

Spring / Summer Veggies



**Walton County Extension
Master Gardener
Volunteers**

UNIVERSITY OF GEORGIA

An Equal Opportunity, Affirmative Action, Veteran, Disability Institution

If you are an individual with a disability who may require assistance or accommodation in order to participate in or receive the benefit of a service, program, or activity of UGA, or if you desire more information, please contact us.

SITE SELECTION

- **Site should receive 8 to 10 hours of full sun**
- **Choose - or create - a site with well drained, amendable soil**
- **Avoid sites with a history of hard-to-control weeds**
- **Site garden close to water source**
- **Avoid planting near trees: in addition to creating shade, trees compete for water and nutrients**
- **Try to avoid low open areas - they can harbor frost which may nip spring seedlings and late season crops**



RIGHT-SIZE THE GARDEN

- **Make the garden only as big as you can tend comfortably**
- **Size is often determined by how much time and money you have to spend on it**
- **It is better to start small and build on success**



Types of Gardens

- Long rows
- Raised beds
- Containers



ADVANTAGES OF RAISED BEDS

- **Better drainage and aeration**
- **No red clay!**
- **No tilling - soil does not get compacted since it is not being walked on**
- **Beds can be made to fit your space and are easier to work**
- **Nutrients, water, and amendments are used only where the plants need them**
- **Allows for intensive planting - fewer weeds, greater yields are possible in a small space**



GROW STRONG HEALTHY PLANTS

- **Soil preparation and fertility**
- **Planting: timing and selection**
- **Correct spacing**
- **Good watering practices**
- **Proper fertilization**
- **Weed control**
- **Crop rotation**
- **Garden sanitation**



DON'T GUESS – SOIL TEST

\$10.00 fee will be charged for each sample




SOIL TESTING – FOR PH LEVEL

Soil test gives recommendations on how to amend your soil, based on what you plan to grow:

- **for ideal pH:** for most vegetables, best range is 6.0 – 6.5

- **measures fertility, and makes recommendations for which nutrients you need to supplement**



THE UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION
Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

Soil, Plant, and Water Laboratory
2400 College Station Road
Athens, Georgia 30602-9105
Website: <http://aesl.ces.uga.edu>

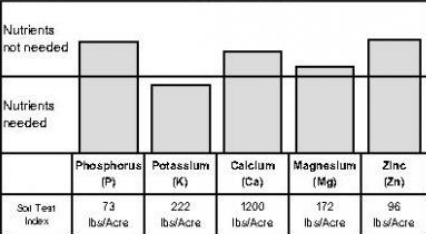
Soil Test Report

(CECEEA Signature)

Sample ID	Lab Information	County Information
Client Information Joe Farmer Danielsville, GA Sample: 1 Crop: Home Vegetable Garden	Lab #54085 Completed: Printed: Tests: S1	Madison County P O Box 68 Danielsville, GA 30633 phone: 706-795-2281 e-mail: uge1191@uga.edu

Results

Mehlich I Extractant



	Phosphorus (P)	Potassium (K)	Calcium (Ca)	Magnesium (Mg)	Zinc (Zn)
Soil Test Index	73 lbs/Acre	222 lbs/Acre	1200 lbs/Acre	172 lbs/Acre	96 lbs/Acre

No phosphate (P), potash (K), or lime needed if shaded bars are above this line:

←————→

pH and Lime

Lime not needed
Lime needed
pH
5.7
Soil Test Index

Recommendations

Can't find a specific grade of fertilizer? Try our Fertilizer Calculator: <http://aesl.ces.uga.edu/soil/fertcalc/>

Limestone: 75 pounds per 1000 square feet

Recommended pH: 6.0 to 6.5

Broadcast 20 pounds of 16-4-8 per 1000 square feet, or apply 7 pounds of 16-4-8 per 100 linear feet of row.

The recommendation given above is for medium feeders, which includes crops such as beans, beets, cantaloupes, cucumbers, eggplant, okra, onions, tomatoes, english peas, peppers, radish, squash, watermelon, and sweet potatoes.

For heavy feeders such as broccoli, cabbage, greens (kale, mustard, turnip, collards), lettuce, Irish potatoes, and sweet corn, increase the recommendation by 50%.

For light feeders such as southern peas, reduce the recommendation in half.

Apply 1 tablespoon of borax per 100 feet of row to broccoli and root crops such as turnips and beets. This can be applied by mixing the borax thoroughly with approximately 1 quart of soil in a container and then applying the mixture along the row; or it can be mixed with a quart of water and applied to the soil in solution.

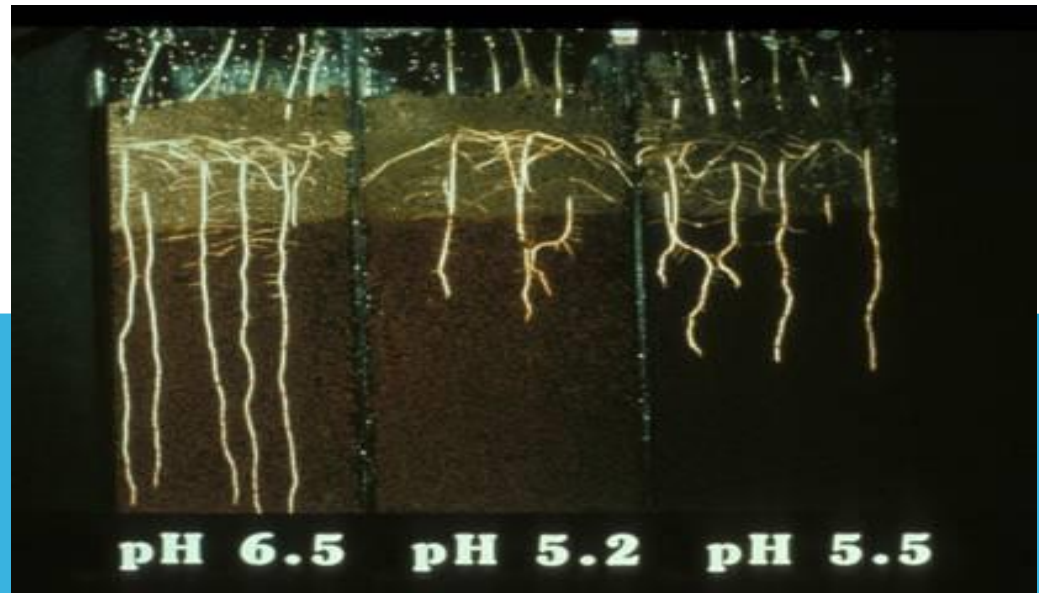
For better fertilizer availability on sandy soils, apply half of the recommended fertilizer just before planting and the remainder when the crop is half grown. In years with unusually heavy rainfall on sandy soils, 3 pounds of 34-0-0 or 2 pounds of 46-0-0 may be added to replace nutrients lost from the soil due to heavy rains.

Learning for Life
 The University of Georgia and Fort Valley State University, the U.S. Department of Agriculture and counties of the state cooperating.
 Cooperative Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability.
 An equal opportunity/affirmative action organization committed to a diverse workforce.

CORRECT SOIL PH ACCORDING TO SOIL TEST RECOMMENDATIONS

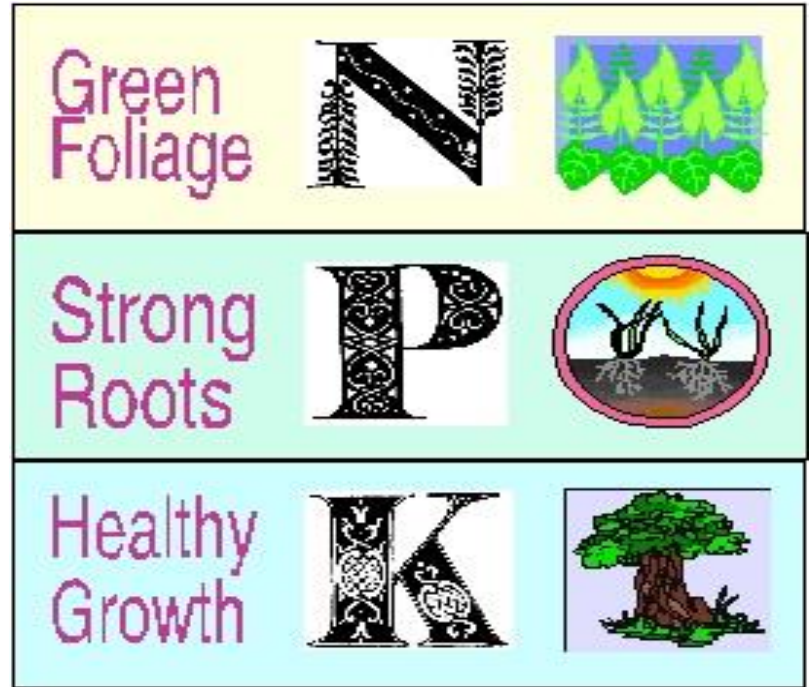
Strong healthy roots =

Strong healthy plants!



Fertilizer Basics

N- Nitrogen



P- Phosphorus

K- Potassium

Don't overfertilize, especially with nitrogen – follow soil test recommendations and label directions

MAXIMIZING SOIL FERTILITY: INPUTS NEED TO EQUAL OUTPUTS

- Amend on an ongoing basis by lightly fertilizing in spring and after each crop
- Supplement individual crops according to recommendations for that plant
- Some crops are light feeders while others are heavy feeders
- FOLLOW LABEL DIRECTIONS for all fertilizer products



SOIL STRUCTURE MATTERS

Make sure the soil is ready to work in spring -
if it is too wet you can damage the soil structure

If soil sticks to the end of a spade it is too wet

Working it too early or walking on soil compacts it, which
reduces oxygen levels - bad for plant health



Too wet if it sticks together



PREPARING A PLANTING BED

Plant roots need three things:

- Oxygen
- Moisture
- Nutrients

Loosen the soil to a depth of 10 inches

Incorporate amendments and fertilizer recommended by the soil test, and organic matter



INCORPORATE ORGANIC MATTER

What to use:

- Compost
- Aged manures
- Pine bark
- Rotted leaves

What NOT to use:

- Vermiculite
- Sand
- Peat moss
- Perlite



Incorporate 2 - 3" of organic matter into the top 6 - 8" of soil

Compost is not really a source of macro-nutrients, but organic matter is critical! It creates an environment in soil where macro- and micro-nutrients can be used by plants.

WHAT WILL YOU GROW?

What do you want to eat?

- Make a short list of crops your family will enjoy
- Limit yourself to 4 - 6 vegetables if you are a new vegetable gardener



How much will you use? Fresh, canned, frozen?

How much storage space do you have?

What makes sense in your garden space?

- Example: watermelon needs at least 5-6' for at least 90 days; probably not the most efficient use of a 10' or 20' garden bed

GET IN SYNC WITH THE SEASONS

Average last frost date in spring is April 15th

Average first frost date in fall is October 15th

Cool Season plants - grow spring and fall:

- Grow best with temps between 40 - 75 degrees
- Are most often those that develop edible roots, stems, leaves, or buds

Warm Season plants - grow in summer:

- Originated in the tropics

Can't tolerate frosts

Usually develop edible fruits



WARM SEASON VEGETABLES:

Beans

-snap beans

-pole beans

-lima beans

Sweet corn

Cucumber

Eggplant

Melons

Okra

Southern Peas

Peppers

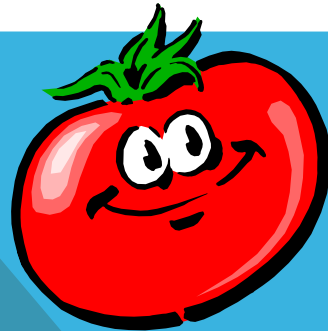
Pumpkins

Sweet Potato

Summer Squash

Tomatoes

Winter Squash



COOL SEASON VEGETABLES

Beets

Broccoli

Brussels sprouts (fall)

Cabbage

Carrot

Cauliflower

Cress

Collards (fall)

Garlic (fall)

Kale

Leeks

Lettuce

Mustard Greens

Onions

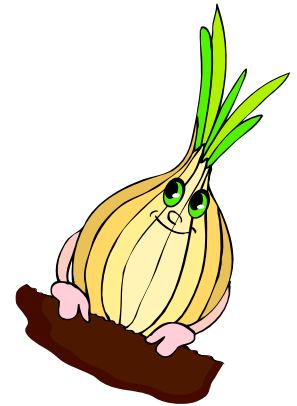
Peas (spring)

Radish

Irish Potato

Spinach

Turnip



BEST USE OF SPACE

**Crops differ in their yield relative to the space required.
Some that give the best return:**

Beans

Beets

Broccoli

Carrots

Cucumbers

Greens

Kale

Lettuce

Onions (bulbs)

Peppers

Summer squash

Tomatoes

Turnips (greens & roots)

Zucchini



Direct Seeding or Transplants?

Pros & cons for each, but for spacing purposes:

- **Seedlings must be thinned; best done at the 3-leaf stage. Use scissors to avoid disturbing nearby roots.**
- **Transplants can be planted at the correct spacing.**
- **Root crops should be grown from seed.**



HYBRID AND HEIRLOOM

Hybrids are created by manually cross-pollinating.

- The seeds from a hybrid plant will probably not produce a true copy of the parent plant.
- Hybrids can never be heirlooms.

Heirlooms by definition are at least 40 years old.

- They are usually organic, and they are never hybrids.



SELECTING TRANSPLANTS

Choose disease resistant cultivars when possible (e.g., tomatoes with VFN resistance)

Seedlings should look healthy:
lush and full, not too tall or overgrown,
with a good deep green color

Check that plants are free
from insects and diseases

If possible buy vegetable
transplants that are not
already flowering



PROPER SPACING

Do not over-crowd plants,
they get big very quickly

Check the vegetable guide -
and believe it!

Over-crowding leads to:

- Spindly plants, smaller vegetables and lower overall yields
- More difficulty in harvesting and insect control
- More disease problems



SQUARE FOOT STYLE SPACING

Look at the space needs for each crop: check the planting chart, seed pack, or plant tag

Each square can be planted with a different vegetable

Watch for crowding, thin if needed



SQUARE FOOT EXAMPLES



OTHER SPACE USE STRATEGIES

Vertical Gardening - use trellises or cages:
some of the square foot spacing estimates
assume vertical growing for maximum use of space

Successive planting – try planting beans or lettuce every
two weeks instead of all at once, for a more gradual
harvest



COMPANION PLANTING

Interplanting - plant a fast maturing crop between larger, slower growing plants; they'll be harvested before other plants need the space



WATERING FOR SUCCESS

Vegetables require 1" of water a week

Keep seedlings and transplants constantly moist when they are getting established

Water the soil and not the plant

Water deeply and less frequently

A light sprinkling only dampens the surface and trains the plant's roots to go upwards to get water - shallow roots mean weak plants

An organic mulch helps regulate soil moisture

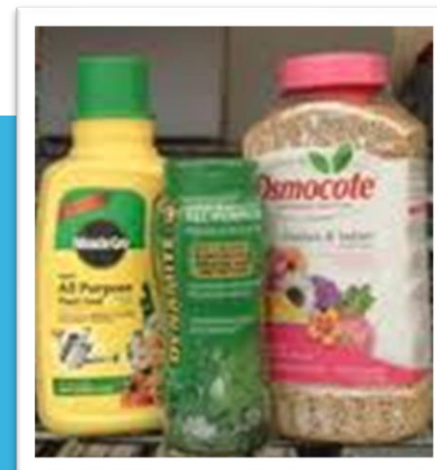


SUPPLEMENTAL FERTILIZATION

Vegetable plants belong to one of three categories:

- **Heavy Feeders – cabbage, lettuce, onions, tomatoes, Irish potatoes**
- **Medium Feeders – beans, beets, melons, sweet potato, okra, cucumbers, broccoli, carrots, cauliflower, eggplant, most greens, squash, peppers, pumpkins, radish, Swiss chard, spinach**
- **Light Feeders – peas**

**FOLLOW LABEL DIRECTIONS
FOR ALL PRODUCTS**



WEED CONTROL

Cultural -

Shading - fast growing crops shade the ground and prevent weed seeds from germinating

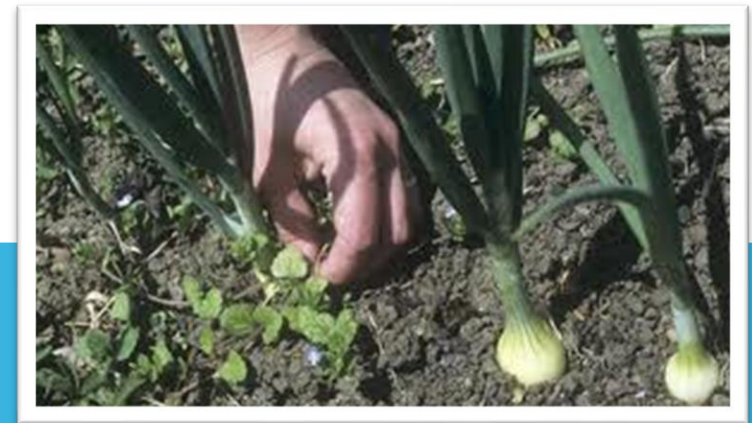
Mulches - also help retain soil moisture

Mechanical -

Remove weeds while small

Don't let weeds set seed!

Remove by hand or cultivation



ROTATE PLANT FAMILIES

NIGHTSHADE - tomatoes, peppers, eggplant, potatoes

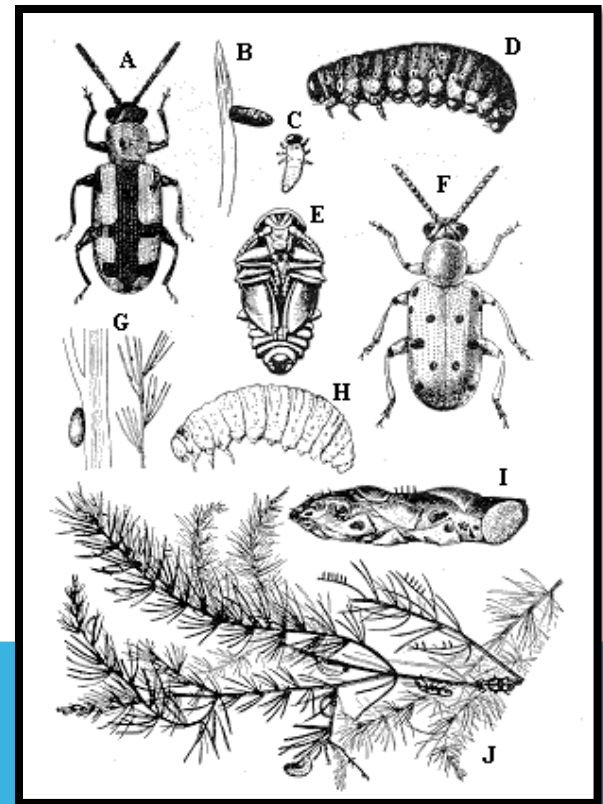
CUCURBITS - cucumbers, squash, pumpkins, melons

BRASSICAS - broccoli, cabbage, cauliflower, mustard, collards, kale, Brussels sprouts, radishes, turnips, rutabagas, cress, bok choy, kohlrabi

- **When possible do not follow any vegetable plant with a plant from the same family.**
- **Rotation is an old and effective strategy for reducing disease and insect problems.**

Good Sanitation Practices

- **Remove infected plants - completely!**
- **Prune out infected parts**
- **Rake out fallen twigs or leaves in which insects and their eggs can overwinter.**
- **Throw away anything with insect or disease issues, or weed seeds - don't compost it or till it in**



ORGANIC PEST CONTROL



Use good cultural practices to avoid pest problems

Mechanical and physical pest control methods are lower impact

Appropriate organic pesticides, applied correctly, as a last resort

INTEGRATED PEST MANAGEMENT

Preventing pest problems

(“an ounce of prevention...)

requires regular monitoring of plants, pests, natural enemies

Identifying insects: is it really

a problem? Most garden insects

are beneficial or harmless

Use of action thresholds



PEST PREVENTION: GROW STRONG HEALTHY PLANTS

Soil preparation and fertility

Plant selection and timing

Correct spacing

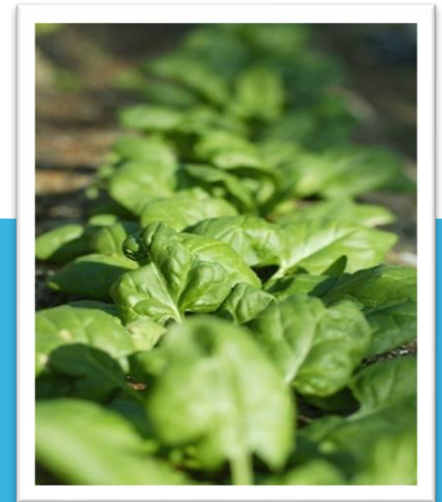
Good watering practices

Proper fertilization

Weed control

Crop rotation

Garden sanitation



BENEFICIAL INSECTS

***“When you kill the beneficial insects,
you have to do their job.”***



assassin bug



lacewing



spider

Handpicking: mechanical and non-toxic insect control

- Inspect plants for egg clusters, beetles, caterpillars, or other pests
- Catch it small: eliminate insect eggs and you won't have to deal with the adults (and *their* offspring)
- Squash them, or drop them in a jar of soapy water



Planting Dates

- Some pests can be avoided by planting a crop before a pest moves into the area, or before the populations of a particular insect increase
- Example: plant squash as early as possible in spring, to get strong plants and start harvesting before the moth that lays the eggs for squash vine borers shows up in early June



INSECT MANAGEMENT STRATEGIES – DO GO LOOKING FOR TROUBLE

- **Know the enemy! Identify before attempting to control**
- **Catch it small: eliminate insect eggs, reduce damage from future generations**
- **Tolerate some damage if practical, but recognize problems and act if needed**
- **Use the appropriate control:**
 - **mechanical: kill jar, strong hose spray**
 - **chemical: as a last resort - least toxic product appropriate for the problem (READ THE LABEL)**



DISEASE PREVENTION

Inspect transplants and purchase only healthy, well cared for plants

Keep foliage dry when possible

**Grow resistant varieties, especially tomatoes:
VFN means the plant has Verticillium, Fusarium,
and Nematode resistance**

**Be vigilant for signs of fungal disease and
treat early (Serenade is a good organic fungicide)**

**Most plant diseases can't be cured, only prevented
or managed**



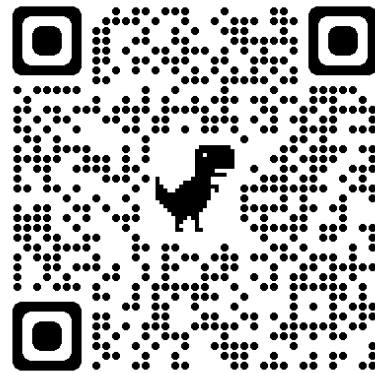
Be Patient and Enjoy Your Garden!

- Don't expect an insect-free garden; work with nature and focus on healthy plants
- Call the EMG Infoline if you have problems or questions (contact info on magnet)
- Consider donating your excess produce to a food bank or the "Share the Harvest" program



WOULD YOU LIKE A COPY OF THE PDF?

The QR code will take you there.



<https://www.waltonmastergardeners.com/ppt-pdfs>

Questions?

Contact us at
waltonmg@uga.edu
770-267-1324



Walton County Extension
1258 Criswell Rd SE
Monroe, GA 30655

M-F – 8 AM to Noon/1PM to 5 PM

Help Desk Hours – Tuesday 1 to 4 PM

Visit our booth at Monroe Market for
help with gardening questions.



Walton County Master Gardeners invite you to
Free Spring 2024 Garden Talks

Mondays 2:00–3:00 p.m.

O’Kelly Memorial Library

363 Conyers Road, Loganville GA

**Feb 26: Growing Inside the Box—
Raised Bed Basics**

Mar 4: Managing Plant Disease

Mar 11: Spring/Summer Veggies

Mar 18: Totally Tomatoes

**Mar 25: Plant Choice Matters—
Gardening with Native
Plants**



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Walton County Master Gardeners invite you to
Free Spring 2024 Garden Talks

Tuesdays 4:00–5:00 p.m.

**W.H. Stanton Memorial Library
407 W. Hightower Trail, Social Circle GA**

**Feb 27: Growing Inside the Box—
Raised Bed Basics**

Mar 5: Managing Plant Disease

Mar 12: Spring/Summer Veggies

Mar 19: Totally Tomatoes

**Mar 26: Plant Choice Matters—
Gardening with Native
Plants**



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Walton County Master Gardeners invite you to
Free Spring 2024 Garden Talks

Wednesdays 2:00–3:00 p.m.

UGA Extension Office

1258 Criswell Rd SE, Monroe GA

**Feb 28: Growing Inside the Box—
Raised Bed Basics**

Mar 6: Managing Plant Disease

Mar 13: Spring/Summer Veggies

Mar 20: Totally Tomatoes

**Mar 27: Plant Choice Matters—
Gardening with Native
Plants**



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Get \$30 off on ALL 3 Big Yellow
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Receive an extra \$5
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[Read our blog on Soil3](#)





*Master Gardener
Fundraiser*

Plant Sale

Walton County
Extension Campus
1258 Criswell Road
Monroe, GA
April 20, 10-2



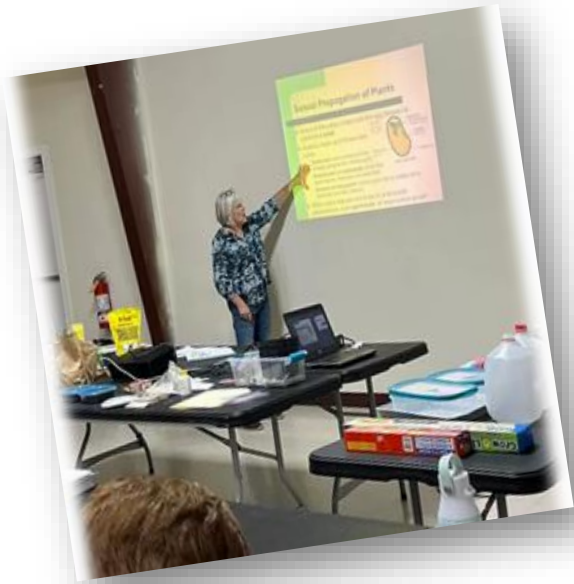
UNIVERSITY OF GEORGIA
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Rain or Shine



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Thanks for coming today!