bean, Pepper, Marigolds

Harvest: Usually 75-110 days; The ideal time to harvest eggplants are when they reach about 5 to 6 inches in length. A "ready to pick" eggplant is usually glossy in color. Dull-looking, spongy eggplants are often over mature and may contain dark, hard seeds resulting in a less tasty crop. The best way to pick an eggplant is to clip the plant from its stalk with a knife or scissor.

Major Pests: Caterpillars, Spider mites

Recommended Plants per Person: 2-3

Considerations: Eggplants need lots of moisture to grow well.

WATERING

Water is one of the most vital ingredients to successful vegetable gardening. From the moment a seed or transplant is planted, its survival depends on receiving adequate water from either rainfall or irrigation. If the soil dries out too much, the plants will quickly shrivel and die. Water can be adequately delivered to plants using a variety of methods including hand watering, sprinklers, soaker hoses or drip irrigation.

Watering Tips

- ☞ To adequately thrive, all small seeds, seedlings and transplants must receive water daily.
- ☞ Thoroughly saturate soil so water percolates down and soaks root zones.
- ☞ The best time to water is between 6 a.m. and 9 a.m. Do not water in the middle of the day, especially during the hot season.
- ☞ Water when the top 1/2 inch of soil begins to dry out.
- ☞ Check the garden frequently for drooping leaves or other signs of stressed plants.
- ☞ Apply enough water. Avoid just wetting the surface of the soil.
- ☞ Avoid over watering. Do not allow the soil to be continually saturated.
- ☞ Water the soil, not the plant foliage. Wet foliage may lead to disease.
- ☞ Avoid wetting foliage of warm season crops like tomato and squash.
- ☞ Water after fertilizing.
- ☞ Use mulch around plants to protect the soil and stretch time between waterings.
- ☞ If you hand water with a hose or bucket, be sure the pressure is not so high that it disturbs the soil structure or roots. A hose nozzle or sprayer helps to evenly distribute the water over a greater area than just sticking a finger over the end of the hose.

SOIL CARE AND NUTRIENTS

Basic principles of organic soil care:

- ☞ **Keep it covered:** A covering of plants or mulch protects soil structure.
- ☞ **Feeding:** Using soil amendments feeds the soil and helps with structure and overall fertility.
- ☞ **Avoid Overfeeding:** More problems are caused with over fertilizing than under fertilizing. The performance of your plants should be your guide.
- ☞ **Access:** Avoid compacting the soil by walking on it. This restricts air movement and makes it difficult for roots to penetrate.
- ☞ **Don't Over-Dig:** Over digging can destroy vital soil structure.

Importance of Nutrients

Most plants grow by absorbing nutrients from the soil. Certain plants require more or less of certain nutrients to grow and produce well. An ideal soil contains equivalent portions of sand, silt, clay and organic matter. The makeup of a soil (soil texture) and its acidity (pH) determine the extent to which nutrients are available to plants. Soils in Alachua County are generally sandy and low in organic matter. Therefore, they need abundant sources of organic soil amendments and fertilizer to produce vegetables. The best way to maintain or restore the nutrients in your garden's soil is to apply nutrient sources (i.e. fertilizers).

Due to the slow release of nutrients in the fertile soil mix provided to you, your GIFT Garden will produce abundant vegetables in the first and perhaps even the second season with very little soil amendment and fertilization. To maintain soil quality to insure a high yield, it is of utmost importance to continue amending the soil with compost, other soil amendments and organic fertilizer.

Tips to Amending GIFT Gardens Soil

- ☞ The soil will settle over time, so regular additions of organic matter will maintain soil depth in the bed. Using organic compost fertilizer and mulch all year will feed and replenish the soil on an ongoing basis.
- ☞ Top dress soil in beds with organic matter in spring and fall to improve the soil. Use peat moss, manure compost or homemade compost.
- ☞ After harvest, chopped vegetable matter, leaves and grass clippings can be spread over the beds and spaded in 8 to 12 inches deep.

- ☞ Side-dress the crops with organic fertilizer during the growing season based on needs of individual crops. Overfertilizing will lead to poor production.

Types of Organic Fertilizers

Animal manures	Good nutrient source and full of microorganisms. Should be well-aged or composted before applying directly to the garden.
Blood meal	Slow release source of nitrogen plus trace minerals. Apply just before planting and use sparingly.
Fish meal/emulsion	Source of nitrogen, phosphorus, potassium and trace elements. Releases quickly.
Greensand	Rich in potassium and numerous micronutrients. Can be used to loosen clay soils. Apply 5-10 lbs. per 100 square feet.
Shellfish meal	Strong source of calcium (23%), nitrogen, phosphorus and micronutrients. May also be used to inhibit root-knot nematodes.
Rock phosphate	Great for flowering plants and provides a 10-year phosphate reserve.

Source: A Growers Guide to Fertilizer by Eric Vinje, Planet Natural

Choosing the Right Fertilizer

Desired Effect	Fertilizer
Promote large blooms and fruits	Bat guano
Condition soil	Compost Animal manures
Promote sturdy above-ground plant growth	Blood meal Fish emulsion
Promote root growth in transplants and seedlings	Phosphate rock Worm castings Bone meal
Enhance composting process	Alfalfa meal Blood meal
Bind sandy soil	Colloidal rock phosphate
Loosen clay soil	Greensand Coconut coir

Source: A Growers Guide to Fertilizer by Eric Vinje, Planet Natural

Which Vegetables Need the Most Fertilizer?

- ∞ **Light Feeding Vegetables:** bean, beet, carrot, onion, pea, potato, radish, turnip
- ∞ **Heavy Feeding Vegetables:** broccoli, brussel sprouts, cabbage, cauliflower, celery, corn, cucumber, kale, leeks, lettuce, melon, peppers, pumpkin, spinach, squash, tomato

Nutrients from most organic sources are slowly available over time. Therefore, it is wise to apply organic fertilizers well before planting so adequate nutrient amounts will be released while plants need them. It is not easy to get quick corrective action from organic sources when a deficiency occurs. Soil moisture, temperature and pH effect nutrient availability.

Compost

It is crucial that organic gardeners maintain soil fertility by continuously adding and maintaining organic matter. One of the best ways an organic gardener can build and maintain their soil is by making compost from decomposed vegetable food wastes, egg shells, grass clippings, leaves, wood and other natural materials, and adding the finished black, earthy compost to the garden. Compost is a vital element in organic gardening, providing food for plants and living organisms in the soil. Compost has a rich dark texture when mature and resembles dark soil.

The key to making compost is to use appropriate starting materials, primarily vegetative materials such as grass clippings, leaves, coffee grounds, vegetable food scraps and twigs and wood. Egg shells are a good addition to the mixture but meat scraps and animal fats should be avoided unless the compost pile is producing a good deal of heat. Manures from horses, cows and chickens are best added to compost piles that heat up properly, but could also be added in smaller amounts to 'cooler' compost piles, especially if they are given a long time to breakdown and are added to the garden soil with care not to cover the edible parts of vegetables. Sprinkling some soil throughout the different layers of the compost pile is a good way to introduce decomposing organisms like bacteria and fungi into the mixture.

There are numerous methods for making compost and the gardener can experiment to find an approach that works best. Bins or wire cages that can be flipped periodically to mix the materials are sometimes used. The simplest method is to pile the materials on the ground, taking a few minutes to loosen the soil where the pile is to be placed with a digging fork. Compost is finished when it appears dark and rich, and when none of the original starting materials are observed. When compost has a nice earthy smell it is ready to be added to the garden soil, and the gardener ready to start the next compost pile!

Making Homemade Compost Bins from Wooden Pallets

Materials:

4 Square Sturdy Wood Pallets (untreated)

8 10" Wire Strips for tying corners (or Zip Ties)

Hard Rake to level ground

Level

Locate a 4'x4' space where compost box will be placed. Rake location, clearing sticks and obstacles as well as leveling the land where the pallets will touch the ground. Raking toward the center of the 4'x4' space creates a pile of debris that can be left within the created box; the beginnings of the compost. With the edges of the 4'x4' space clear of debris and level, place one pallet on end into position as one side of the box. Have the more heavily boarded side of the pallet on the outside of the box; this looks better and more air will circulate within the box this way. Take a second pallet (same side out) and butt it up to the first pallet. Use the level to get a 90 degree angle and a level top edge. Wrap wire around the corner near the top and near the bottom to hold pallets in place. Repeat with the third and fourth pallets until there is a box with a level top and an appealing outside appearance.

This box will accommodate a lot of debris and is great for yard waste as well as kitchen scraps. Construct two. When the first box is full the second box can be used. While the second box is filling up the first is breaking down. By the time the second box is full the first box should decomposed into great soil. When the compost is ready, clip the wires, drop the sides, pull away the pallets and harvest the compost for use in your garden. The nice thing about this method is that it is passive. No turning or shoveling just waiting.

Source: John Jeavons, How to Grow More Vegetables

WEED CONTROL

Weed control is easy in raised bed gardens. There is no need to use an herbicide to control weeds!

Weed Control Tips:

- ∞ Monitor your garden regularly for weeds and pull them while they are small.
- ∞ Hand pull weeds from loose soil.
- ∞ Excavate and dispose of the entire root of each weed so they do not grow back.
- ∞ Plant each plant close together to reduce the emergence of weeds.
- ∞ Mulch with wood waste or oak leaves to prevent weeds from growing.
- ∞ Plant a cover crop when soil is bare.
- ∞ Use cardboard in pathways to smother weeds and apply mulch.

ORGANIC PEST MANAGEMENT

Avoiding chemical pesticides in your garden is an important step to ensure the health and safety of people, pets and the earth. Pest management in organic gardens is best achieved by creating a fertile, biologically thriving soil; by planting crops that are hardy in our growing environment and resistant to pests and disease; and by mixing a diversity of plants in the garden. Contact Florida Organic Growers and Consumers if you have any questions about pests and possible solutions.

Know Your Pests

Understanding the lifecycle and habits of pests and using smart gardening strategies will prepare you to prevent pest damage before it happens. The following insects are common in Florida during different times of the year:

- ∞ Aphids are yellowish-green tiny insects that can be found clustered on tender plant shoots, generally on the underside of leaves. They stunt a plant's growth by sucking its juices, causing leaves to curl.
- ∞ Spider mites are common pests, very tiny and often white or red. Some have two spots on their back. They generally move fast and when in large numbers build visible webbing. Spider mites can cause discoloration and in extreme cases deform your vegetable leaves.
- ∞ Whiteflies (right) are not always easy to see, because either the adults are constantly flying around the plants or the young "ones" are too tiny and different to easily recognize. Whiteflies are common in tomatoes, squash, melons and other vegetables. They feed by sucking on the leaf juices and can transmit diseases.



Scout for pests

Examine your plants regularly for living insects above and in the soil. Often pest infestation causes discoloration of your leaves. If you see brown/yellow spots on leaves, it might mean that pests have been sucking juices out of them. You can trap insects by placing and or hanging yellow paper plates around your garden. Many pests are attracted to yellow, so by using a sticky yellow surface, you can trap these pests when they attempt to rest on those surfaces. Covering a yellow plate with Vaseline is a good way to trap pests in your garden.

Beneficial insects

Some insects actually eat or control those that feed on your plants. Become familiar with the beneficial insects in the garden. Beneficial insects, just like pests, come in different shapes, colors and sizes. Avoiding pesticide use can increase the likelihood that beneficial insects find safety and help in your garden.

☞ Ladybugs (right) have different forms at different stages of their lives. Ladybugs feed on aphids, whitefly larvae and other soft body pests.

☞ Parasitic wasps are tiny black wasps that attack aphids and are common in many places in Florida. These wasps can lay 100 eggs during their 4-5 day lifespan. A female parasitic wasp will lay one egg per aphid, immobilizing it and eventually killing it. The infected aphids become rigid, brown and unable to move. From the aphids, new wasps will emerge, to continue the cycle. It takes about 14 days for a new wasp to hatch.



☞ Lacewings (right) are generalist predators, because they eat different types of pests including aphids. An individual lacewing can eat between 100 and 600 aphids. Lacewings can control aphids that attack pepper, potato, tomato and eggplant.



Recommendations

- ☞ Know the pests that live in and around your garden.
- ☞ Know your beneficial insects.
- ☞ Weather variations from season to season may cause a particular management practice to be effective one year and ineffective the next. Observe closely and take good notes.

- ∞ Pest and beneficial insects are associated with both perennial and annual crops. Find out what types of crops pests prefer.
- ∞ Inspect weeds adjacent to and in your garden regularly to make sure they do not harbor destructive pests.

Natural Pest Control Tips

- ∞ Handpick and destroy bigger bugs; use a stream of water to wash away tiny bugs from your plant's leaves and stems.
- ∞ Use physical traps and barriers, like cutworm collars and mice traps.
- ∞ Attract pest predators to your garden like ladybugs and those described above. Bats and birds are also effective pest predators and habitat can be created to encourage their presence in the garden.
- ∞ Rotate crops.
- ∞ Companion plant.
- ∞ Identify garden pests and determine that their activity is in fact a problem (some level of pest infestation often does not affect a crop) before trying to find a remedy!

Companion Planting for Pest Control

ants — spearmint, tansy, pennyroyal
 been leaf beetle — onion, turnip, potato
 Codling moth— common oleander
 flea beetle— onion, mint, garlic
 Harlequin bug — turnips, onion, radish
 Japanese beetle — garlic, larkspur, red buckeye
 Mexican bean beetle — potato, garlic, radish, onion
 root-knot nematodes — French marigold
 spider mites — onion, cloves, garlic
 squash bug — marigold, radish
 squash vine borer — cloves, garlic, onion
 stink bug — radish
 tomato hornworm — marigold, sage
 whitefly — marigold, nasturtium

Home Remedies to Discourage Common Garden Pests

Cats: Save your citrus peels, especially orange, and cut it up or run over a pile with the lawnmower. Scatter it around the garden and its edges. Cats thoroughly dislike citrus!

Deer: The best way to keep deer out of a garden is to use a fence that is at least 6 feet high. Deer don't like the smell of fish products, kelp, soap or hot peppers. Any spray made from these products can be used. Just mix the product of choice in water and spray the plants to be protected.

Spider Mites: Natural predatory mites are the best control, so having compost and mulch to encourage beneficial mites will keep the right

balance. Spiders, parasitic wasps, lady bugs and lacewings also feed on red spider mites. Use a soap spray to eradicate these critters. Spray plants weekly until mites are gone, then monthly to stop them from returning.

Whitefly: Windy conditions keep whitefly away temporarily, and also a strong hose down will move them on. Vegetable-based detergent or oil coats their wings and stops them flying, so mix approximately 1-2 teaspoons detergent with a litre (15oz) of water, or a 1/2 cup of inexpensive vegetable oil to a litre of water, with a dash of detergent. Spray on infected plants, including underside of leaves if possible. Whitefly are attracted to yellow. Get some sticky stuff, such as Vaseline, castor oil, natural gum resin or vegetable wax. Tie bright yellow plastic bag bits coated with sticky stuff to stakes, smear a yellow plastic bucket, or paint a nearby board the brightest yellow you can buy. If necessary shake the whitefly off the plants then watch as they land on the yellow traps and get stuck.

Caterpillars: Spray with a molasses blend to discourage moths and grubs on corn, fruit and brassicas (includes broccoli, spinach, cabbage, cauliflower, brussel sprouts, kale, collard greens, pak choi and kohlrabi). Mix a tablespoon of molasses with a litre of hot water. Then add a teaspoon of liquid detergent and put in a spray bottle. Spray the leaves, top and bottom, about once a week. An alternative to the molasses spray is a blend of 1 part vinegar to 3 parts water. Add a teaspoon of liquid detergent and put in a spray bottle. Spray the leaves, top and bottom, to kill off grubs and bugs.

Aphids: Tea brewed from rhubarb leaves poisons smaller critters, such as aphids, mites, white fly, caterpillars, etc. Pour boiling water over crushed rhubarb leaves then soak for several days. Strain, add a good squirt of detergent and dilute enough so it looks like weak tea and spray over pest-infested plants. Repeat every 10 days or so.

Organic Remedies for Garden Pests

Many pests can be removed manually. Caterpillar and other larger pests can easily be removed by hand. If you do not like the idea of touching bugs, wear gloves and carefully picking them off from your plants. Some pests are easily repelled by soapy water applied with a sponge or spray bottle. Try not to apply any pesticides that you can find in local garden stores, even if the label suggests they are organic or natural. Many “safe pesticides” can also kill beneficial insects and bees that live in your garden.

Pest	No-spray Options	Top Product Choices (some of these may be prohibited for organic use)
Aphids	Row covers; beneficial insects including ladybeetles, lacewings and syrphid flies; reflective mulches	Insecticidal soap, diatomaceous earth, horticultural oil
Armyworms	Row covers; beneficial insects including braconids and other small wasps	Bt, spinosad, kaolin clay
Asparagus beetles	Predation by poultry; winter cleanup of debris	Spinosad
Cabbage loopers	Row covers; handpicking; predation by birds	Bt or spinosad
Cabbageworms	Row covers; handpicking; predation by birds	Bt or spinosad
Colorado potato beetles	Resistant varieties; row covers; straw mulch; crop rotation; handpicking	Spinosad
Corn earworms	Resistant corn varieties with tight husk tips; early planting	Bt, spinosad or vegetable oil applied to young ear tips
Corn borers	Good end-of-season cleanup of debris; parasitic wasps	Bt, spinosad (alternating use)
Cucumber beetles	Row covers; handpicking; vacuuming; trapping in yellow pails filled with water or with yellow sticky traps	Kaolin clay
Cutworms	Surface cultivation; weed reduction; rigid collars around seedling stems	Bt, kaolin clay, beneficial nematodes
Fire ants	Check garden weekly for new mounds and treat as needed	Spinosad
Flea beetles	Row covers; reflective mulch	Spinosad
Grasshoppers	Poultry; good fall cleanup to dislodge overwintering eggs	Nosema locustae protozoa, applied to habitat areas in late spring
Japanese beetles	Row covers; handpicking; parasitic wasps	Milky spore, beneficial nematodes
Leafhoppers	Ladybeetles, lacewings and other beneficial insects	Neem, kaolin clay, diatomaceous earth

Mexican bean beetle	Scout twice weekly; handpick adults, eggs and larvae; release beneficial <i>Pediobius</i> wasps	Neem
Spider mites	Encourage beneficial insects; use strong water spray to wash undersides of leaves	Insecticidal soap applied in late afternoon or early evening
Slugs and snails	No evening watering; handpicking; trapping; ground beetles and other natural predators; reduced mulching; clean cultivation	Sand, diatomaceous earth, copper barriers, iron sulfate baits (restricted use in some certified organic operations)
Squash bugs	Row covers; handpicking; trapping under boards at night; growing non-preferred varieties; prompt composting of debris	Neem
Tent caterpillars	Tear nests open with a stick every few days	Late night applications of Bt or spinosad
Thrips	Grow flowers to provide pollen and nectar for beneficial insects; reflective mulches	Kaolin clay, Beauveria fungus, insecticidal soap
Tomato fruitworm (same species as corn earworm)	Encourage beneficial insects and wild birds; handpick	Bt or spinosad
Tomato hornworm	Scout twice weekly starting in early summer; handpick	Bt or spinosad
Whiteflies	Wash off with water; yellow sticky traps; reflective mulches	Neem, insecticidal soap, horticultural oil

Source: Barbara Pleasant, *Guide to Organic Pest Control*

SAVING SEEDS

Saving seed from crops provides an opportunity to capture traits most beneficial for that area's unique conditions (e.g. soil type, climate, insect pests and diseases). It is quite achievable for a grower, by saving seed from vigorous plants with desirable traits, to arrive at a variety that is uniquely adapted to their own backyard. The alternative to saving seed is to purchase seeds grown elsewhere (often in places with vastly different growing conditions), with the likely result that the grower will experience the limitations and frustrations of trying to grow a crop variety not suited to our growing conditions in North Central Florida.

Considerations for home gardeners who wish to save their seeds:

- ∞ Do not save seed from hybrids. Seeds from hybrids will not produce offspring identical to parent plants.
- ∞ The vegetable seeds most easily saved are tomato, pepper, bean, cucumbers and squash.
- ∞ Collect seeds from fully mature, ripe fruit.
- ∞ Tomato seeds have a gelatinous coating. Remove this coating by fermenting it. Squeeze the seeds from a fully ripe fruit into a bowl, add water, and let stand for about three days. Once fermentation occurs, mold will form on the surface of the water. Add more water, stir and then gently scrape mold and debris off the top. Repeat until only clean seed remains, and then strain, rinse and leave the seeds at room temperature until dry.
- ∞ Some vegetables, like peppers, should be fully ripe before you try to collect and save their seeds. For example, mature peppers should be completely red (or yellow or colored) before you extract the seeds. Cut the pepper open, scrape the seeds onto a plate, and let the seeds dry in a shaded place. Leave at room temperature until completely dry.
- ∞ Store most seed in airtight containers (i.e. glass jar).
- ∞ Legumes can be stored in breathable bags.
- ∞ Store your seeds in a cool, dark, dry place, like a refrigerator.
- ∞ Avoid opening the container until you are ready to plant.
- ∞ Stored seeds will retain their viability for different lengths of time. Melon seed can be stored for as long as five years, while sweet corn is only good for one year.

GARDENING TIPS FROM LOCAL FARMERS

“Think outside the box...try new and creative things! Be sure to keep the raised beds mulched when you are not growing anything. Pay attention to crop rotation and time your plantings to manage disease. Plant cut and come again crops and crops with a short-turn around time. For instance, you can plant three different crops of lettuce in the amount of time it may take to harvest broccoli. You can also take leaves of lettuce as needed without having to harvest cut the whole plant” – Joe Durando, Possum Hollow Farm, Alachua

“Don’t just focus on growing the plants, focus on growing the soil... it all begins with healthy soil. Don’t be discouraged and give up! Use diatomaceous earth for fire ants.” – Haley, Comet Farms and Ecological Growth, Worthington Springs

“In North Central Florida, you can grow crops in the shade that normally won’t grow in the hot summer sun.” – Mark, Devi’s Farm, Alachua

“Certain crops like spinach, cabbage, radish and turnips can easily be grown without using pesticides. In Fall, it is more difficult to grow the same crops that you would have better luck growing in Spring because of fungal and pest problems.” – Leo, Arcadian Farms, High Springs

“You can plant your herbs in shadier spots. Rotate which crops you plant in your plots so that pests and nematodes don’t take over.” – Rusty, Dogwood Lane Farm, Branford

“For most anything you grow, you will need fertile, aerated, well-drained soil. Unfortunately people in Gainesville have very sandy soil, so you need all the organic matter you can get into the soil like compost and peat... I like to use oak leaves and pine needles. Leafy greens like to grow in partial shade and tomatoes and peppers in full sun. In the winter you can grow all sorts of northern greens. Oriental radishes are easy to grow.” – Farmer John Steyer, Starke

“Timing, crop rotation and soil preparation are all very important for successful growing.” – Hemchan, Kumarie Organic Garden, Alachua

SEASONAL RECIPES

If you have any delicious recipes from your GIFT Garden harvest, please let us know and we can publish them in the next edition of the GIFT Garden Growing Guide!

FALL HARVEST

Sauteed Kale

(Total Preparation Time: 10 minutes)

- 1 bunch green kale
- 2 tablespoons olive oil
- 4 cloves garlic, sliced
- 1/2 teaspoon kosher salt
- 1/4 teaspoon freshly ground black pepper

Rinse kale and shake off excess water. Stack leaves with all the stems pointed in the same direction, and roll them lengthwise into a tight bundle. With a sharp knife, trim stems and cut bundle crosswise into 1/4-inch ribbons. Greens may be cut in advance and refrigerated until just before serving time. When you are almost ready to serve the greens, put olive oil in a large saucepan over high heat. Add garlic, salt and pepper and then greens. Cook for 1-2 minutes, moving greens quickly around the pan with tongs until they are wilted. Remove from heat and serve at once.

WINTER HARVEST

Scrumptious Creamy Cauliflower Soup (can be vegan)

(Total preparation time: 30 minutes)

- 1 onion
- 3 cloves garlic
- 1 large head of cauliflower
- Thyme
- Bay leaf - optional
- Vegetable (or chicken) stock – optional
- Soy, rice, or cow milk
- Salt and Pepper

Begin by boiling water with soup stock. Chop cauliflower in to small chunks, peel garlic and chop onions. Add cauliflower, garlic, onions and thyme to boiling water and reduce to medium heat. Boil uncovered until the cauliflower is very soft and begins to fall apart. Add milk (soy or rice milk works great), reduce heat to low and continue to simmer for 10 minutes. Add salt and pepper. Either put soup in a blender or mash cauliflower by hand to blend together.

Old Fashioned Coleslaw

(Total Preparation Time: 5-10 minutes)

1 quart finely shredded cabbage
3/4 cup sour cream
1/2 teaspoon dry mustard
2 teaspoon sugar
1/2 teaspoon cider vinegar
salt and pepper to taste.

Blend all ingredients (except the cabbage) and whip for 1/2 a minute to mix thoroughly. Pour over shredded cabbage and toss to mix well.

SPRING HARVEST

Kale, Lettuce, Collard Wraps

The leaves of Dino Kale, lettuce or collards can be substituted for the traditional wheat burrito style wraps, soft taco shells or sandwich wraps. Be creative!

Ethiopian Collards (Ye'abesha Gomen)

(Total Preparation Time: 30 minutes)

1 lb. collard greens
1 cup red onions
4 green peppers
2 cups water
Vegetable Oil
Salt

Wash collard greens and boil in medium pan until soft. Remove from heat, drain, and cut into small pieces. Set aside. Wash green peppers, remove seeds, slice lengthwise and set aside. In the medium pan, cook onions over a low heat until brown adding a little water to prevent sticking and burning. Add oil. Add collard greens and cook until water disappears. Add all the spices and stir gently. Add green pepper slices and cook for 10 minutes. Serve hot or cold.

Cajun Collards

(Total Preparation Time: 20 minutes)

1 large bunch collard greens (about 1 lb) rinsed and chopped
1 yellow onion, diced
2 cloves garlic, diced
4 medium sized tomatoes
3/4 cup vegetable broth
1/2 tsp red pepper flakes
1/2 teaspoon hot sauce
2 tbs olive oil
1/2 tsp garlic powder

salt and pepper, to taste
dash cayenne (optional)

Sautee onions and garlic in olive oil. Add vegetable broth and collard greens and cover. Allow to cook for about 6-8 minutes, until greens are slightly soft. Add remaining ingredients and cook for another 6-8 minutes, until greens are done, stirring occasionally.

Spring Vegetable Sautee

(Total Preparation Time: 30 minutes)

$\frac{3}{4}$ pound new potatoes, cut in half
 $\frac{1}{2}$ pound sugar snap peas, trimmed
2 tablespoons butter
3-4 small spring onions, thinly sliced
2 garlic cloves, minced
 $\frac{1}{2}$ teaspoon freshly grated nutmeg
2-3 tablespoons chopped fresh mint
Salt and Freshly ground black pepper

Place a large pot of salted water over high heat and bring to a boil. Add the potatoes and cook for 20 minutes, or until tender. Add the snap peas during the last 2 minutes of cooking time. Drain. Heat the butter in a large skillet over medium heat. Add the onions and garlic and cook for 5 minutes, or until tender. Add the potatoes, snap peas, nutmeg, and mint. Toss to coat well. Season with salt and pepper to taste.

Radish Salsa

(Total Preparation Time: 10 minutes)

$\frac{1}{2}$ cup finely diced organic radishes
 $\frac{1}{2}$ cup seeded and diced ripe organic plum tomato (1 large tomato)
 $\frac{1}{4}$ cup finely chopped scallions (white parts only)
1 teaspoon minced garlic
2 tablespoon freshly squeezed lime juice
1 teaspoon minced jalapeño or serrano pepper
2 tablespoons roughly chopped cilantro
2 tablespoons olive oil
Salt and freshly ground black pepper

Gently stir all ingredients together in a serving bowl.

Savory Green Bean Soup

(Total Preparation Time: 20 minutes)

1/3 cup chopped green onions, leeks, or yellow onions

1 large clove garlic, peeled

1 tablespoon butter

1 tablespoon olive oil

1 1/2 pounds organic snap or runner beans

2 - 2 1/2 cups organic chicken broth

1 tablespoon minced fresh summer savory or 2 teaspoons minced fresh winter savory

1/4 teaspoon hot pepper sauce, or to taste

Salt and freshly ground black pepper to taste

1/2 cup heavy cream or half and half

Garnish: sprig of savory

In a large saucepot, sauté onions and garlic in butter and oil until wilted and slightly translucent. Add beans, savory, and broth and stir. Cover pan and simmer, stirring occasionally, until beans are just tender. Add hot sauce, salt and pepper, and process soup in the blender in batches. It will still be a bit stringy and have lumpy bits so at this point strain the soup through a colander. Pour the now smooth soup back into the saucepot and bring it to a simmer over low heat. Take off the heat and add the cream. Adjust seasoning if needed. Ladle into soup bowls, and garnish.

SUMMER HARVEST

Wendi's Simple Delicious Eggplant Stirfry (vegan)

(Total preparation time: 25 minutes)

1 large, 2 medium, or 3 small eggplant (preferably long Asian variety)

2 or 3 tablespoons olive oil

garlic

onion

salt and pepper

garden herbs (Rosemary, Basil, Parsley, Oregano, Thyme)

Precook by chopping eggplant into thin round pieces with skin still on (thin cutting is the key to success with this recipe). Chop onion and garlic into small pieces. Prepare herbs by chopping all together. In a large skillet heat olive oil over medium heat. Sautee eggplant and onion for 10 minutes. Add garlic and herbs. Cook until eggplant begins to become translucent and soft. Add salt and pepper to taste.

North African Okra

(Total Preparation Time: 15 minutes)

½ teaspoon cumin seeds

1 tablespoon organic olive oil

7 - 9 okra pods, sliced into ½-inch rounds, stem ends discarded

1 teaspoon tomato paste

1 teaspoon freshly squeezed lemon juice

Salt and freshly ground black pepper

Heat the cumin seeds in a dry skillet over medium heat for 30 seconds or so, until they become fragrant. Then transfer them to a mortar and, when they're cool, grind them up with a pestle. Heat a skillet over medium-high heat, add the olive oil, and when hot add the okra. It only takes a few minutes for the okra to tighten up and acquire a little crunchy browning. Once this happens, add the tomato paste and lemon juice, the ground cumin, and salt and pepper to taste. Reduce the heat to medium-low and continue cooking for another minute or so, stirring occasionally, until the okra is fully tender and coated with the tomato mixture.

Mid-Summer Harvest Pasta Sauce

(Total preparation time: 30 minutes)

6 large tomatoes

1 large onion

4 cloves garlic

1 zucchini

1 eggplant

1 red or green pepper

sprigs of fresh oregano, parsley, basil, thyme and rosemary

1 tbs. olive oil

Salt and Pepper

Precook by cubing tomato, onion, garlic, zucchini, eggplant (thin slices), and chopping herbs into small pieces. Chop basil and keep separate. In a medium saucepan, heat olive oil over medium heat. Sauté onion and eggplant for 10 minutes until onion is translucent and eggplant begins to soften. Lower heat to medium-low and add tomatoes, garlic, zucchini, and herbs (except basil). Bring to a boil, then simmer for another 15-20 minutes. Add chopped basil and salt and pepper at the end.

Early Summer Salsa

(Total preparation time: 10 minutes)

2 large tomatoes or 1 cup small tomatoes

1 small onion or ¼ cup green onion

½ cup cilantro or parsley

1 hot or sweet pepper (optional)

1 lime

Salt and pepper

Chop (or put in blender or food processor) all ingredients except lime.

Squeeze lime into mixture. Add salt and pepper to taste.

Yummy Pesto

(Total preparation time: 5-10 minutes)

1 ½ cup basil

½ cup pine nuts or walnuts

2 medium cloves garlic (or 1 clove if you do not appreciate garlicky food)

¼ cup olive oil

¼ cup parmesan or romano cheese (optional)

Salt and pepper

Put all ingredients in food processor or blender (or chop finely). Eat with pasta, crackers or toast.

Connie's Cucumber Vegetable Salad

(Total preparation time: 10 minutes)

1 cucumber, washed, halved and sliced very thin

1 red onion, halved and sliced very thin

1 yellow bell pepper, halved and sliced very thin

1 cup julienne carrots

2 tomatoes, seeded and diced

salt and pepper

1/2 cup Italian dressing

Place diced tomatoes and cucumber in large bowl. Sprinkle with salt and pepper, then set aside. Prepare remaining vegetables and add to tomato and cucumbers and mix. Pour dressing over vegetables. Salt and pepper to taste. Let set several hours before serving.

LOCAL GARDENING RESOURCES

∞ FREE Compost Bins from Alachua County Department of Waste Alternatives

Alachua County provides up to two free wire compost bins per Alachua County resident, plus kitchen keepers compost buckets and a guide on composting. Residents can pick-up compost bins at the address below.

Alachua County Department of Waste Alternatives
5620 N.W. 120th Lane
Gainesville, FL 32653
352.374.5213, jroller@alachuacounty.us

∞ FREE Mulch from Gainesville Regional Utilities (GRU)

GRU provides large truckloads of free wood chips delivered to GRU customers. The best way to get a quick and fresh delivery is to obtain a Woodchip Recycling Application from GRU workers cutting trees in orange Asplundh fleet trucks and return it to them. For more information, contact GRU at 352.393.1813. Applications can also be found on GRU's website www.gru.com/YourHome/ProductsServices/woodchip.jsp

∞ FREE Bat Guano Fertilizer from University of Florida (UF)

UF provides free bat guano from the bat houses located on campus just north of Lake Alice. Anybody can receive up to two five-gallon buckets of bat guano per trip at the address provided below. You must call first, though!

Raw bat guano is naturally high in phosphorus, nitrogen, trace minerals, organic matter and microbial flora. This is an excellent free resource that you can use as a way to enhance soil and boost harvests in your garden. To use the guano as organic fertilizer in gardens, mix 1 cup per gallon of water and feed soil around established plants.

UF – Environmental Health and Safety Services
Ken Glover
352.392.3410 (CALL FIRST!)

Location: Building 683 of Surge Area Drive off Archer Road at UF
From 441 - Take Archer Road to Surge Drive and go right. When you enter the Surge Area, take the first left and park at Bldg. 683. The bat guano is in a locked area near the building. Remember to bring buckets or containers!

∞ **FREE Coffee Grounds from Local Coffee Shops**

Coffee grounds make an excellent soil amendment for vegetable gardens. They contain a very high content of nitrogen, tannic acids and other nutrients. They also will deter some pests such as slugs and snails. To use coffee grounds in your garden, simply sprinkle the soil around established plants, prepare new soils by mixing in a generous heap or dilute with water for a gentle fast-acting liquid fertilizer. Most coffee shops will gladly give you mass quantities of their coffee waste.

∞ **FREE Gardening Classes and Advice from Alachua County Extension**

In addition to providing the community with excellent online gardening information and resources, the Alachua County Extension office also teaches free monthly gardening classes and offers a Master Gardeners certification for residents who want more intensive horticultural training and to help others in the community with their gardens.

Office Location:
2800 NE 39th Ave.
Gainesville, FL 32609
352.955.2402
alachua@ifas.ufl.edu
<http://alachua.ifas.ufl.edu/>

∞ **INEXPENSIVE Perennial Plants from the Edible Plant Project**

The Edible Plant Project (EPP) is a not-for-profit, volunteer-based group working to promote edible landscaping and local food abundance in North Central Florida. The goal of the EPP is to create positive alternatives to the unsustainable food system in this country. While plants from this non-profit organization are not free, they are low-priced so anybody who wishes to plant edible plants can. EPP holds monthly plant sales at the downtown farmer's market on the first Wednesday of each month. For more information, go to EPP's website: <http://www.meaningfulpursuit.com/edibleplantproject/>

∞ **FREE Advice from Florida Organic Growers!**

Last but certainly not least, Florida Organic Growers will assist you in any way possible as you learn to maintain your garden. Call 352.377.6345 or email fog@foginfo.org with any questions and we'll respond as soon as possible.

FOR FURTHER READING

Alachua County libraries have an excellent selection of books available for more in-depth reading about home vegetable gardening, organic methods, composting, mulching, saving seeds, soil fertility and weed and pest management. Listed below are books recommended for further reading.

Rodale Organic Gardening Solutions: Over 500 Answers to Real Life Questions from Backyard Gardeners. By Cheryl Long and the editors of Organic Gardening Magazine.

Gardening in Small Spaces: How to Make the Most of Every Square Foot. By Marcus Schneck.

The Kitchen Garden: A Practical Guide to Planning and Planting. By Andi Clevely.

Successful Small-Scale Organic Farming: An Organic Approach. By Karl Schwenke.

1001 All-Natural Secrets to a Pest-Free Property. By Dr. Myles H. Bader

Vegetable Gardening in Florida. By James M. Stephens

The Kitchen Garden: Fresh Ideas for Luscious Vegetables, Herbs, Flowers and Fruit. By Norma Coney

Carrots Love Tomatoes: Secrets of Companion Planting for Successful Gardening. By Louise Riotte.

Getting Started in Permaculture: Over 50 DIY Projects for House & Garden Using Recycled Materials. By Ross and Jenny Mars.

The 20-minute Vegetable Gardener: Gourmet Gardening for the Rest of Us. By Tom Christopher and Marty Asher.

The Gardener's A-Z Guide to Growing Organic Food. By Tanya L.K. Denckla

How to Grow More Vegetables Than You Ever Thought Possible. By John Jeavons.

Jeff Ball's 60-Minute Garden: One Hour a Week is All It Takes to Garden Successfully. By Jeff Ball.

1,001 Old-Time Garden Tips: Timeless Bits of Wisdom on How to Grow Everything Organically, from the Good Old Days When Everyone Did. Edited by Roger Yepsen.

Growing and Saving Vegetable Seeds. By Marc Rogers.

The Mulch Book: A Complete Guide For Gardeners. By Stu Campbell.

Weedless Gardening: Introducing a System of Gardening that Protects the Soil, Eliminates Heavy Work, and Reduces Water Needs. By Lee Reich.

Four Season Harvest: Organic Vegetables from Your Home Garden All Year Long. By Eliot Coleman.

The No-Work Garden: Getting the Most Out of Your Garden for the Least Amount of Work. By Bob Flowerdew.

Lasagna Gardening. A New Layering System for Bountiful Gardens: No Digging, No Tilling, No Weeding, No Kidding! By Patricia Lanza.

Gardening for the Future of the Earth: The masters of organic gardening show you how to create natural bounty in your own backyard and help save the planet one seed at a time. By Howard-Yana Shapiro, Ph.D. and John Harrison.

Magic Muck: The Complete Guide to Compost. By Lady Muck.

Let It Rot: The Gardeners Guide to Composting. By Stu Campbell.

Gaia's Garden: A Guide to Home-Scale Permaculture. By Toby Hemenway.

Month-By-Month Gardening in Florida. By Tom McCubbin.

Step-By-Step Gardening Techniques Illustrated. By Elayne Sears.

The Cook's Garden: Growing and Using the Best-Tasting Vegetable Varieties. By Shepherd and Ellen Ogden.

Square-Foot Gardening: A New Way To Garden in Less Space With Less Work. By Mel Bartholomew.

Perennial Vegetables: From Artichoke to 'Zuiki' Taro, A Gardeners Guide to Over 100 Delicious, Easy-to-Grow Edibles. By Eric Toensmeier.

ONLINE RESOURCES

Florida Organic Growers: www.foginfo.org

Save Our Seed: www.savingourseed.org

Gardening Links for Florida Gardeners:
www.donitaworld.com/States/Florida/main.html

Florida Vegetable Gardening Guide: <http://edis.ifas.ufl.edu/VH021>

A Vegetable Gardening Guide for the Organic Grower:
www.vegetablegardeningguru.com/

Square Foot Gardening: www.squarefootgardening.com/

Block-Style Layouts in Raised Bed Vegetable Gardens:
www.cmg.colostate.edu/gardennotes/713.pdf

FLORIDA CERTIFIED ORGANIC GROWERS AND CONSUMERS, INC.

Florida Certified Organic Growers and Consumers, Inc. (FOG) is a not-for-profit, 501(c)(3) organization based in Gainesville since 1989. FOG's mission is to promote organic and sustainable agriculture and healthy and just food systems. Through its education and outreach program, FOG educates producers, consumers, the media, institutions and governments about the benefits of organic and sustainable agriculture. The evaluation and development of public policy is an important part of FOG's education and outreach activities. FOG staff conduct, coordinate and participate in educational events in a diversity of areas relating to organic agriculture at local, national and international venues. GIFT Gardens is part of a larger effort to cultivate healthy community food systems and improve food security for local residents. To meet the demand of a growing organic industry, FOG operates Quality Certification Services (QCS), which provides verification of the organic integrity of organic farming and processing systems, providing agricultural operators a valuable tool for differentiating their products in the marketplace.

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P.O.Box 12311, Gainesville,FL 32604
www.foginfo.org 352.377.6345

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