

Vegetable Gardening Basics

Gardens to Groceries



What is DOUGHERTY FRESH?



- Dougherty Fresh is a partnership between Dougherty County, Flint River Fresh and the University of Georgia Extension Service.



What is Flint River Fresh?

- Based in Albany, GA located in Southwest Georgia
- Projects cover 4 Counties (Colquitt, Dougherty, Houston, and Sumter)
- 4 Pillars
 - Food Access
 - Youth Development
 - Economic Opportunities
 - Land Stewardship



Our Pillars



Increase access to fresh, local, affordable, healthy food for our neighbors



Create new economic opportunities for local farmers



Develop young people through agriculture



Conserve natural resources for future generations

Seasonal Planting in Georgia

Albany, GA Zone 8b

Three Growing Seasons

Sowing Seed/Planting Transplants

- Spring: February 15 – March 15 (avg. temp lows 40's, highs 60's)
- Summer: March 15 - July 15 (avg. temp lows 50's, highs 70's)
- Fall: September 15 – October 1 (avg. temp lows 60's, highs 80's)

Harvest

- Spring: March 15 – April 30
- Summer: May 1 - until the first frost
- Fall: November 1-December 31 into March

Spring/Fall Garden

Vegetables

- Lettuce, Spinach, Arugula, Broccoli, Cabbage, Brussel Sprouts (fall only), Collards, Garlic (fall only), Shallots (fall only), Onions (fall only), Leeks (fall only), Asian Greens such as Tatsoi, Pac Choi, Bok Choi, Kale, Collards, Swiss Chard, Carrots, Fava Beans, Beets, Radishes, Sugar Peas, English Peas, Snap Peas, Potatoes (spring only)

Flowers/Annual

- Sunflowers, Calendula, Snapdragons (fall only), Pansies and Violets (fall only), Sweet Williams

Herbs/Annual

- Parsley, Dill, Cilantro

Summer Garden

Vegetables

- Artichoke and Cardoon, Asparagus (perennial), Beans, Pole and Bush, Corn, Cucumbers, Eggplant, Ginger/Tumeric, Melons, Okra, Peas, Crowder or Black Eye, Peppers, Soybeans, Squash, Summer & Winter, Tomatoes, Tomatillos, Sweet Potatoes

Flowers/Annual

- Cosmos, Lantana, Marigolds, Petunia, Sunflowers, Tithonia, Verbena, Zinnias

Herbs/Annual

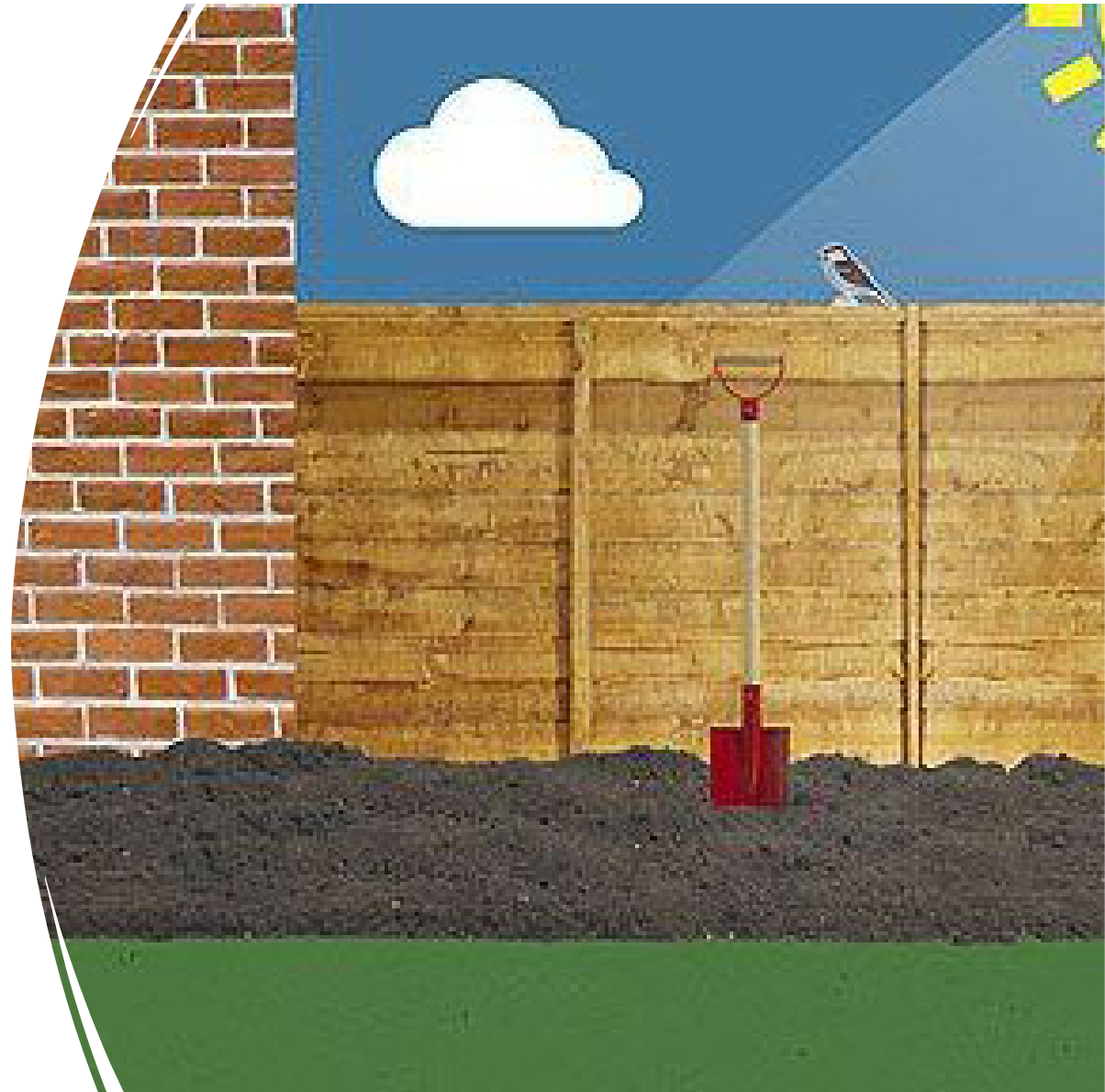
- Aloe Vera, Basil, Bay Laurel, Geranium, Scented, Stevia, Lemongrass, Lemon Verbena, Mexican Sage, Pineapple Sage

**Let's go
from grass
to garden
to
groceries...**



SITE SELECTION

- Located in Full Sun
- Minimum of 6 to 8 hours
- Conveniently located to a water source
- Drains well
- Good Soil



Drainage Test

- Make your hole 12” deep and fill it with water. How long does it take to drain?
- Fill the hole with water again. How long does it take to drain the second time? If it takes longer than 8 hours, you’ll want to learn about improving drainage and consider using containers or raised beds.





Know Your pH

- Certain plants can only access the soil's nutrients if the pH is within a certain range. And not even additional plant food or fertilizer will help if your soil lies outside of a plant's preferred pH range.
- A pH less than 7 is acidic, 7 is neutral, and anything higher than 7 is alkaline.
- Acidic or alkaline soil isn't bad; it all depends on what you're growing. Most plants can adapt to soil pH that ranges from 6 to 7.5, but some plants have distinct preferences. For instance, blueberries prefer acidic soil while asparagus tends to do best in alkaline.

What kind of beds do you want?



Farm Rows

- In-ground planting can offer more plantable square feet
- Use the native soil with few to no amendments
- No carpentry skills
- Less start-up work
- Less permanent
- Low Water requirement
- Easier irrigation



Raised Beds

- Manageability
- Prevention of soil compaction and plant damage
- Longer growing season
- Less weeding and maintenance
- Better drainage
- Easier soil amendments
- Material conservation
- Access for gardeners with disabilities





Filling the Raised Beds

- If you are using raised beds made with a wooden perimeter, fill the frame to the top with top soil ordered from a landscape supply company. It is ok to order enough soil to fill the beds to the top rim since the soil will settle.
- Once the top soil has been added, it is time to add the layer of compost. Add 2” of compost over the top soil as if you are icing a cake. Rake the soil and compost to lightly incorporate the compost.
- You may order compost to be delivered or purchase bagged compost (Black Cow, Mushroom Compost)

Container Gardening

- Drainage.
- Is it big enough?
- Do you have to move it?
- Potting soil.
- Proper sun.
- Watering.
- How many plants per container?
- Feed your plants.



FROM THE KITCHEN





OTHER THINGS

CONTAINER MIX

Needs to Provide...

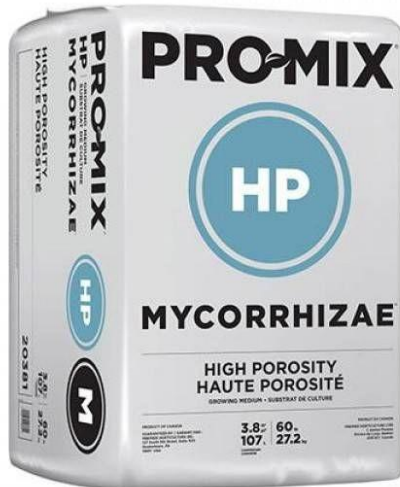
- Water
- Nutrients
- Support

Should Be...

- Well-aerated
- Well-drained
- Lightweight



How to make your own potting soil for containers



Source: Mark's Greenhouse



Source: Garden Center



Source: Garden Center

Recipe: 1 x 5 gallon bucket of ProMix + 1/3 of a 5 gallon bucket of Cow/Mushroom Compost + 1/2 cup of Plant-Tone Organic Fertilizer

Spacing your plants



Spacing for Commonly Grown Summer Vegetables, Herb, and Flowers

Vegetables

Artichoke/Cardoon – 24" apart
Asparagus - 12-18" apart
Beans, Pole - 6" apart
Beans, Bush – 4" apart
Corn – 12" apart
Cucumbers – 6" apart
Eggplant -15-18" apart
Ginger/Tumeric- 12" apart
Melons-24-36" apart
Okra-18-24" apart
Peas, Crowder – 6" apart
Peppers – 12"-18" apart
Soybeans-6" apart
Squash, Summer – 24" apart
Squash Winter- 24" apart
Tomatoes – 24" apart
Tomatillos-24" apart
Sweet Potatoes-12" apart

Herbs, Annuals

Aloe Vera – grow in a pot
Basil – 12-15" apart
Bay Laurel – grow in a pot
Geranium, Scented – grow in a pot
Stevia – 12 to 15" apart
Lemongrass – 24" apart
Lemon Verbena– 24" apart
Mexican Sage– 24" apart
Pineapple Sage– 24" apart

Flowers

Cosmos – 12" apart
Lantana – 12-18" apart
Marigolds 12" apart
Petunia – 12-18" apart
Sunflowers – 12-18" apart
Tithonia – 24" apart
Verbena – 12-18" apart
Zinnias – 12-18" apart

Spacing Plants - Methods



In single rows



Broadcast



In block rows

Planting in Single Rows



- Single row planting is the most conventional way to plant vegetables. However, room can be wasted in a raised garden if you leave too much space between the rows.
- A single row may be as wide as 3 feet.
- Seeds or plants are set in one row. Rows are arranged in a parallel lines.
- This approach is practical for vine crops that you want to grow vertically, such as pole beans, black eyed peas, cucumbers and trellised peas.
- It is also practical for larger vegetables that need space around them such as eggplants, peppers, tomatoes, squash, okra.

SQUARE FOOT GARDENING

Simple and Unique method of raised bed gardening

Made famous by Mel Bartholomew in the 1970s

More efficient way to use garden space

Seeds or Seedlings are planted in cleared marked 1ft by 1ft spaces



7 Reasons to Square Foot Garden

1. Easy to start.
2. No Soil Improvement
3. Container Mix
4. Low Maintenance
Garden
5. Raised Beds
6. Very Adaptable
7. High Yield



Spring/Fall Garden

16 Plants per Square

- Carrots, Micro-Greens, Salad Greens, Radishes, Scallions

9 Plants per Square

- Onions, Spinach, Turnips

4 Plants per Square

- Lettuce, Swiss Chard

1 Plant per Square

- Cucumbers, Peppers, Potatoes, Strawberries, Kale

2 Squares per plant

- Broccoli, Cabbage, Collards, Eggplants, Peppers

4 Squares per plant

- Tomatoes, Summer Squash

Taking Care of Your Garden



Add
compost to
feed your
soil





Mulching your Garden

Magic Mix



Recipe

Soil conditioner - 2 parts
Azomite - 1 part
Mushroom Compost - 2 parts
Dolomitic Lime $\frac{1}{4}$ part
Plant-tone Food $\frac{1}{4}$ part
Mix all together.



How to use it

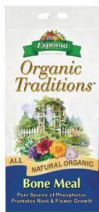
When planting, mix 1:1 ratio with native soil. For example, if I am planting a gallon size plant, I mix in 1 gallon of #gardengeris soil conditioner mix.



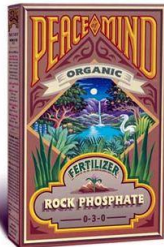
Why it is good

Georgia red clay has vast nutrient and water-holding capacity. This mixture aerates the soil and adds more nutrients in the form of compost and plant food.

Other Soil Amendments



Bone Meal: mixture of crushed and coarsely ground bones that is used as an organic fertilizer for plants. As a slow-release fertilizer, bone meal is primarily used as a source of phosphorus and calcium. 4-12-0



Rock Phosphate: A long-lasting, slow release source of phosphorus. This product also contains a large supply of calcium, which aids in fruit and flowering quality. Calcium also helps plants produce tougher cellular membranes which enables them to be more disease resistant. 0-3-0



Greensand: mined from deposits of minerals that were originally part of the ocean floor. Contains about 3% total potash, along with iron, magnesium, silica and as many as 30 other trace minerals. May also be used to loosen heavy, clay soils. Improves plant health. 0-0-3



Dolomitic lime: Supplies magnesium and calcium. Stabilize pH of the soil.

Feeding your garden



To avoid this situation, fertilize your plants once per month.



Use a liquid fertilizer such as fish emulsion, compost tea, [BioThrive Grow \(4-3-3\)](#)
Frequency of use: Every 4 weeks at recommended strengths on the bottle.



Spread a 1" layer of compost over the top of the soil for a slow release fertilizer.

WATER

- Hand Watering
- Self-Watering Plant Containers
- Drip Irrigation
- Micro-Sprinklers
- Buried Irrigation (Olla Pots)



The Finger Test



To check the soil for watering readiness, stick your forefinger into the soil up to your first knuckle. If the soil is dry in the first inch to inch-and-half, water.

Differences between wet, moist, and damp soil. Wet is defined as "covered with visible free moisture," damp is a "moderate covering of moisture," and moist is "slightly damp but not quite dry to the touch." Thus wet indicates the highest level of moisture and moist indicates the lowest level.

You don't need to water if the soil feels like a moist sponge.
Any drier than that, water.

Drip Irrigation

- Less Watering and More efficient water use
- Water directly to roots
- Less evaporation
- Prevents water from moving to non-target areas such as walk paths



The pests that love your garden



Let's talk squirrels



Bunnies!



Screened Garden



Screened Garden



\$100
[Gardeners.com](https://www.gardeners.com)



\$159
[Gardeners.com](https://www.gardeners.com)

[Gardeners Supply Crop Cages](https://www.gardeners.com)
[Build Your Own Cage](https://www.gardeners.com)

Screened Garden







Resources

Ways to test your soil

1. Do it yourself using baking soda and vinegar
<https://www.thespruce.com/do-it-yourself-soil-ph-test-4125833>
2. Do it yourself using a pH soil kit
3. Send your soil sample to the University of Georgia Soil, Plant and Water Lab.
<https://extension.uga.edu/story.html?storyid=7887>

Potting Soil

Fafard ProMix

- Mark's Greenhouse
- Bennet's Feed and Seed
- Lowes, Home Depot

Other Brands

- Garden Centers

Liquid Fertilizer

Fish Emulsion – Neptune's Harvest, Alaska

Fish Fertilizer

- Mark's Greenhouse
- Online at Lowe's, Home Depot
- Hoss Tools,
<https://hosstools.com/product-category/fertilizers/>
- Grow Organic,
<https://www.groworganic.com/collections/natural-and-organic-fertilizers>

Fish and Seaweed Fertilizer

- <https://www.arbico-organics.com/>

Resources

Fill Dirt & Compost Sources

- [Mark's Greenhouse](#)
- [Lawn & Barber](#)
- [Conyers Rock Yard](#)

Soil Conditioner and Container Garden Mix

- Soil conditioner – Mark's Greenhouse
- Azomite – Mark's Greenhouse
- Mushroom Compost- Mark's Greenhouse
- Dolomitic Lime – Mark's Greenhouse
- Plant-tone Food – Mark's Greenhouse

Bulk Compost Delivery

- [Marks Greenhouse](#)
- [Lawn & Barber](#)
- [Conyers Rock Yard](#)
- Soil(3) <https://soil3.com/>

Basic Garden Tools



Spade Fork



Cutco Garden Trowel



Watering Can



Felco Pruners

Resources

Fruit/Tomato Protection Structures

[Gardeners Supply](#)

[Hoss Tools](#)

[Johnny's Selected Seeds](#)

Favorite Seed Companies

- Baker Creek Heirloom Seed Co.
- Johnny's Selected Seeds
- High Mowing Seeds
- Hoss Tools
- Seed Savers Exchange
- Southern Exposure Seed Exchange
- Territorial Seed Company

Upcoming Gardening Webinars

**Build a Raised Garden Bed
Friday, February 4th @ 12pm**

**Planting a Spring Garden
Friday, February 18th @ 12pm**

**Vegetable Gardening Basics
Friday, March 18th @ 12pm**

**Planting a Summer Garden
Friday, March 25th @ 12pm**

**Pesky Pest and What to do about them
Friday, April 8th @ 12pm**

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