

EASY

Food

Gardening

Why garden? To make sure the food you eat is fresh and nutritious; to decrease your reliance on an unsustainable system you have little control over; to save money; to learn how to take care of yourself; to appreciate the beauty of life; to connect to the earth; to learn something new; to relax; to be creative.

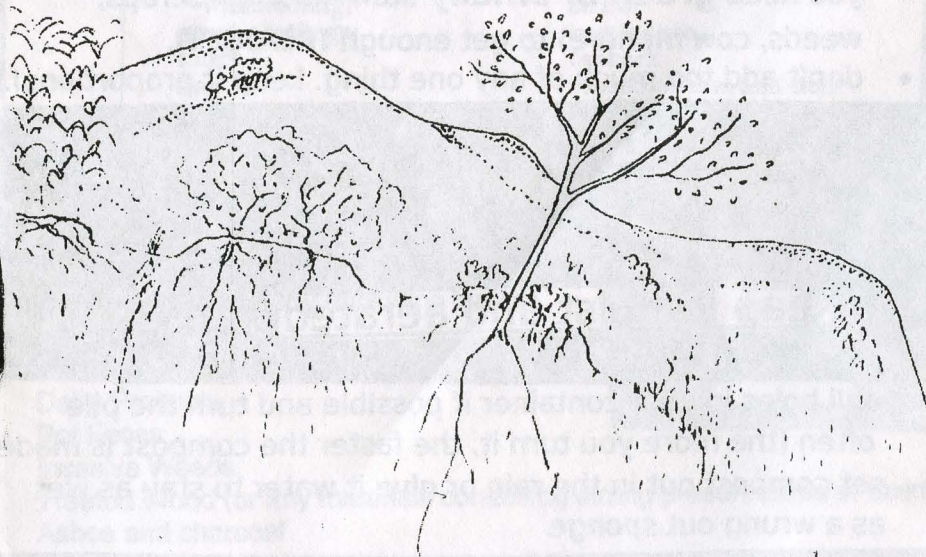
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GARDENING
IS CHEAPER THAN THERAPY
AND YOU GET TOMATOES



It took me years to get up the courage to start gardening. When my first attempt failed, I was devastated. Luckily, I got an internship at Turkey Hill Farm and read a bunch of gardening books until I finally felt like I knew what I was doing. The truth is, though, that once you know how to get started, growing food is easy. There are always bumps along the way, but gardening is a continuous learning experience, and there are very few experts. I'm still a beginner, but I want to share with you the information I've gathered so that you can start gardening right after this class ends. I encourage you to go for it! It is one of the most rewarding hobbies out there.



1. Composting

Start composting NOW (seriously)

Throw kitchen scraps, leaves and stuff into a bucket, hole in the ground, or just onto the ground. It's easy! And it makes good organic soil.

For effective compost:

Add a variety of materials

- you need **woody brown** stuff (leaves and wood chips) to get a good amount of **carbon**
- you need **green or smelly** stuff (kitchen scraps, weeds, cow manure) to get enough **nitrogen**.
- don't add too much of any one thing. keep it proportional.

Keep it moist and aerated

- drill holes in your container if possible and turn the pile often (the more you turn it, the faster the compost is made)
- set compost out in the rain or give it water to stay as wet as a wrung out sponge

COMPOSTING MATERIALS

"You can work at compost as if you're cooking a wonderful French ragout," says a gardener who savors her product. "Try to make it as interesting and diverse as possible."

Materials for composting and soil enrichment can be limited to those you generate yourself. If you have imagination and the initiative to scavenge a bit, figuring the time spent in building your soil will mean lush crops that grow with less of your midsummer energy, here's a list of possibilities:

- | | |
|---|---|
| apple pomace (by-product of cider-making) | kitchen wastes (vegetable and fruit rinds, parings, egg shells, coffee grounds, tea leaves, etc.) |
| bird-cage cleanings | leather waste and dust |
| brewery wastes | leaves |
| buckwheat hulls | manures (horse, cow, goat, pig, rabbit, poultry) |
| cannery wastes | milk, sour |
| castor bean pomace | mill wastes of lignin, wool, silk, and felt |
| chaff | nut shells |
| cheese whey | oat hulls |
| cocoa bean hulls | olive residues |
| corn cobs and husks | peanut hulls |
| cottonseed hulls and gin trash | peat and sphagnum moss |
| dust from vacuum cleaner | pine needles |
| evergreen needles | pond weeds |
| feathers | rice hulls |
| felt waste | salt hay |
| fish scraps | sawdust and shredded bark |
| garden residues (spent plants and vines, beet and carrot tops, corn stalks, etc.) | seaweed, kelp, eelgrass |
| gelatin processing waste | straw |
| grape pomace (by-product of winemaking) | sugar cane |
| grass clippings | tanbark |
| hair | tobacco stems and dust |
| hay | wood chips and rotted wood |

dryer lint

DO NOT COMPOST THESE

- Meat, Fish and Poultry (including bones)
- Food Sauces
- Fats, Grease, and Oils
- Dairy Products
- Pet Feces
- Invasive Weeds
- Treated Wood (or any materials containing strong preservatives or toxins)
- Ashes and charcoal
- Non-organics (plastic, metal, glass, etc.)



SYMPTOMS PROBLEMS SOLUTION

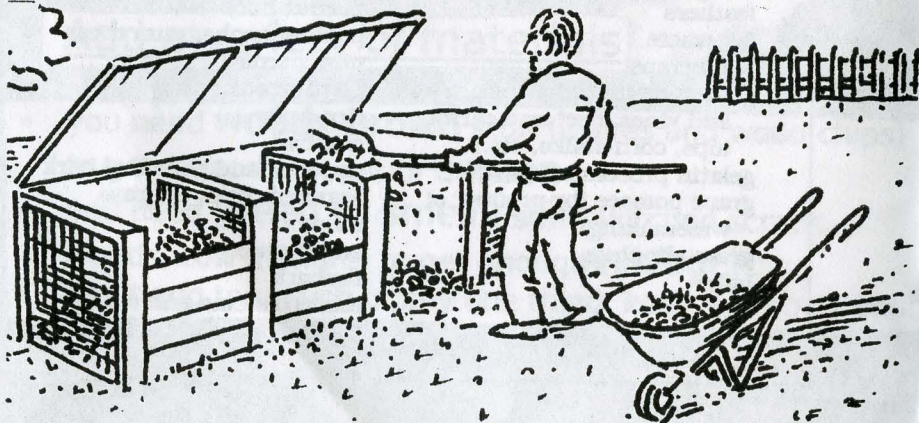
The compost has a bad odor. *Not enough air; pile too wet* *Turn it; add coarse dry materials such as straw, corn stalk, etc.*

The center of the pile is dry. *Not enough water; too much woody, coarse material* *Turn and moisten materials; add fresh green wastes, chop or shred coarse wastes.*

The compost is damp & warm in the middle, but nowhere else *Too small.* *Collect more material & mix the old ingredients into a new pile.*

The heap is damp and sweet-smelling but still will not heat up. *Lack of nitrogen.* *Mix in a nitrogen source like fresh grass clippings, fresh manure, bloodmeal or ammonium sulfate.*

trouble shooting →



scientific details →

The Essentials of Composting

With these principles in mind, everyone can make excellent use of their organic wastes.



Biology

The compost pile is really a teeming microbial farm. Bacteria start the process of decaying organic matter. They are the first to break down plant tissue and also the most numerous and effective composters. Fungi and protozoans soon join the bacteria and, somewhat later in the cycle, centipedes, millipedes, beetles and earthworms do their parts.

slow to melt when it's large, but melting very fast when broken into smaller pieces. Chopping your garden wastes with a shovel or machete, or running them through a shredding machine or lawnmower will speed their composting.



Materials

Anything growing in your yard is potential food for these tiny decomposers. Carbon and nitrogen, from the cells of dead plants and dead microbes, fuel their activity. The microorganisms use the carbon in leaves or woodier wastes as an energy source. Nitrogen provides the microbes with the raw element of proteins to build their bodies.



Volume

A large compost pile will insulate itself and hold the heat of microbial activity. Its center will be warmer than its edges. Piles smaller than 3 feet cubed (27 cu.ft.) will have trouble holding this heat, while piles larger than 5 feet cubed (125 cu.ft.) don't allow enough air to reach the microbes at the center. These proportions are of importance only if your goal is a fast, hot compost.

Everything organic has a ratio of carbon to nitrogen (C:N) in its tissues, ranging from 500:1 for sawdust, to 15:1 for table scraps. A C:N ratio of 30:1 is ideal for the activity of compost microbes. This balance can be achieved by mixing two parts grass clippings (which have a C:N ratio of 20:1) with one part fallen leaves (80:1) in your compost. Layering can be useful in arriving at these proportions, but a complete mixing of ingredients is preferable for the composting process. Other materials can also be used, such as weeds and garden wastes. Though the C:N ration of 30:1 is ideal for a fast, hot compost, a higher ratio (i.e., 50:1) will be adequate for a slower compost.



Moisture & Aeration

All life on Earth needs a certain amount of water and air to sustain itself. The microbes in the compost pile are no different. They function best when the compost materials are about as moist as a wrung-out sponge, and are provided with many air passages. Extremes of sun or rain can adversely affect this moisture balance in your pile.



Time & Temperature

The faster the composting, the hotter the pile. If you use materials with a proper C:N ratio, provide a large amount of surface area and a big enough volume, and see that moisture and aeration are adequate, you will have a hot, fast compost (hot enough to burn your hand!) and will probably want to use the turning unit ~~described in the next section~~. If you just want to deal with your yard wastes in an inexpensive, easy, non-polluting way, the holding unit ~~(described below)~~ will serve you well.



Surface Area

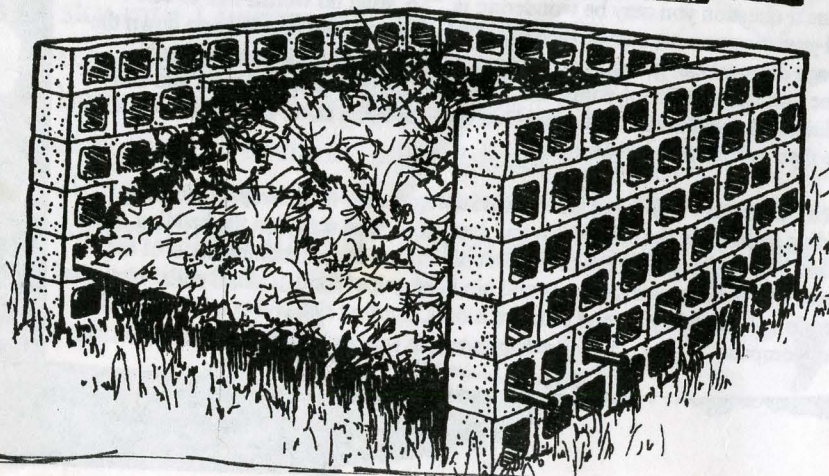
The more surface area the microorganisms have to work on, the faster the materials are decomposed. It's like a block of ice in the sun—

Fancy, easy pile * * *

A three-sided **concrete-block bin** is easy to construct. Lay the blocks sideways (no mortar), and the holes will help let air in and gases out of the pile. If you want to get fancy, suspend perforated pipe at intervals between the holes in the blocks to promote even better aeration.

Or lift the pile off the ground with pipes thrust between the second layer of blocks. Place wire mesh on the pipes. Evergreen branches laid on the wire will prevent most of the compost from sifting through the mesh. Build from there with composting materials. No turning is necessary, because of the ten-inch air space under the pile.

↓ pictured



Special Projects



EXTRA RICH WORM COMPOST:

Materials:

- Two 8-10 gallon plastic storage boxes (dark in color, not see through!)
- Drill (with 1/4" and 1/16" bits) for making drainage & ventilation holes.
- Newspaper, corrugated cardboard strips, shredded computer paper, decaying leaves.
- And about one pound of redworms.

Step 1 Drill about twenty evenly spaced 1/4 inch holes in the bottom of each bin. These holes will provide drainage and allow the worms to crawl into the second bin when you are ready to harvest the castings.

Step 2 Drill ventilation holes about 1 - 1 1/2 inches apart on each side of the bin near the top edge using the 1/16 inch bit. Also drill about 30 small holes in the top of one of the lids.

Step 3 Prepare bedding by shredding the material into 1/4 to 1 in strips. Worms need bedding that is moist but not soggy. Moisten the material by soaking it in water and then squeezing out the excess water. Cover the bottom of the bin with 3-4 inches of moist newspaper, fluffed up. If you have any old leaves or leaf litter, that can be added also. Throw in a handful of dirt for "grit" to help the worms digest their food.

Step 4 Add your worms to the bedding. An earthworm can consume about 1/2 of its weight each day. For example, if your food waste averages 1/2 lb. per day, you will need 1 lb. of worms or a 2:1 ratio. There are roughly 500 worms in one pound. Just adjust the amount that you feed them for your worm population.

Step 5 Cut a piece of cardboard to fit over the bedding, and get it wet. Then cover the bedding with the cardboard. (Worms love cardboard, and it breaks down within months.)

Step 6 Place your bin in a well-ventilated area such as a laundry room, garage, balcony, the kitchen sink, or outside in the shade. Place the bin on top of blocks or bricks or upside down plastic containers to allow for drainage. You can use the lid of the second bin as a tray to catch any moisture that may drain from the bin. This "worm tea" is a great liquid fertilizer.

Step 7 Feed your worms slowly at first. As the worms multiply, you can begin to add more food. Gently bury the food in a different section of the bin each week, under the cardboard. The worms will follow the food scraps around the bin. Burying the food scraps will help to keep fruit flies away.

The next question you may be wondering is, "So, what do worms like to eat?" Feed your worms a vegetarian diet. Most things that would normally go down the garbage disposal can go into your worm bin, including breads, grains, cereal, coffee grounds and filters, fruits, tea bags, and vegetables. Avoid meat and dairy products. You will notice that some foods will be eaten faster than others - worms have their preferences just like us!

When the first bin is full and there are no recognizable food scraps, place new bedding material in the second bin and bury your food scraps in the bedding of the second bin, stacking it on top of the first bin. In one to two months, most of the worms will have moved to the second bin in search of food. ...And, voila! Now the first bin will contain your end product: a dark, nutrient rich soil conditioner called vermicompost!

Info from <http://whatcom.wsu.edu/ag/compost/Easywormbin.htm>

2. Garden planning

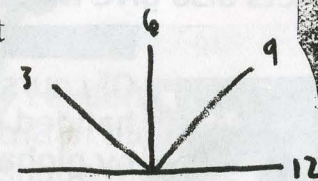
Some say planning the garden is the most important step, but don't get worked up about it. Just know your **sun, seasons,** and **rotation.**

It's really quite simple.

Sun

Make sure your plants will get at least 4 to 5 hours of sun as a bare minimum, but ideally 6+ hours a day.

Look at where the arc of the sun is (it will curve south as we are in the northern hemisphere) and divide the sky into 12 segments, each segment representing an hour of sunlight to see how many open segments (hours) there are. You could also just try to make sure at least 35% to 50% of the sky along that arc is open. Remember that the sun dips more south in the winter so those tree shadows will hit a little farther north that time of year.





You never get a break here.

We Floridians grow all year round.

Many farmers joke that

"August is our winter"

because it's so hot

that it's hard to grow much.

Spring planting: Mar 15- Apr 15

Hot Season planting: Apr 15- Aug 15

Cool Season planting: Aug 15- Feb 28

Every plant has its favorite weather, whether it's based on germination temperature or avoiding certain pests. Follow the Tallahassee planting calendar printed in the back of this book and you should be fine. Most seed packets also give maps and planting dates.

Of course, much of our gardening wisdom handed down for generations will be changed by global warming. We may be growing on a south Florida calendar in 20 years, or doing something totally different.

Crop Rotation + Companion Planting

There are several reasons to rotate crops:

avoiding pests,

avoiding plant diseases,

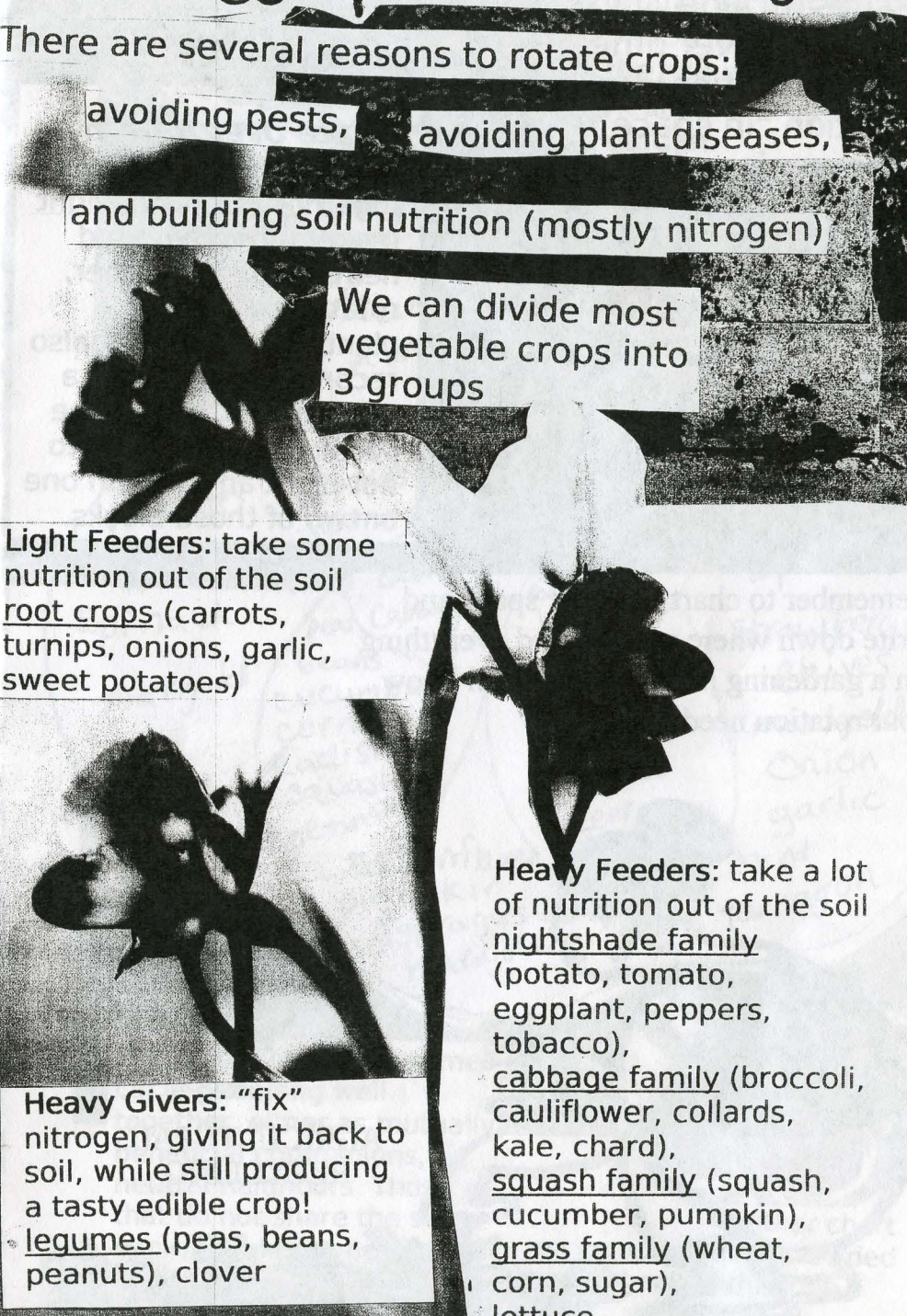
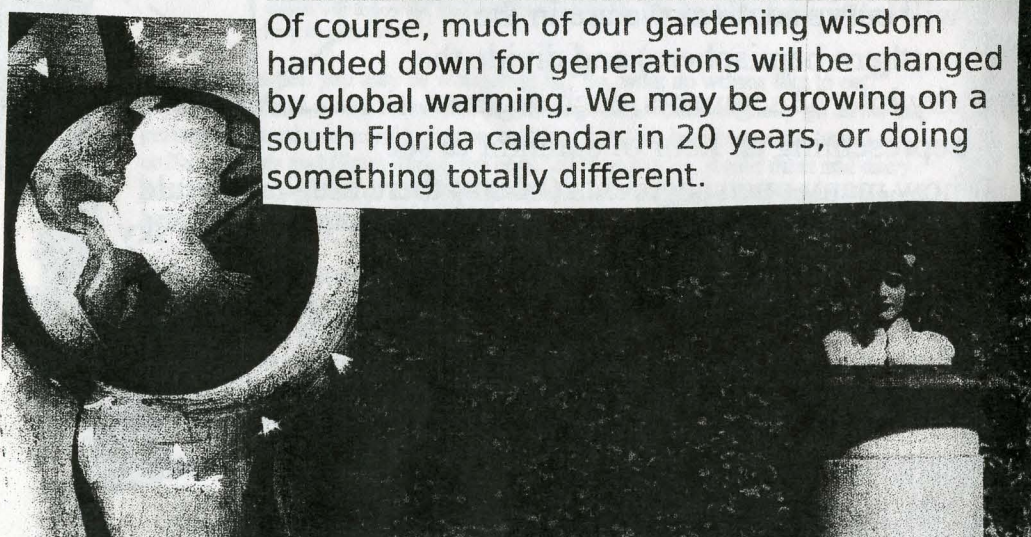
and building soil nutrition (mostly nitrogen)

We can divide most vegetable crops into 3 groups

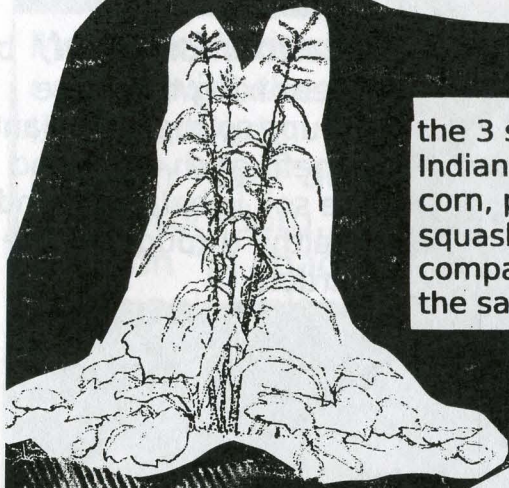
Light Feeders: take some nutrition out of the soil
root crops (carrots, turnips, onions, garlic, sweet potatoes)

Heavy Feeders: take a lot of nutrition out of the soil
nightshade family (potato, tomato, eggplant, peppers, tobacco),
cabbage family (broccoli, cauliflower, collards, kale, chard),
squash family (squash, cucumber, pumpkin),
grass family (wheat, corn, sugar),
lettuce

Heavy Givers: "fix" nitrogen, giving it back to soil, while still producing a tasty edible crop!
legumes (peas, beans, peanuts), clover



the 3 sisters the American Indians planted together: corn, pole beans, and squash were awesome companions and are all in the same circle in the chart.



Anti-companions: (antagonists)

- Onion family plants inhibit growth of peas and beans.
- Beets and Pole Beans do not get along.
- Separate heavy feeder nightshade plants (potato, tomato, eggplant) by location and season (rotate)
- Basil inhibits the growth of rosemary
- Tomato and cabbage
- Potato and cucumber

Composting is an additional type of rotation, since you are adding a balanced set of nutrients back to the soil when you compost.

Don't think too hard about this, these are just general guidelines for the most effective gardens.



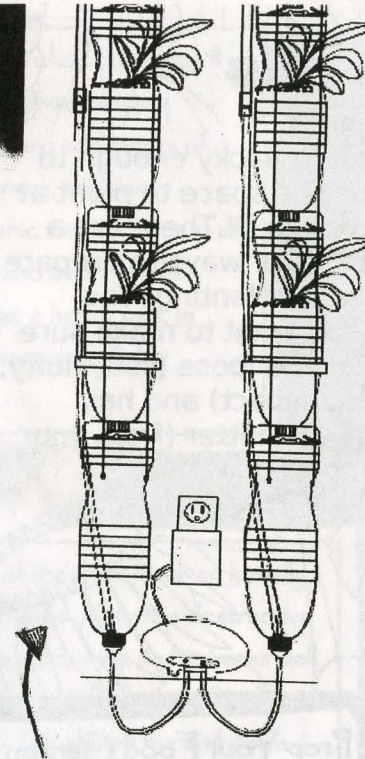
Plant root systems improve the top-soil by bringing up nutrients from the subsoil.

Basic gist: keep a balanced, healthy soil, and you will have the framework for a good garden!

3. Planting the Seed

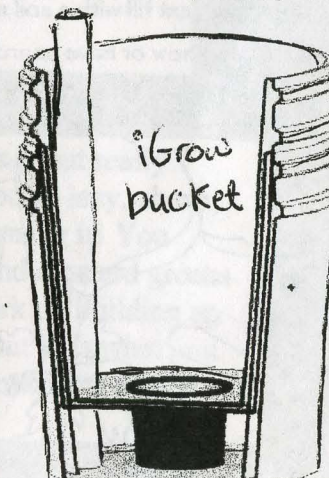
Containers

If you have limited space and resources, you might want to start growing in containers. Try to get containers as deep as possible and make sure they have a hole in the bottom to let water drain out. Most vegetables will do well in containers but plants will be smaller and it will be harder to grow enough to feed yourself with them.



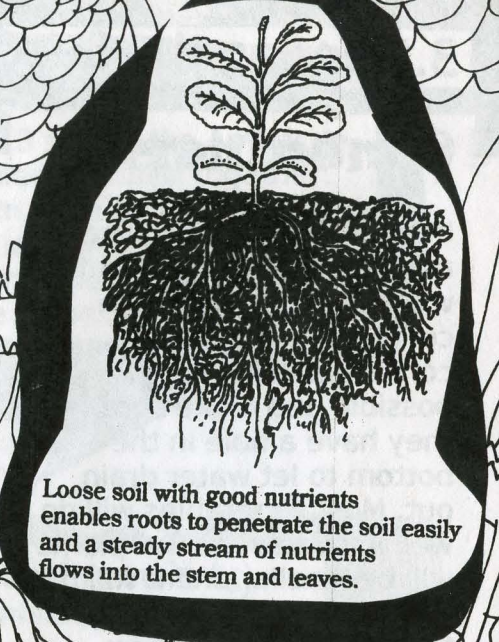
If you live in a dorm or apartment with no porch and you really want to get crafty, google "Window Farms" to see how to make this mini hydroponic system out of used water bottles. You do, however, need an electric air pump to cycle water through the system.

iGrow buckets are one alternative to typical containers, and they're made right here in Tallahassee by Frenchtown youth trying to raise money for their own urban farm. The design utilizes bottom-up watering which increases root growth for maximum food production. Lotsa stuff can grow in one of these 5 gallon buckets! They are available online or around town for a price range of \$20 to \$32.



Beds

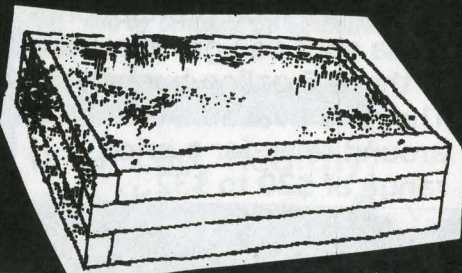
If you're lucky enough to have the space to plant at home, do it! There are a number of ways to prepare beds for planting. You mostly want to make sure the soil is loose (soft, fluffy, not compact) and has organic matter (from your compost!) in it.



Loose soil with good nutrients enables roots to penetrate the soil easily and a steady stream of nutrients flows into the stem and leaves.

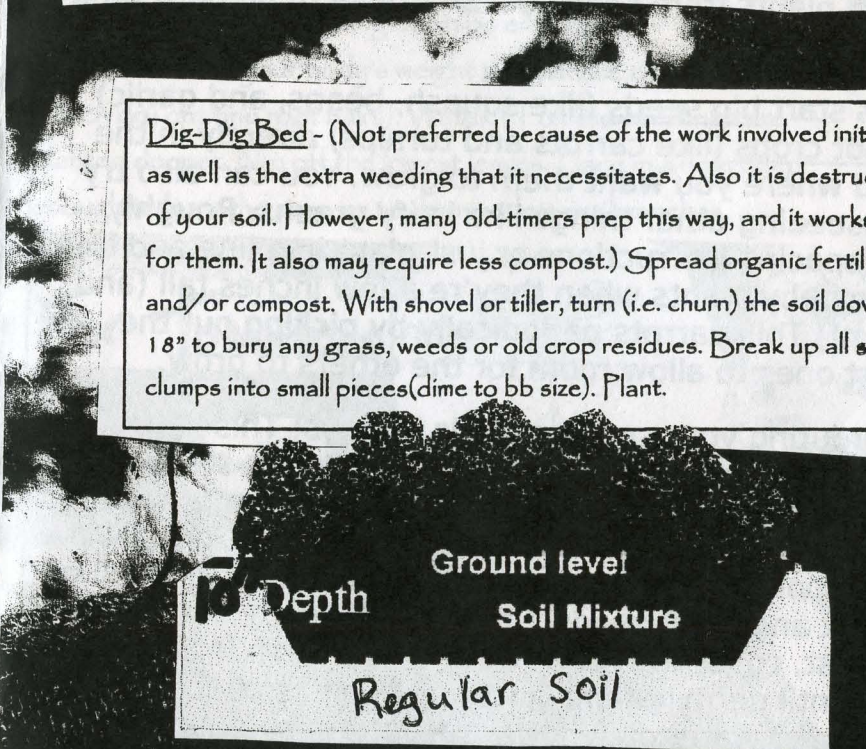
Prep Your Food Garden Beds (three choices)

Raised Bed- Construct a frame out of lumber, stone, concrete blocks, and/or repurposed miscellanea. (Typically, beds do not exceed 4ft in width so you can reach everything without need to step in the bed, thus avoiding compaction. Length and height depends on you). If existing grass and/or weeds are especially hardy, prep the bottom with layers of newspaper or cardboard. Next fill with a soil mix rich in organic material (e.g., compost). Unless you know or have heard compost is especially rich, you can mix in organic fertilizer. Plant. (Container gardens are essentially mini raised beds.)



Lasagna Bed- (An option if you've got 3-4 months before you'll plant). Cover your garden site with four layers of newspaper and/or a layer of cardboard. Atop the cardboard add layers of wood chips, leaves, grass clippings, kitchen scraps, and/or compost. Layer until you've got 6-12" of organic material on top of the paper. Top with a 1-2" layer of compost, and add a final 1" dressing of leaves. Water 'till it's as wet as after a heavy rain. In three months, rake back the leaves to reveal great soil. Add organic fertilizer. Plant.

Dig-Dig Bed - (Not preferred because of the work involved initially as well as the extra weeding that it necessitates. Also it is destructive of your soil. However, many old-timers prep this way, and it works well for them. It also may require less compost.) Spread organic fertilizer and/or compost. With shovel or tiller, turn (i.e. churn) the soil down 6-18" to bury any grass, weeds or old crop residues. Break up all soil clumps into small pieces (dime to bb size). Plant.



Ground level
Soil Mixture
Regular Soil

18" Depth

A cross-sectional diagram of a garden bed. The top layer is labeled 'Ground level'. Below it is a dark, textured layer labeled 'Soil Mixture'. Below that is a lighter, more uniform layer labeled 'Regular Soil'. A vertical line on the left side of the 'Soil Mixture' layer is labeled '18" Depth'.

These instructions will give you something that really works, but fertilizer is expensive, so if you're lazy, cheap, or don't have a ton of compost, try half-assing it! You should be able to at least grow collards and mustard greens in poor, sandy soil. Give it a shot. Do work on building up your compost though because what you put in is what you get out, and you want good soil so those nutrients end up nourishing your body!

STARTING FROM SEED:

You'll probably be more successful in the beginning if you buy seedlings and only plant things that are already growing (because someone else started them), but starting plants from seeds doesn't have to be hard (and it's cheaper)!

Always start big seeds (like squash, beans, and garlic) and root crops (like carrots and turnips) directly in the ground where you want them to grow. You can also try direct seeding other things like leafy greens. Roughly follow spacing instructions or just plant in a line and thin out the baby plants when they're a few inches tall (and eat 'em!) Thin carrots periodically by picking out the biggest ones to allow room for the others to grow.

Try sprouting your smaller seeds in trays! This conserves water and space and can result in stronger, healthier plants. Use old styrofoam trays or cut the side out of a juice carton (any container 2+ inches deep will do) and poke holes in the bottom. Fill with potting soil or compost and plant seeds. Spritz with water to keep the soil moist, cover with plastic bags, and keep in the shade until germination. Once the seeds sprout, set in full sun and water daily from the bottom by setting the trays in a pool of water and letting the water saturate the soil. If they grow tall, spindly, and floppy, they didn't get enough sun and will be susceptible to disease. Transplant into beds or bigger containers when they are 2 or 3 inches tall.

Plant: For spacing, refer to chart in the back of this book.

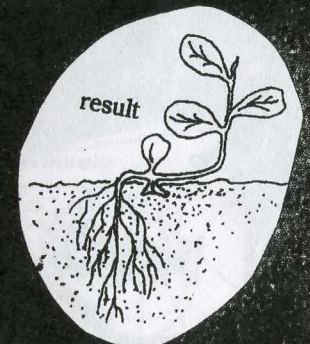
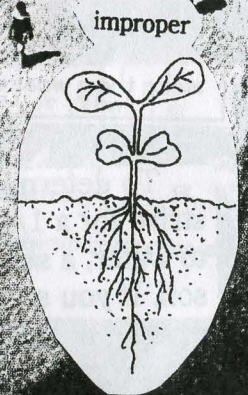
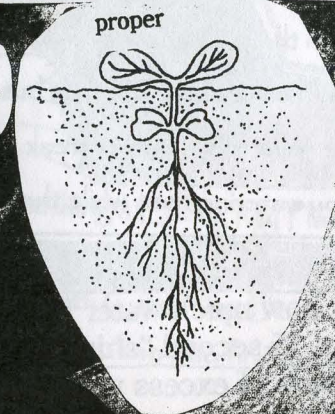
Plant seeds to a depth 2-4 times their size. To transplant, remove seedling from plant pot (yes, even those peat pots).

Be careful not to crush the stem. Break up root ball if "root-bound" (i.e., if the roots were clearly confined and so grew round-and-round in the shape of the pot). This may involve cutting or breaking some of the roots. That's okay.

Place in a hole deep enough to just cover the existing soil level.

Brush soil in around the plant, and then with your palms firm around the plant by pressing down on either side of the stem with the force of your body's weight to eliminate air pockets (which dry out tiny root hairs). Water. (Tomato seedlings are planted deeper. Nip off the lowest leaves. Place in a hole deep enough to bury the stem up to the next leaves/branches.

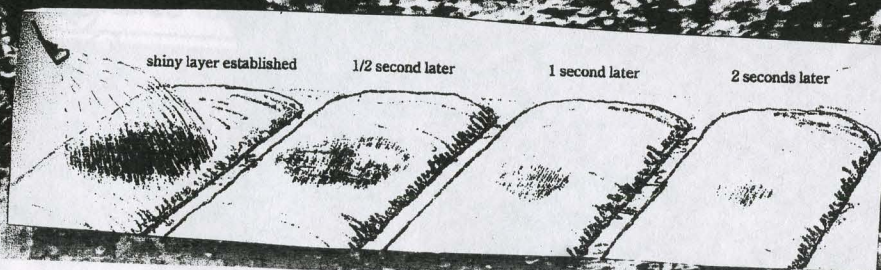
For Tomatoes



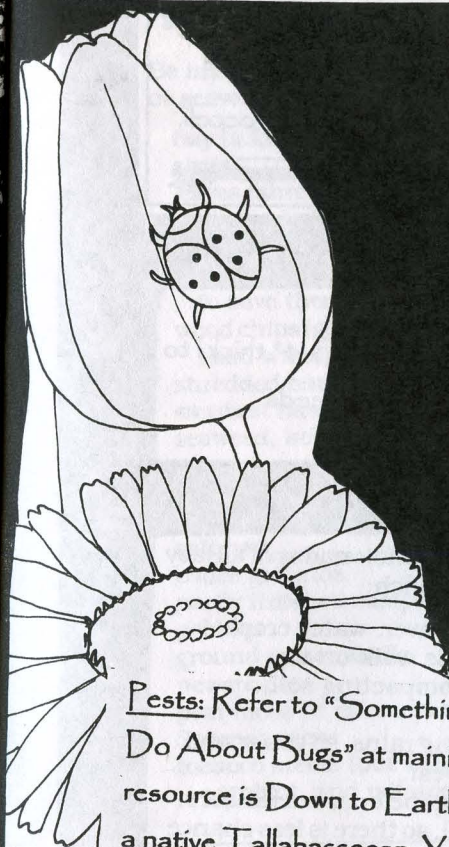
4. Watching your garden grow

Water: The first weeks of sprouting (for a seed) and establishment (for a transplant) are critical because their roots haven't yet grown to deeper (& thus) moister soil. Water everyday for the first three weeks after planting. Then, water 1-4 times a week depending on moisture. You want your soil to feel like a lightly wrung out sponge. If watering with a hose, mimic soft rain by spreading the flow with a thumb or finger. In the winter, you may be able to get away with watering once a week or letting the rain handle it; just check the moisture of the soil with your finger. You have to be more careful and water more often in the summer. Try to water after 4pm or in the morning to conserve water. Don't wait til your plants are already droopy to water them! If they ever droop really bad then they will suffer permanent damage. Sometimes they wilt a little bit in the middle of the day, but it is just their natural defense against transpiration, so don't freak out. You will actually make them weaker by watering them while they're wilting.

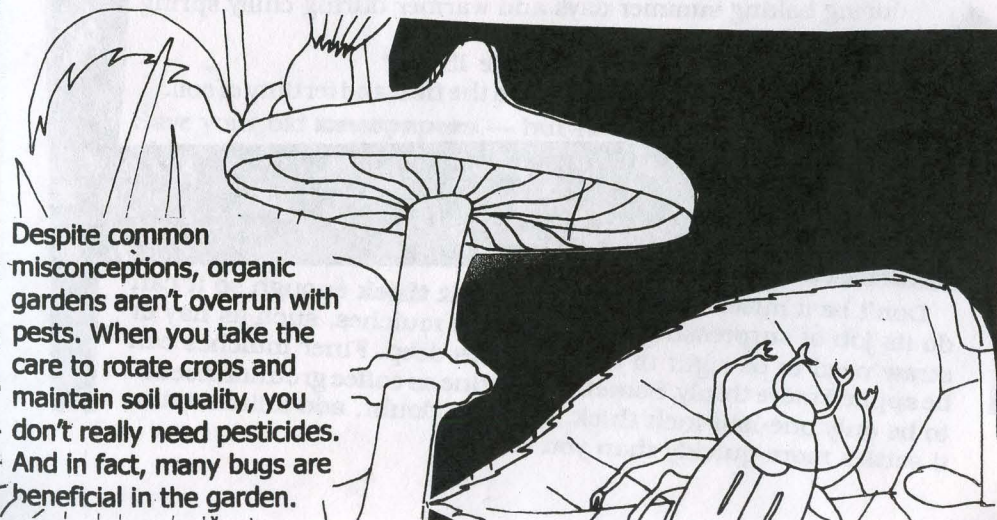
To determine how much water to give a bed each day, strive for a 1/2- to 15-second "shiny."²⁰ When you first begin to water, a *shiny layer* of excess water will appear on top of the soil. If you stop watering immediately, the shiny layer will disappear quickly. You should water, then, until the shiny layer remains for 1/2 to 15 seconds after you have stopped watering. The actual time involved will differ depending on the texture of your soil. The more clayey the texture, the longer the time will be.



Grow Vertically: Cage or stake tomatoes (with supports every 6"-1 ft) to 4-6ft height. Pole beans, snap peas, cucumbers and winter squash can be trellised to conserve bed space.



Pests: Refer to "Something's Eating My Plants! Or What To Do About Bugs" at maininoveralls.blogspot.com. Another great resource is *Down to Earth Gardening Down South* by Lacy Bullard, a native Tallahasseean. You can also find great organic remedies all over the internet!

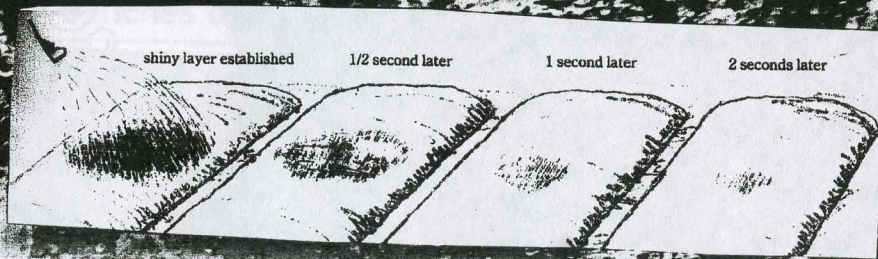


Despite common misconceptions, organic gardens aren't overrun with pests. When you take the care to rotate crops and maintain soil quality, you don't really need pesticides. And in fact, many bugs are beneficial in the garden.

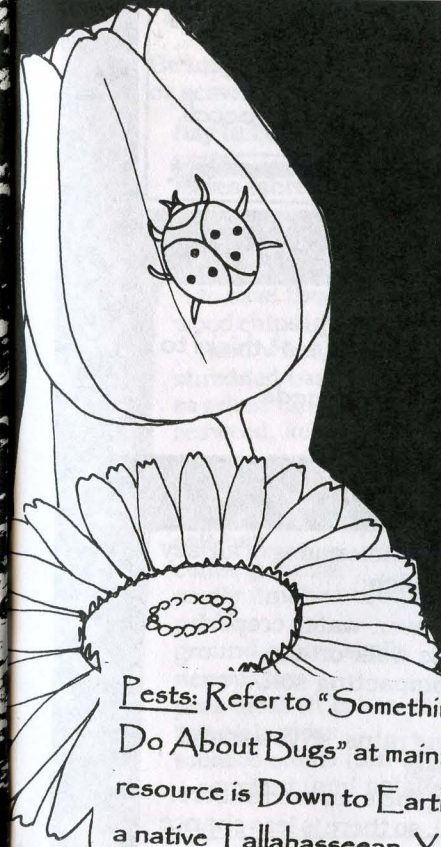
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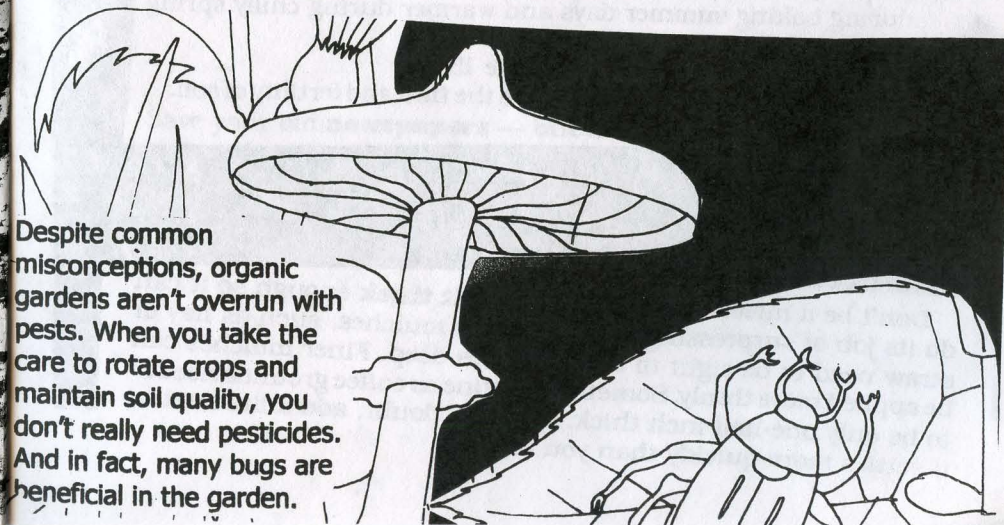
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Despite common misconceptions, organic gardens aren't overrun with pests. When you take the care to rotate crops and maintain soil quality, you don't really need pesticides. And in fact, many bugs are beneficial in the garden.

Freezes: Cool season crops do ok when it freezes. Cover lettuce and any warm season crops still growing (like tomatoes and peppers) with a sheet for the night. In a hard freeze, when the temperature stays freezing for a few hours, you might want to cover everything. Some crops, like arugula, carrots, and broccoli, actually taste better after a light freeze. ~~Some that's not true.~~

Mulch: Once plants are a 6" tall, mulch with leaves (1-4" thick) to reduce the need to water. Mulch also suppresses weeds.

Mulch saves weeding, which should make aficionados of all lazy gardeners. Add to that its other virtues. Mulch:

- Conserves moisture. Mulchers rarely, if ever, water crops.
- Reduces compaction of soil when people walk on it.
- Keeps hard rain from pounding and compacting soil.
- Prevents erosion.
- Keeps dirt from splashing on crops during rains, so you spend less time washing leaf crops after harvest.
- Protects sprawling crops like tomatoes, melons, cucumbers, and squash from direct contact with soil, so there is less chance for rot.
- Helps maintain an even soil temperature — helps it stay cooler during baking summer days and warmer during chilly spring and fall nights.
- Encourages earthworms (see page 15).
- As it decomposes, mulch improves the tilth and fertility of soil.

Don't be a miser with mulch. **Make it thick** enough so it can do its job of suppressing weeds. Coarse mulches, such as hay or straw need to be eight to twelve inches deep. Finer mulches can be applied more thinly. Something as fine as coffee grounds needs to be only one-half inch thick. When in doubt, add a little extra; it settles more quickly than you think.

MULCHING MATERIALS — FROM HAY TO Z

Be imaginative in collecting mulching materials. Buy if you must, or scavenge from friends or local industries. Try:

hay (a farmer might be delighted to unload spoiled bales)
straw
leaves (shred or rotary mow first)
hulls or shells from cocoa beans, buckwheat, peanuts, rice, cottonseed, oats, or nuts
grass clippings (ask your neighbors or a lawn-maintenance service to save them)
wood chips (get them from a utility company pruning near overhead wires) (add nitrogen)
shredded bark (add nitrogen)
sawdust (add nitrogen)
seaweed, kelp, eelgrass
ground corn cobs and stalks (add nitrogen)
shredded sugar cane
packing materials (excelsior, shredded paper)
salt hay
coffee grounds
partly finished compost
pebbles
ground oyster shells
newspaper
peat moss (it cakes, is really better dug *into* soil)
Spanish moss
tobacco stems (but keep them away from tomatoes, peppers, eggplant, and potatoes).

Save your old **newspapers** — but not the color pages — for mulches. Lay them two or three sheets thick wherever you don't want weeds to grow. The papers will gradually disintegrate, and when they do, just add more. ~~Some that's not true.~~

Smother the Weeds — with Mulch

The queen of mulch was Ruth Stout, author of *How to Have a Green Thumb Without an Aching Back*. She maintained a year-round hay mulch at least eight inches deep in her Connecticut vegetable garden. In her fifty-by-fifty-foot plot, she used twenty-five bales a year. She never turned the soil, sowed a cover crop, hoed, weeded, watered, or built a compost pile. She just mulched, making compost on the spot, for as the bottom layer of mulch decomposed, it added rich organic matter to the soil—a continuing process. Ruth didn't bother with manures, but used cottonseed meal or soy bean meal for added nitrogen. She sprinkled it on top of the mulch in winter, at a rate of five pounds to one hundred square feet, so that snow and rain carried it down through the hay by planting time. To plant, she pulled aside the mulch and sowed the seed.

Harvest: Pick and pull when it looks like it does in the grocery.

If you wait too long, you likely won't do it again. Onions, garlic and potatoes are ready when their tops die-back. For other root veggies, just dig with your finger or brush the soil back to peak.

If it's not ready, just return the soil.



Most of the information in this section was reproduced from maninoveralls.blogspot.com "Food Gardening 101"



Tallahassee
FOOD GARDENS

Tallahassee Food Gardens is a social enterprise that encourages and assists folks to grow their own food and share it.

Learn more at ManInOveralls.blogspot.com, search "Man in Overalls" on facebook, or call (850) 322-0749.

Before you mulch for the first time, **add extra nitrogen** to the soil. As soil organisms decompose the bottom layer of mulch, they use the nearest available nitrogen — robbing it from the soil if necessary. This problem is greatest with mulching materials low in nitrogen, such as sawdust, leaves, wood chips, or ground corn cobs. If your plants begin to look yellow or stunted, that could mean they're starving for a shot of nitrogen. Run out there quickly, manure tea or any high-nitrogen fertilizer in hand (sodium nitrate, urea, calcium nitrate, or lawn fertilizer). Once the mulching process gets under way, you can add new mulch on top of old without worry.

A LIST OF COMMON GARDEN VEGETABLES, THEIR COMPANIONS AND THEIR ANTAGONISTS⁶¹

	COMPANIONS	ANTAGONISTS
Asparagus	Tomatoes, parsley, basil	
Beans	Potatoes, carrots, cucumbers, cauliflower, cabbage, summer savory, most other vegetables and herbs	Onions, garlic, gladiolus
Bush Beans	Potatoes, cucumbers, corn, strawberries, celery, summer savory	Onions
Pole Beans	Corn, summer savory	Onions, beets, kohlrabi, sunflowers
Beets	Onions, kohlrabi	Pole beans
Cabbage Family (cabbage, cauliflower, kale, kohlrabi, broccoli)	Aromatic plants, potatoes, celery, dill, chamomile, sage, peppermint, rosemary, beets, onions	Strawberries, tomatoes, pole beans
Carrots	Peas, leaf lettuce, chives, onions, leeks, rosemary, sage, tomatoes	Dill
Celery	Leeks, tomatoes, bush beans, cauliflower, cabbage	
Chives	Carrots	Peas, beans
Corn	Potatoes, peas, beans, cucumbers, pumpkins, squash	Potatoes, aromatic herbs
Cucumbers	Beans, corn, peas, radishes, sunflowers	
Eggplant	Beans	
Leeks	Onions, celery, carrots	
Lettuce	Carrots and radishes (lettuce, carrots, and radishes make a strong team grown together), strawberries, cucumbers	
Onions (and garlic)	Beets, strawberries, tomatoes, lettuce, summer savory, chamomile (sparsely)	Peas, beans

	COMPANIONS	ANTAGONISTS
Parsley	Tomatoes, asparagus	
Peas	Carrots, turnips, radishes, cucumbers, corn, beans, most vegetables and herbs	Onions, garlic, gladiolus, potatoes
Potatoes	Beans, corn, cabbage, horseradish (should be planted at corners of patch), marigolds, eggplant (as a lure for Colorado potato beetle)	Pumpkins, squash, cucumbers, sunflowers, tomatoes, raspberries
Pumpkins	Corn	Potatoes
Radishes	Peas, nasturtiums, lettuce, cucumbers	
Soybeans	Grows with anything, helps everything	
Spinach	Strawberries	
Squash	Nasturtiums, corn	
Strawberries	Bush beans, spinach, borage, lettuce (as a border)	Cabbage
Sunflowers	Cucumbers	Potatoes
Tomatoes	Chives, onions, parsley, asparagus, marigolds, nasturtiums, carrots	Kohlrabi, potatoes, fennel, cabbage
Turnips	Peas	



Fall/Cool Season Crops

Crop	Planting Dates	Spacing (Inches)	
		Rows	Plants
Beets	September-March	14-24	3-5
Broccoli	August-February	30-36	12-18
Cabbage	Sept-February	24-36	12-24
Carrots	Sept-March	16-24	1-3
Cauliflower	January-February August-October	24-30	18-24
Celery	January-March	24-36	6-10
Chinese Cabbage	October-February	24-36	12-24
Collards	February-April August-November	24-30	10-18
Garlic	October-December	18	4-8
Kale	September-February	24-30	12-18
Kohlrabi	September-March	24-30	3-5
Lettuce	February-March September-October	12-24	8-12
Mustard	September-May	14-24	1-6
Onions, Bulbing	Sept-December	12-24	4-6
Onions, Bunching	August-March	12-24	1-2
Peas, English	January-March	24-36	2-3
Potatoes	January-March	36-42	8-12
Radish	September-March	12-18	1-2
Shallots	August-March	18-24	6-8
Spinach	October-November	14-18	3-5
Strawberry	October-November	36-40	10-14
Turnips	January-April August-October	12-20	4-6

Spring and Hot Season Crops

Crop	Planting Dates	Spacing (Inches)	
		Rows	Plants
Beans, Bush	March-April August-September	18-30	2-3
Beans, Pole	March-August August-September	40-48	3-6
Beans, Lima	March-August	24-36	3-4
Cantaloupes	March-April	60-72	24-36
Corn, Sweet	March-April August	24-36	12-18
Cucumbers	Feb-April August-September	36-60	12-24
Eggplant	Feb-July	36-42	24-36
Endive/Escarole	Feb-March September	18-24	8-12
Okra	March-July	24-40	6-12
Peas, Southern	March-August	30-36	2-3
Peppers	Feb-April July-August	20-36	12-24
Potatoes, Sweet	March-June	48-54	12-14
Pumpkin	March-April August	60-84	36-60
Squash, Summer	March-April August-September	36-48	24-36
Squash, Winter	March August	60-90	36-48
Tomatoes, Vining	Feb-April August	36-48	18-24
Tomatoes, Bush	Feb-April August	40-60	36-40
Watermelon, Large	March-April July-August	84-108	48-60
Watermelon, Small	March-April July-August	48-60	15-30

6. More Information

Get Experience:

Tallahassee Sustainability Group- Work days every Saturday, 10-2, at the Salvation Army Garden at 2131 Jackson Bluff Rd

Damayan Garden Project- Work days every Friday from 1:45 to 3:45 at Lichgate, 1401 High Rd. contact volunteer@damayan.org for details and other opportunities.

Turkey Hill Farm- takes volunteers almost every week day. Contact turkeyhill@earthlink.net

Back Yard Farm- www.farmerpam.com click on the "contact us" link

Local Resources:

Gramlings Seed Store (1010 S. Adams Street, (850) 222-4812)

Native Nurseries

Tallahassee Nurseries

Esposito

Heinz Nurseries

Natural Matters (local Fertrell—organic fertilizer distributor)

Just Fruits and Exotics (Fruit Trees, Berries and Grape Vines)

Solid Waste Management (free mulch at the dump: 7550 Apalachee Parkway Tallahassee, FL 32311)

Online Resources:

iGrow buckets: <http://igrow-whateveryoulike.weebly.com/?ref=nf>

Maninoveralls resources: <http://maninoveralls.blogspot.com/p/resources.html>

Cheap Vegetable Gardener: <http://www.cheapvegetablegardener.com/>

IFAS extension office, with nice veg planting calendar: www.bradford.ifas.ufl.edu

Worm bin details: <http://whatcom.wsu.edu/ag/compost/Easywormbin.htm>

Books:

Down to Earth Gardening Down South (Tallahassee native, Lacy Bullard)

How to Grow More Vegetables (Jevons)

Square Foot Gardening (Mel Bartholomew)

Carrots Love Tomatoes and Roses Love Garlic (Riotte)

Tips for the Lazy Gardener (Tilgner)

My hope is that there is enough information here for you to be a successful gardener, without being overwhelmed. Keep in mind there are a million ways to garden, and these are just some suggestions to get you started, and then you will figure out the rest as you go. Start right now! Experiment with a few containers at first if you're scared, but ya gotta start somewhere!

Try Organic Food

**...or as your
grandparents
called it,
"Food"**

