Warm Season Vegetable Gardening 101

Matt Jones
Horticulture Extension Agent
NC Cooperative Extension - Chatham County Center

What is Cooperative Extension?

World's largest **non-formal education** network

- Established 1914 by the Smith-Lever Act

Practical, non-degree programs

NC COOPERATIVE EXTENSION

N.C. A&T STATE UNIVERSITY

NC STATE UNIVERSITY

What is Cooperative Extension?

A nationwide network of

- Educators
- Researchers
- Volunteers

Additional Resources

Sustainable Vegetable Gardening Resources

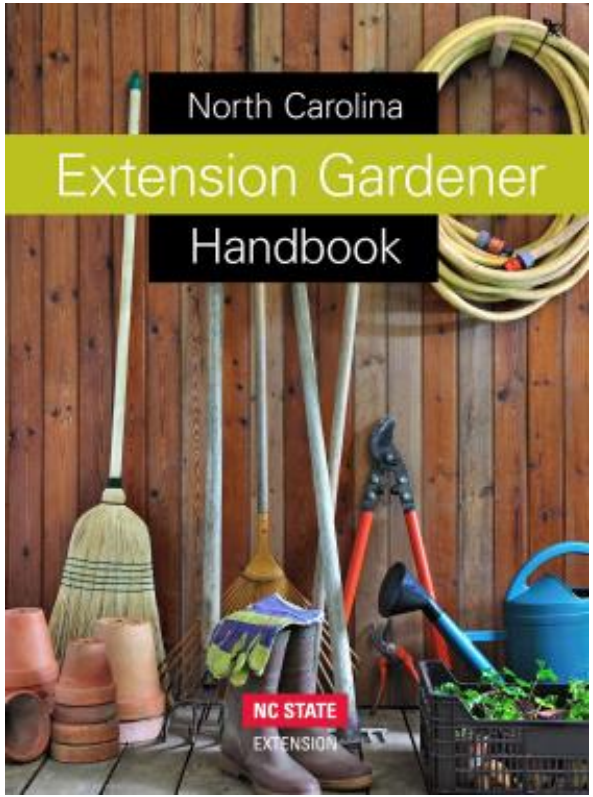
- Many excellent Extension resources
- Slides from previous classes:
- Soils
- Pests & Diseases
- Warm season crops
- Cool season crops

https://go.ncsu.edu/chathamveggies

NC STATE EXTENSION

NC Extension Gardener Handbook

https://go.ncsu.edu/eg-handbook



Free Online!

Hard copy – UNC Press ($60)

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Warm Season Vegetable Gardening


Bad Alley (Cat)
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Ks mini
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Clemson
Barbara H Smith

Matt Jones
Horticulture Extension Agent
NC Cooperative Extension - Chatham County Center

Outline

Review of Vegetable Gardening Fundamentals

- Types of beds
- Site considerations
- Nutrients and organic matter
- Vegetable planting calendars

Warm Season Vegetable Crops

- Tomatoes
- Peppers
- Eggplants
- Southern Peas
- Okra
- Cucumbers

Pest, Disease, and Weed Management in Vegetable Gardens (Online)

- June 7, 2023
  - In-person: 9:00-11:00
  - Online: 6:00 – 7:30

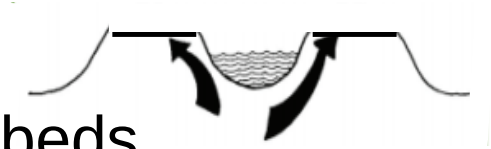
- Subscribe to my newsletter for updates on registration and other upcoming webinars!

Uncontained Raised Beds

- Superior drainage
- Warm-up faster in spring
- Easy access
- No compaction in root zone

Uncontained Raised Beds

- Use soil from paths and incorporate organic matter to build mounds
- 4-8” high, 45˚ slopes
- 3-4’ wide
- 1.5-3’ between beds
- Flat top
- Mulch between beds



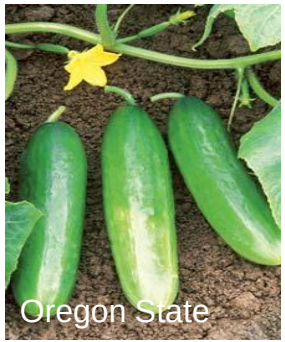
Contained Raised Beds

- **At least 8” deep**
  - Till or loosen soil underneath before filling
- **4’ wide** or less
- **Length** – depends on material available space
- Fill with **mix** of soil and organic matter (20%)
  - Topsoil bags (not potting soil!)
  - Organic matter: compost, leaf mold, or pine bark fines
  - In Chatham Co., Brooks Contractor BR-4 50:50 mix available at many garden centers
    - pH may be high, some soil crusting

Light Requirements

Hours of Direct Sun per Day

8-10



Fruit Crops

6-8+

Leaf and Root Crops

All vegetables need at least 6-8 hours of direct sunlight per day

Other Site Considerations

Accessibility

- Foot Traffic
- Tools
- Water Sources

Drainage

- Avoid low areas where water pools after rain

Near Water Source

- Vegetables need consistent water supply
- **1” water per week,** May-Sept.
- Water the soil, not the plant
  - Soaker hose
  - Drip lines

Adding Organic Matter

- Till in compost when garden is *first created*
  - 20% by volume
  - See Table 1-2 of Extension Gardener Handbook
  - https://content.ces.ncsu.edu/extension-gardener-handbook/1-soils-and-plant-nutrients#section_heading_7239

- Apply thin layers (1-3 in.) of organic matter or compost to the soil surface each year

Types of Organic Matter to Add

Clay Soils

- Compost
- Composted leaf mold
- Pine bark (<0.5 in. diameter)

Avoid

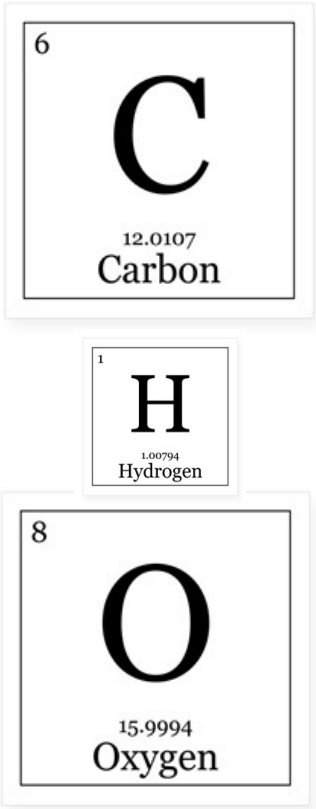
- Peat moss, sand, hardwood bark, wood chips, and pine straw for incorporation

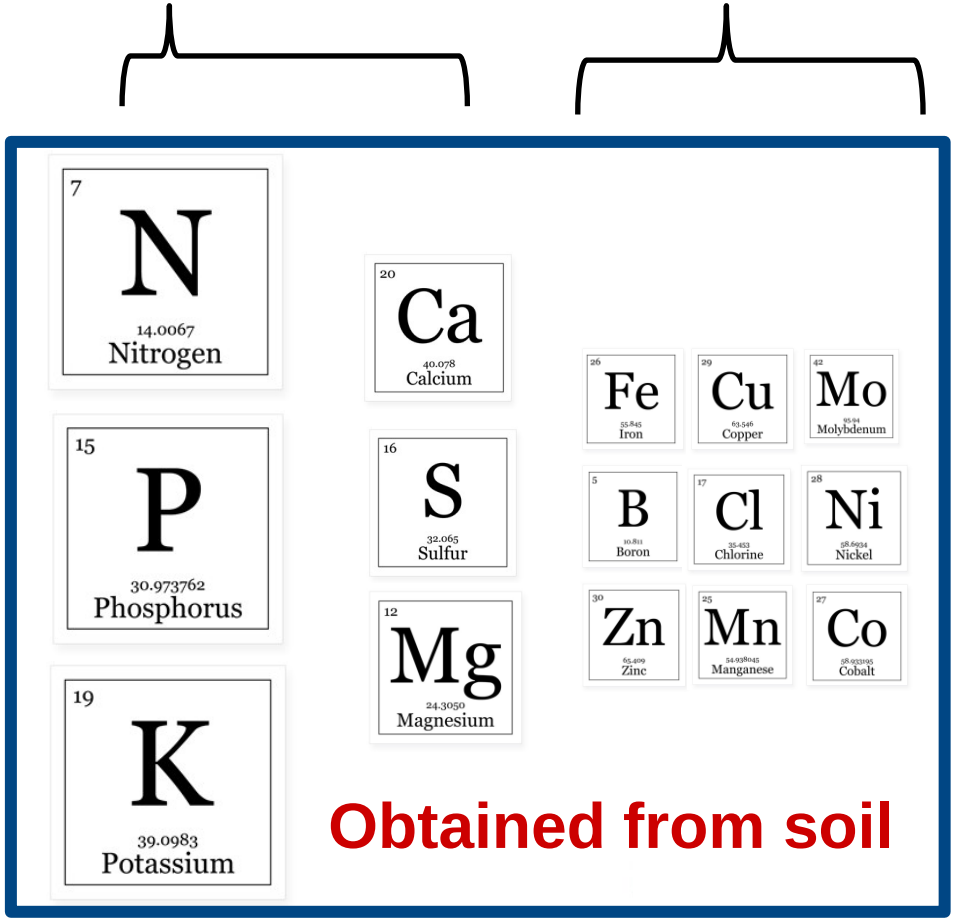
Plant Nutrients

- What is “plant food” ?
- Nutrients are chemicals necessary for an organism's biochemistry
- Nutrients help a plant *make* food

The Macro- and Micronutrients

Obtained from the atmosphere





Obtained from soil

Nutrient Deficiencies

Some nutrient deficiencies (and toxicities) are symptomatic in leaves

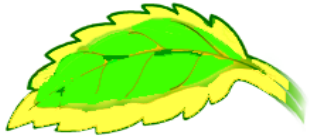
Symptoms

- Chlorosis or necrosis
- Entire leaf, margin, or interveinal
- Older vs. younger leaves

Requires tissue analysis for confirmation

- NCDA ($3)
- http://www.ncagr.gov/agronomi/uyrplant.htm

Univ. of Arizona



Marginal Chlorosis

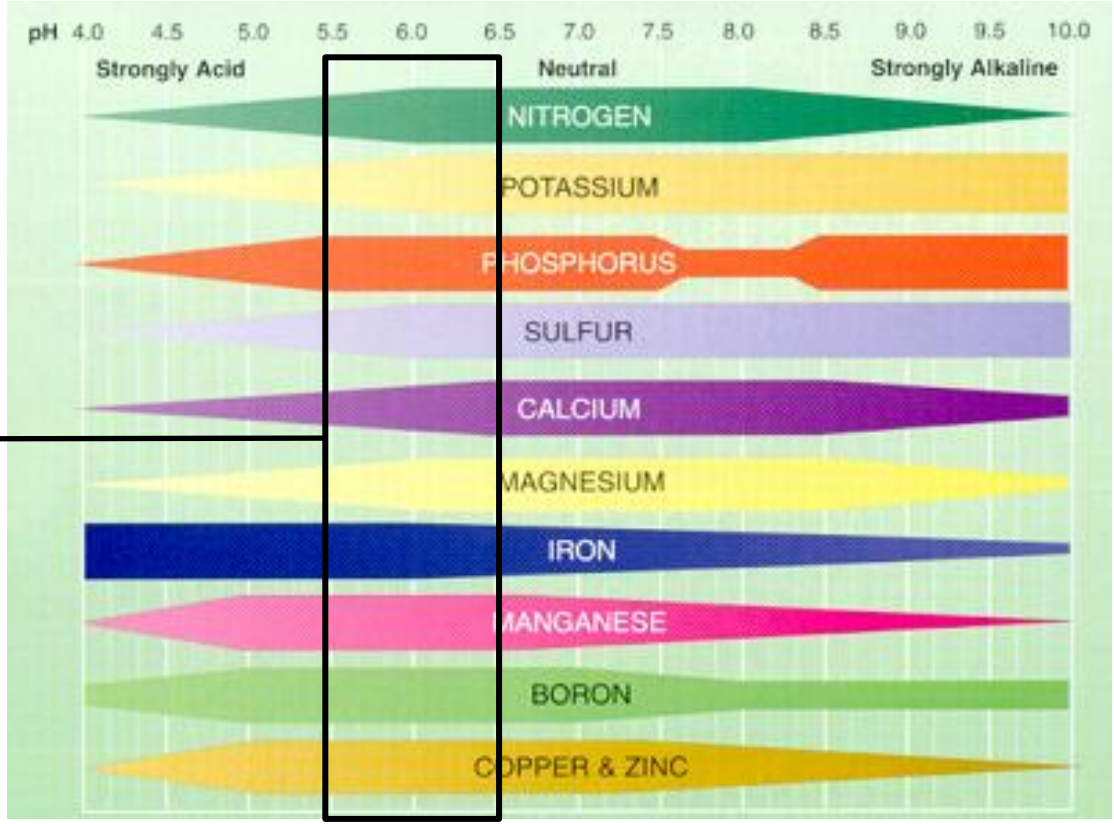
Interveinal Chlorosis

Immobile nutrient
Deficiency on younger leaves

Mobile nutrient
Deficiency on older leaves

How pH Affects Nutrient Availability

Many plants favor pH 5.5-6.5



How to determine nutrient & pH status?

Soil Testing from the NCDA!

- Only reliable method to assess soil nutrient content and pH
- Boxes & forms available from NC Cooperative Extension
- Analysis is *free* for NC residents (Apr.-Nov.)
  - $4/sample: Dec-Mar

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Master Gardener | Chatham County

Chatham MGVs deliver soil samples monthly during the free period!

Fertilizers vs. Amendments

Fertilizers

Compounds containing nutrients added to the soil to improve plant health

Fertilizers vary by:

- Source
- Release time
- Application method

Amendments

Compounds that improve soil structure or physical condition

Natural fertilizers such as manure can be both a fertilizer and an amendment

Nutrient Analysis Interpreting Fertilizers

Number on the bag represent % of:

N	P	K
↑	↑	↑
Nitrogen	Phosphorus	Potassium

For a 100 pound bag of fertilizer:

10 – 5 – 15

= 10 lbs. N, + 5 lbs. P, + 15 lbs. K, + 70 lbs. filler

Slide: Charlotte Glen – NCSU

Applying Fertilizer

Fertilize based on soil test recommendations

Incorporate in top few inches before planting

- **Row gardens:** 2/3 broadcast, remainder banded
- **Raised beds:** broadcast, scratch or rake in
- Make sure fertilizer is watered-in before planting

Banding Fertilizer

Side Dressing

Cabbage, peppers, potatoes, squash

Apply 1 Tbsp. high N fertilizer per plant halfway through growing season (NCSU) **OR**

0.5-1 lb. N/1000 ft^2 one month after emergence or transplanting (NCDA)

Okra

0.5-1 lb. N/1000 ft^2 when 2 ft. high (NCDA)

Tomatoes

0.5-1 lb. N/1000 ft^2 4 & 8 weeks after first bloom (NCDA)

Potatoes, Sweet Corn

1.5 -2 lb. N/1000 ft^2 one month after emergence or transplanting (NCDA)

Adding Lime to Raise Soil pH

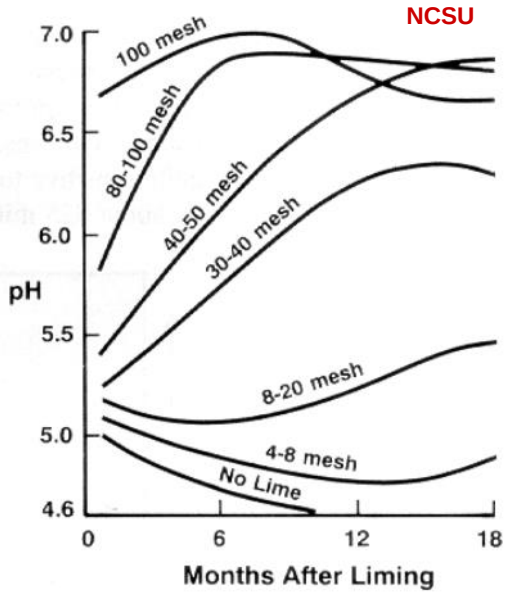
Only add lime based on soil test results!

Lime Materials

- Calcitic lime ($CaCO_3$, $Ca(OH)_2$, CaO)
- Dolomitic Lime ($MgCO_3$)

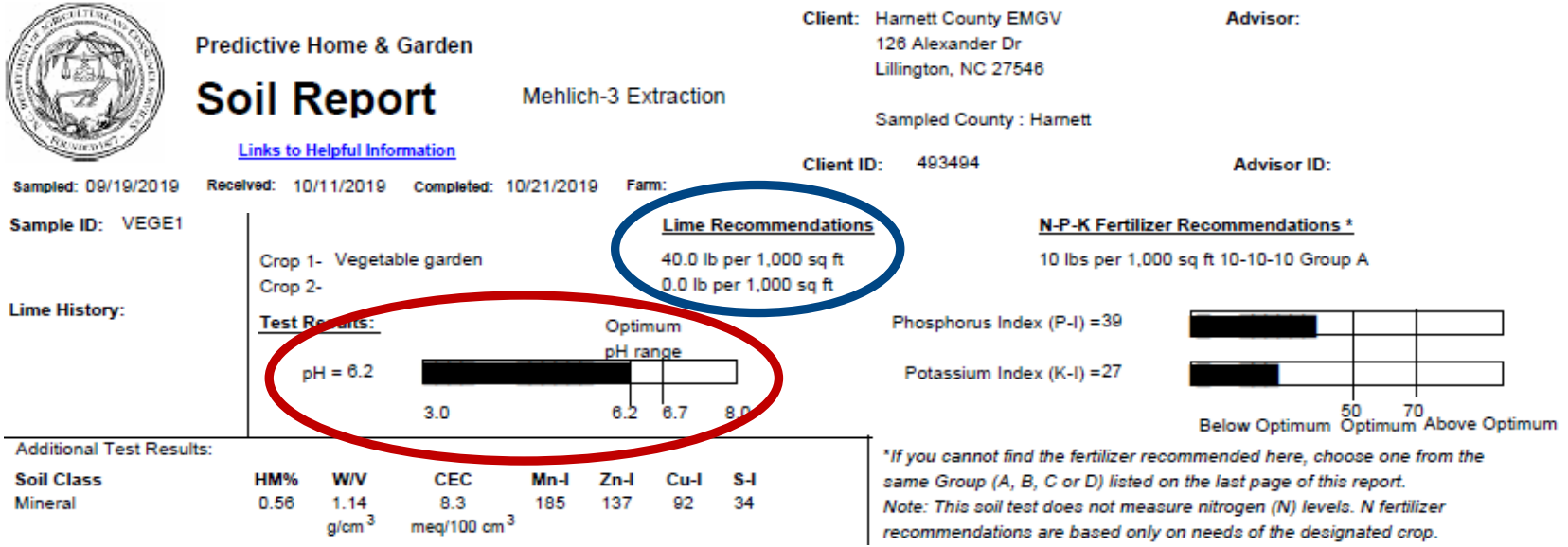
Finer grains, faster reaction

- Most agricultural lime is 8-20 mesh
- 4-6 months to react & raise pH



Soil Acidity & Liming: Basic Information for Farmers and Gardeners
https://content.ces.ncsu.edu/soil-acidity-and-liming-basic-information-for-farmers-and-gardeners

Lime Recommendation



Predictive Home & Garden

Soil Report

Mehlich-3 Extraction

Links to Helpful Information

Client: Harnett County EMGV
126 Alexander Dr
Lillington, NC 27546

Sampled County : Harnett

Advisor:

Client ID: 493494

Advisor ID:

Sampled: 09/19/2019 Received: 10/11/2019 Completed: 10/21/2019 Farm:

Sample ID: VEGE1

Crop 1- Vegetable garden
Crop 2-

Lime History:

Lime Recommendations
40.0 lb per 1,000 sq ft
0.0 lb per 1,000 sq ft

N-P-K Fertilizer Recommendations *
10 lbs per 1,000 sq ft 10-10-10 Group A

Test Results:

pH = 6.2

Optimum pH range

3.0 6.2 6.7 8.0

Phosphorus Index (P-I) =39

Potassium Index (K-I) =27

50 70
Below Optimum Optimum Above Optimum

Additional Test Results:

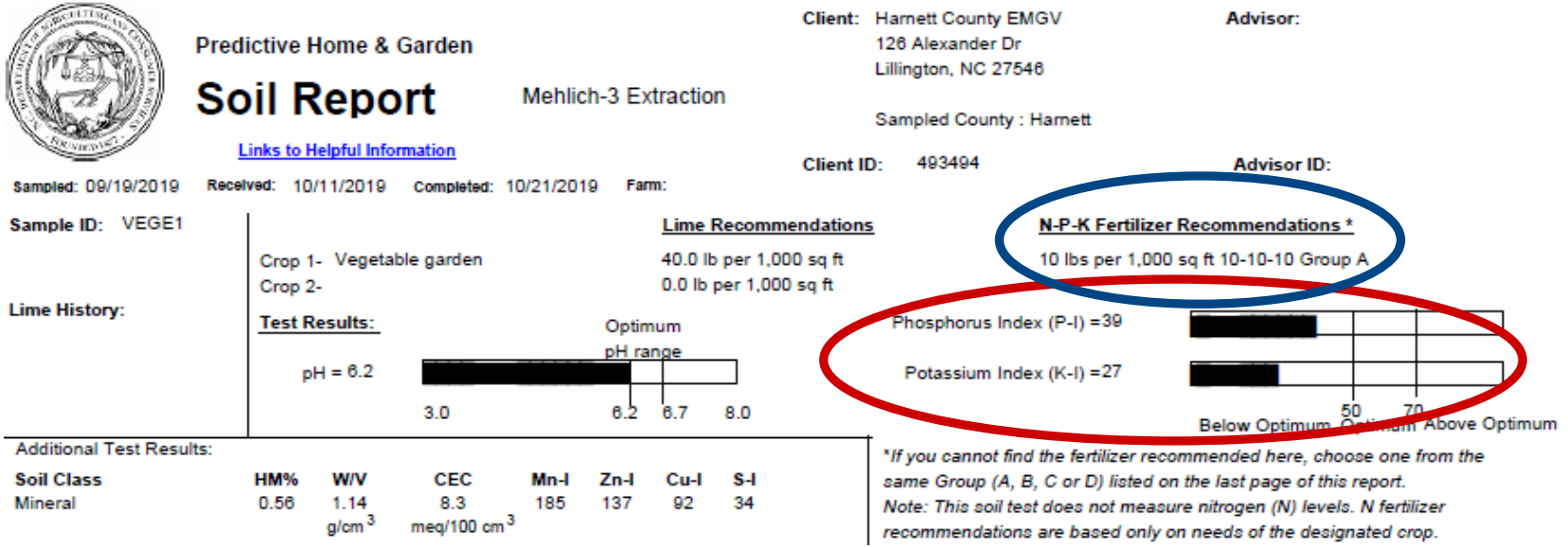
Soil Class	HM%	W/V	CEC	Mn-I	Zn-I	Cu-I	S-I
Mineral	0.56	1.14 g/cm^3	8.3 meq/100 cm^3	185	137	92	34

*If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.
Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

pH level – gives number and shows where your pH is in comparison to target range

Lime recommendation – for dolomitic or agricultural/garden lime, pounds per 1000 ft.^{2}

Fertilizer Recommendation



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Phosphorous and Potassium Index – between 50 and 70 is ideal, lower than 50 will recommend fertilizer

Fertilizer Recommendation – in pounds per 1000 ft.^{2}

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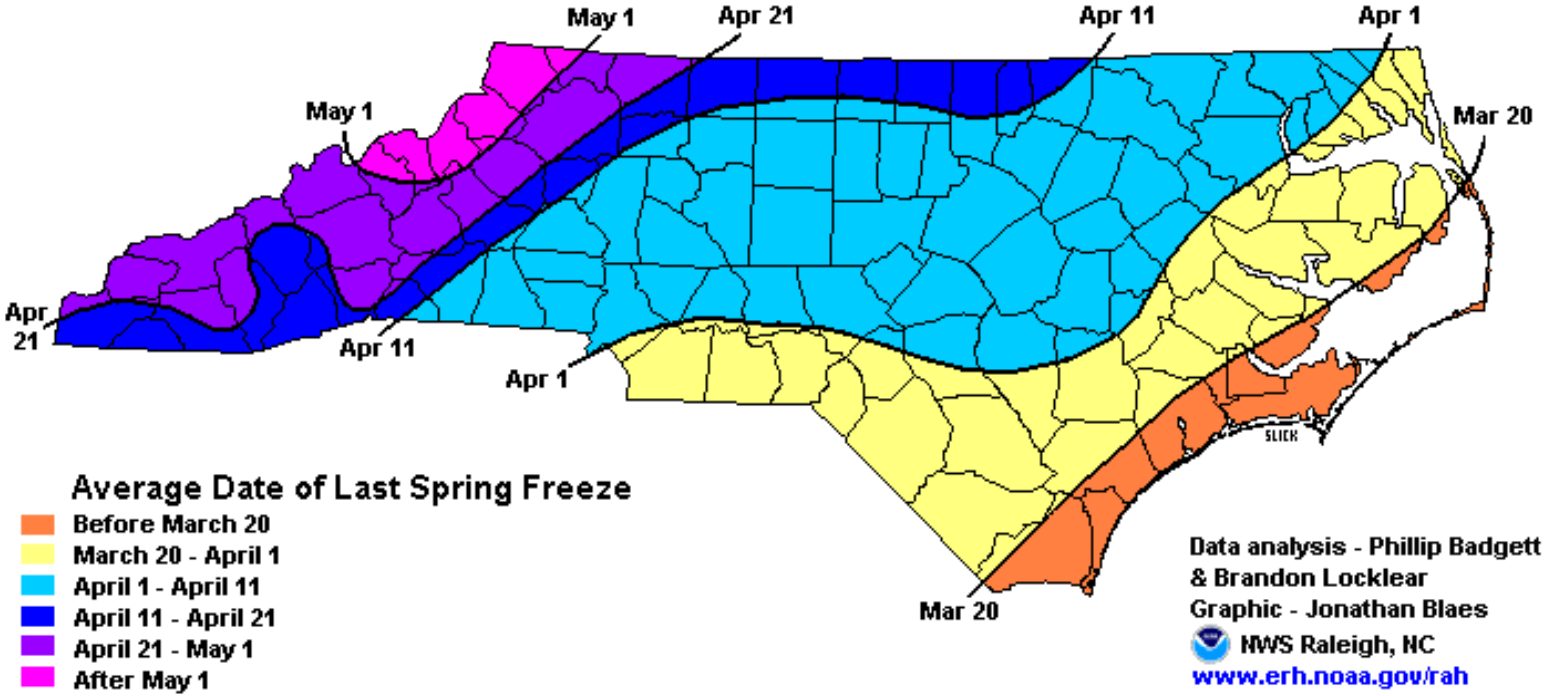
Average Last Frost Date



NC COOPERATIVE EXTENSION

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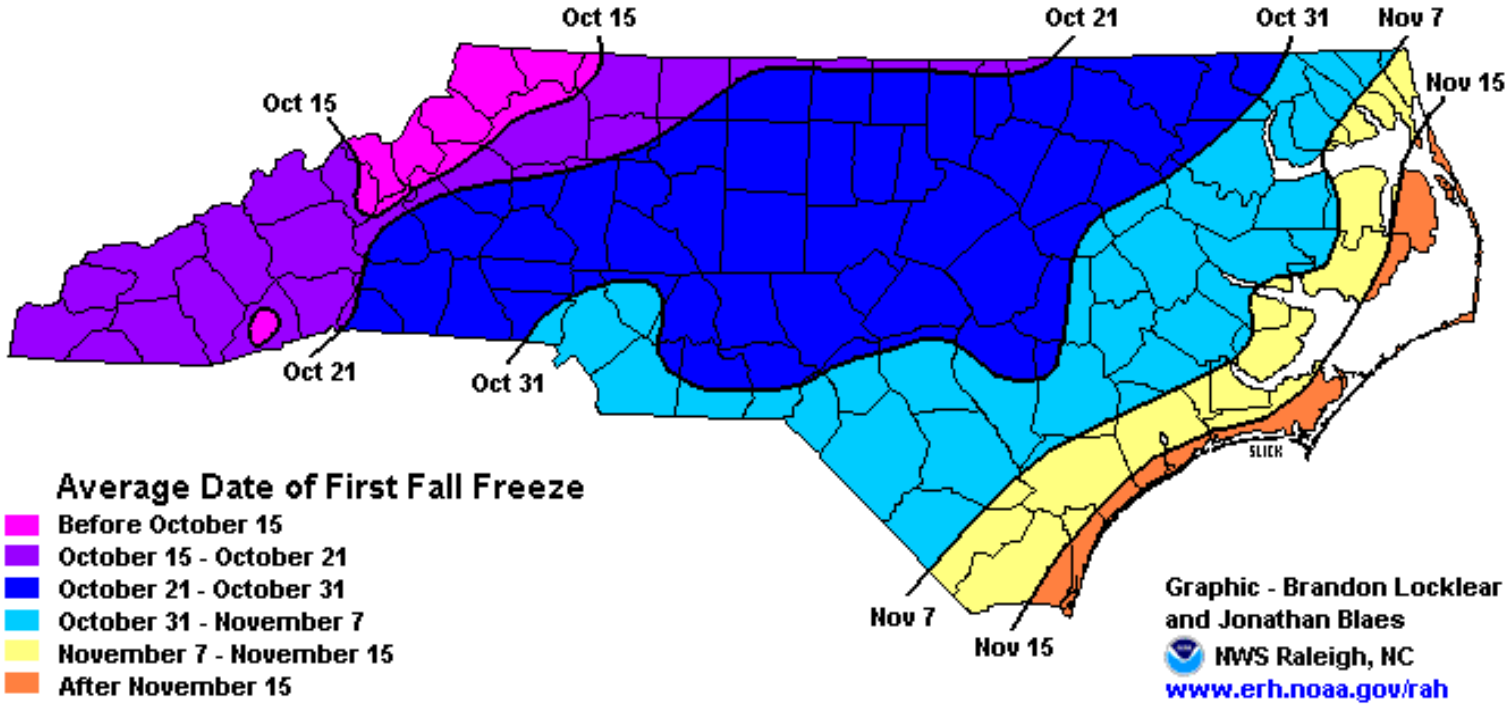
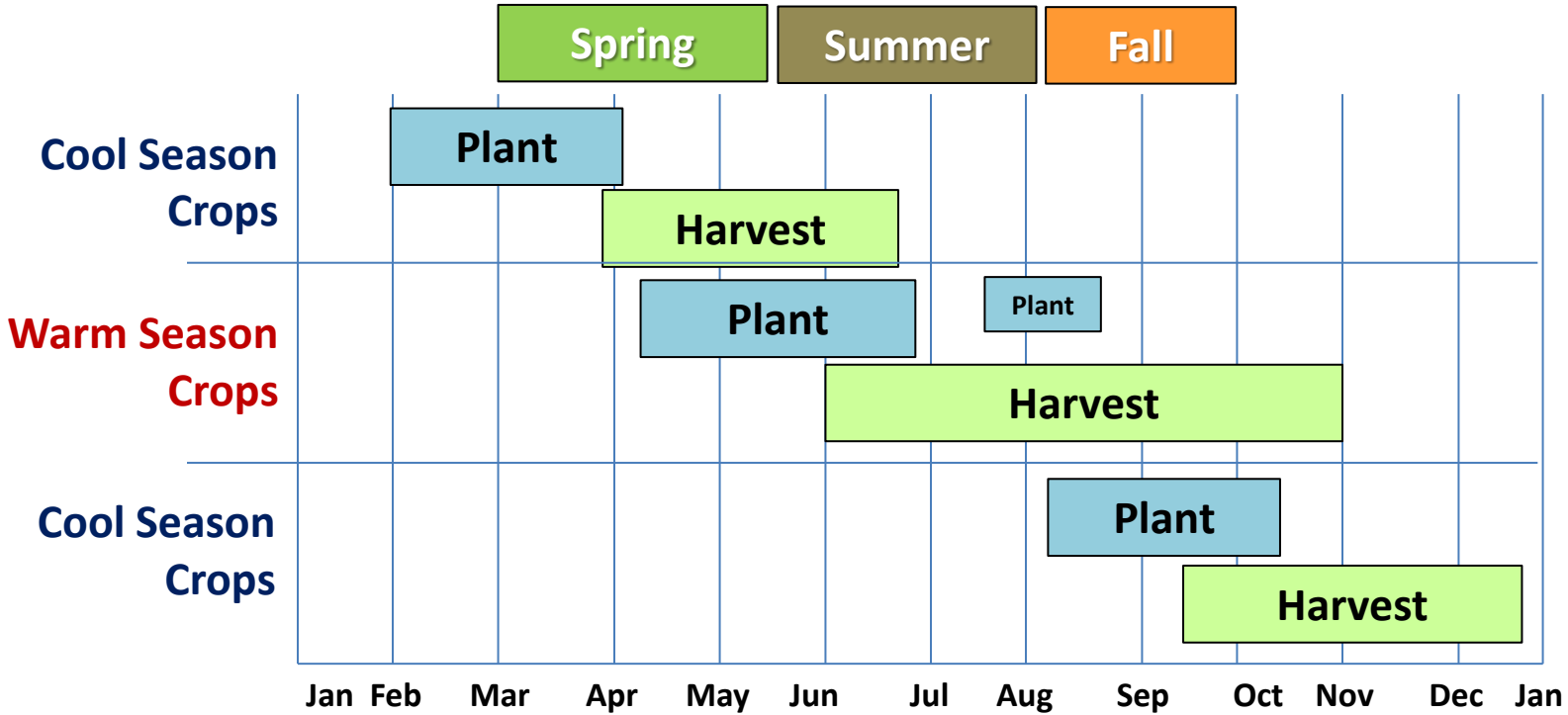


Planting Seasons

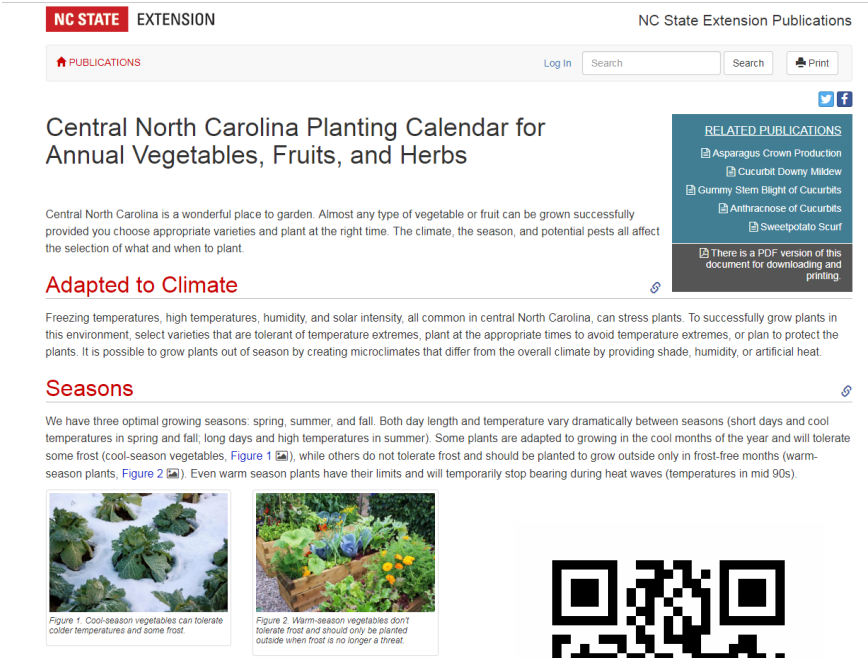


Slide: Charlotte Glen
NC State Extension

Planting Calendars

- Use Extension planting calendars
- Do not rely on seed packets for regionally-accurate information!
- Refer to direct planting, not seed starting

https://go.ncsu.edu/veggiecalendar



NC STATE EXTENSION — NC State Extension Publications

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Central North Carolina Planting Calendar for Annual Vegetables, Fruits, and Herbs

RELATED PUBLICATIONS
- Asparagus Crown Production
- Cucurbit Downy Mildew
- Gummy Stem Blight of Cucurbits
- Anthracnose of Cucurbits
- Sweetpotato Scurf

There is a PDF version of this document for downloading and printing.

Central North Carolina is a wonderful place to garden. Almost any type of vegetable or fruit can be grown successfully provided you choose appropriate varieties and plant at the right time. The climate, the season, and potential pests all affect the selection of what and when to plant.

Adapted to Climate

Freezing temperatures, high temperatures, humidity, and solar intensity, all common in central North Carolina, can stress plants. To successfully grow plants in this environment, select varieties that are tolerant of temperature extremes, plant at the appropriate times to avoid temperature extremes, or plan to protect the plants. It is possible to grow plants out of season by creating microclimates that differ from the overall climate by providing shade, humidity, or artificial heat.

Seasons

We have three optimal growing seasons: spring, summer, and fall. Both day length and temperature vary dramatically between seasons (short days and cool temperatures in spring and fall; long days and high temperatures in summer). Some plants are adapted to growing in the cool months of the year and will tolerate some frost (cool-season vegetables, Figure 1), while others do not tolerate frost and should be planted to grow outside only in frost-free months (warm-season plants, Figure 2). Even warm season plants have their limits and will temporarily stop bearing during heat waves (temperatures in mid 90s).

Figure 1. Cool-season vegetables can tolerate colder temperatures and some frost.

Figure 2. Warm-season vegetables don't tolerate frost and should only be planted outside when frost is no longer a threat.

NC COOPERATIVE EXTENSION

Table 1. Garden planting calendar for vegetables, fruits, and herbs in Central North Carolina.

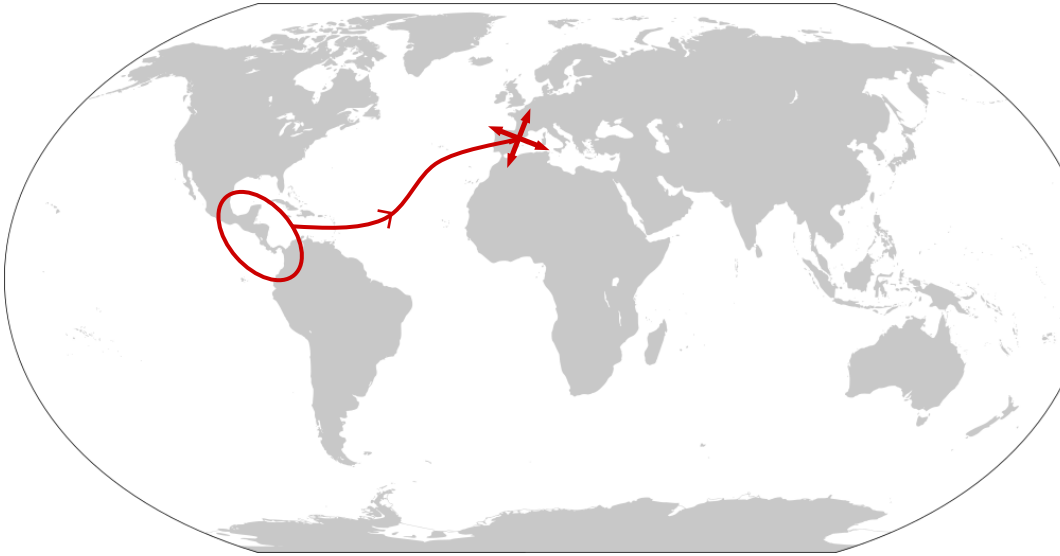
Fruit, Herb, or Vegetable	Days to Harvest (from seed unless otherwise noted)	Distance Between Plants (inches)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
			1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Artichokes, globe	T = 1 year	30						T	T	T																
Artichokes, Jerusalem*	Tu = 6–8 months	9–12						Tu	Tu	Tu																
Arugula	40–50	6–9			S	S	S	S									S	S	S	S						
Asparagus	C = 2 years	18				C	C	C																		
Basil	T = 14–35 S = 50–75	2–8									S,T	S,T	S,T	S,T	S,T	S,T										
Beans, lima/bush	65–80	6								S	S	S	S	S	S	S										
Beans, lima/pole	75–95	6								S	S	S	S			S										
Beans, snap/bush	50–55	2						S	S	S	S	S	S	S	S	S	S	S	S	S						
Beans, snap/pole	65–70	6							S	S	S	S	S	S	S	S	S	S	S	S						
Beets	55–60	2					S	S	S							S	S	S	S							
Broccoli	T = 70–80	18				T	T	T	T								T	T	T							
Brussels sprouts	T = 40–50 S = 90–100**	14–18													T	T	T	T								
Cabbage	T = 63–75 S = 90–120**	12			T	T	T	T	T							T	T	T	T							
Cabbage, Chinese	T = 45–55 S = 75–85	12						S,T									S	S		T	T					
Fruit, Herb, or Vegetable	Days to Harvest (from seed unless otherwise noted)	Distance Between Plants (inches)	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
			1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15

https://go.ncsu.edu/veggiecalendar

Tomatoes

Solanum lycopersicum (Solanaceae)

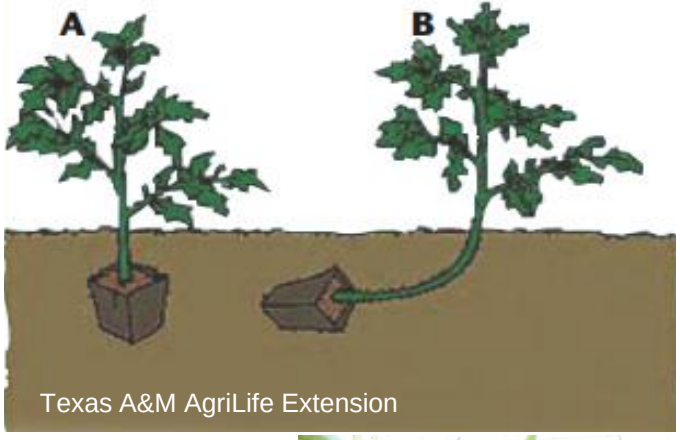
Buzz Pollination



Relatives: Potato, eggplant, pepper, nightshade

What you eat: Mature fruit (botanical berries)

Planting Tomatoes



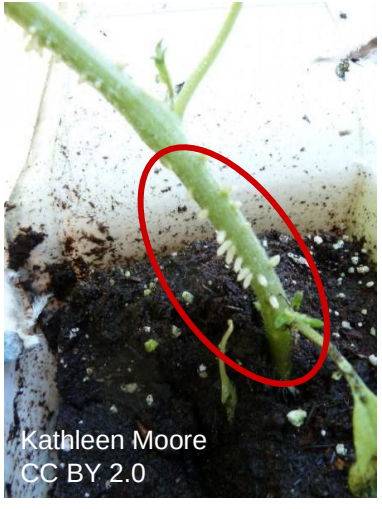
Texas A&M AgriLife Extension

Start Seeds Indoors

- ¼ in. deep
- Seed heating mat 65-85° F
- 5-7 weeks before last frost (Feb-Mar)
- https://go.ncsu.edu/veggieseedresources

Transplants (purchased or grown yourself)

- May* to July, August
- Plant a little deeper than rootball, on side if leggy
- 18-24” apart, 3’ between rows


Kathleen Moore
CC BY 2.0

Planting Tomatoes

Cages

- Less pruning (suckering) required
- Allow 6 in. openings for accessibility

Stakes

- Train to 1 or 2 stems, remove suckers
- 6-8’ tall, 8-12” deep

Suckering Tomatoes

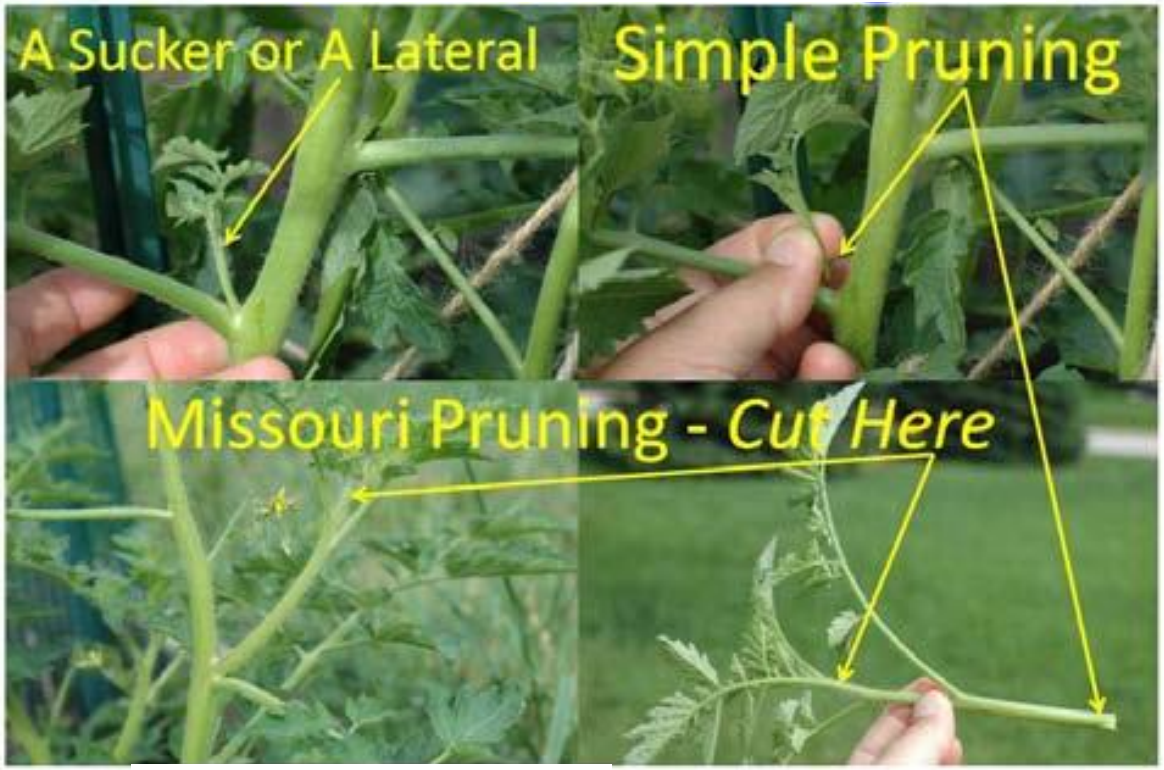
Prune lateral shoots on staked tomatoes

Indeterminate Cultivars

- Remove all suckers

Determinate Cultivars

- Remove suckers below first fruit cluster



Gary Gao Ohio State Extension

Growing Tomatoes

Fertilizer

- **Soil Test!**
  - If unavailable: 3 lbs. 5-10-10 or 7.5 lbs. 3-4-3 (organic) per 100 ft^2
  - pH 6.0-6.5
- **Side Dressing**

  0.5 lb. actual N /1000 ft^2 4 weeks and 8 weeks after transplant

  = 2 lbs. calcium nitrate or 2-3 lbs. of blood meal per 100 ft^2

Watering

- 1-1.5” per week equivalent
- Moisten to a depth of 6 inches
- Consistent moisture to reduce Blossom End Rot
- Organic mulches

Choosing Tomato Cultivars

Growth Habit

- Dwarf (containers*)
- Compact/Determinate
- Indeterminate

Fruit Characteristics

- Color
- Size
- Fresh vs. Paste
- Acidity

Ripening Period

- Early, mid, late
- Determinate vs. indeterminate

Genetics

- Open Pollinated
- Hybrid

Disease Resistance

*https://chatham.ces.ncsu.edu/fall-vegetable-gardening-in-containers/fall-vegetable-gardening-in-containers-resources/

Tomato Disease Resistance

Look for abbreviations

V – Verticilim Wilt

F – Fusarium Wilt

(RK)N – Nematodes

EB – Early Bight

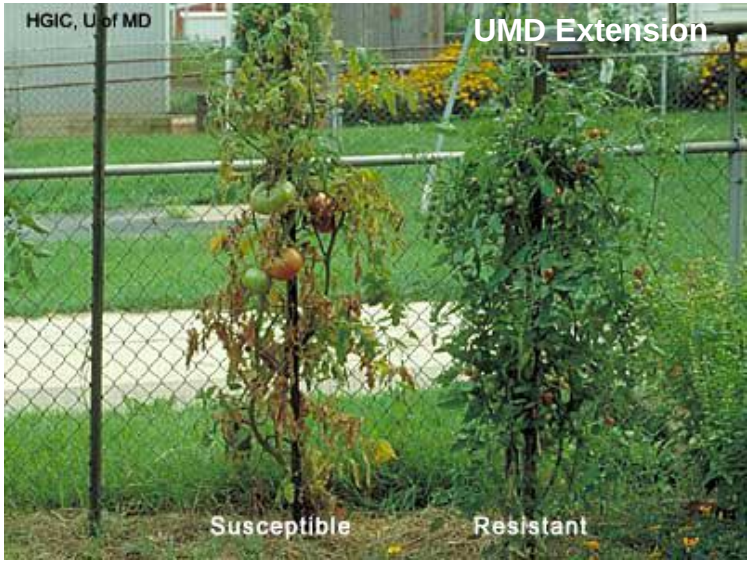
LB – Late Blight

T(MV) – Tobacco Mosaic Virus

S – Septoria leaf spot

Bacterial wilt (grafted)

- Extension Master Gardener Fundraiser next year!



What's the Matter with my 'Mater?

Registration opening soon!

- July 5, 2023
  - In-person: 9:00-11:00
  - Online: 6:00 – 7:30
- Subscribe to my newsletter for updates on registration and other upcoming webinars!

Diagnosis and Management of Pests and Diseases of Tomatoes

Late blight of tomato. Photo by Dr. Inga Meadows, NC State University.

Extension Gardener Workshop

Vegetable Boot Camp (Part 5 of 6)

Access to fresh tomatoes is among the most rewarding aspects of home vegetable gardening, and at time the most challenging. Warm nights, high rain and humidity, and resulting pest and disease pressure can frustrate even experienced gardeners.

Tomato Cultivars

Cherry

- ‘Sweet 100’
- ‘Sweet Million’
- ‘Sun Gold’
- ‘Juliet’

Main Crop Hybrids

- ‘Celebrity’
- ‘Better Boy’
- ‘Floramerica’

Early Ripening

- ‘Early Girl’
- ‘Bush Early Girl’

For Containers

- ‘Husky Gold’ & ‘Husky Pink’
- ‘Tiny Tim’

Heirloom

- ‘German Johnson’
- ‘Cherokee Purple’
- ‘Brandywine’
- ‘Green Zebra’

Harvesting Tomatoes

Harvest

- 60-85 days after transplant
- Full color but still firm
- Red pigment degrades > 86°F
- Green tomatoes can ripen off vine if blushed

Storage

- On the counter
- Light not a factor
- Respond to ethylene (climacteric fruit)

Peppers

Capsicum spp. (Solanaceae)

C. annum

- Bell
- Poblano
- Jalapeno
- Many others

C. baccatum

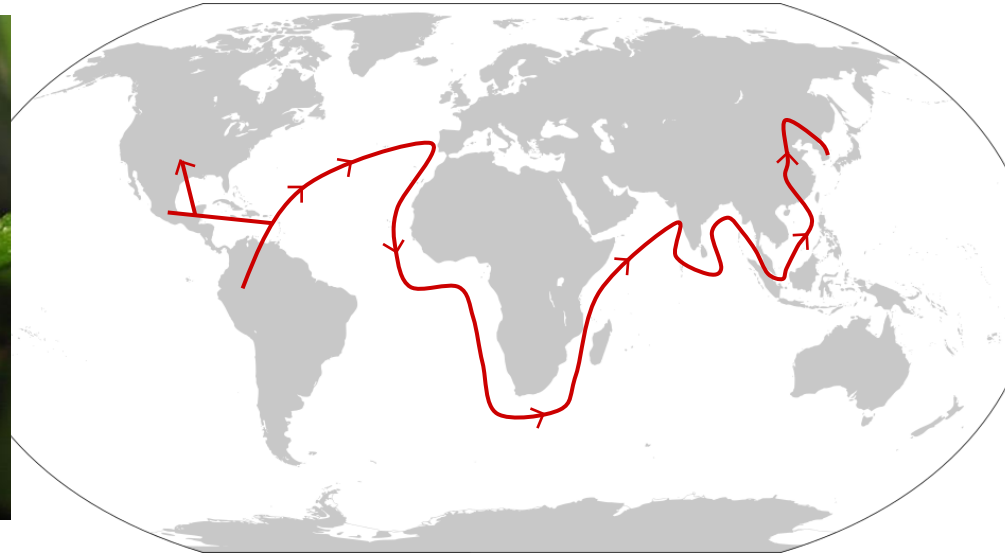
- Aji Amarillo

C. chinense

- Habenero
- Scotch bonnet

C. frutescens

- Piri piri
- Tabasco
- Xiaomila



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What you eat: **Fruits (botanical berries)**

Planting Peppers

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- ¼ in. deep
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- 6-8 weeks before last frost (Feb-Mar)
- https://go.ncsu.edu/veggieseedresources

Transplants (purchased or grown yourself)

- Mid-April through mid-June
- Plant as deep as root ball or pot
- 12-18 inches apart

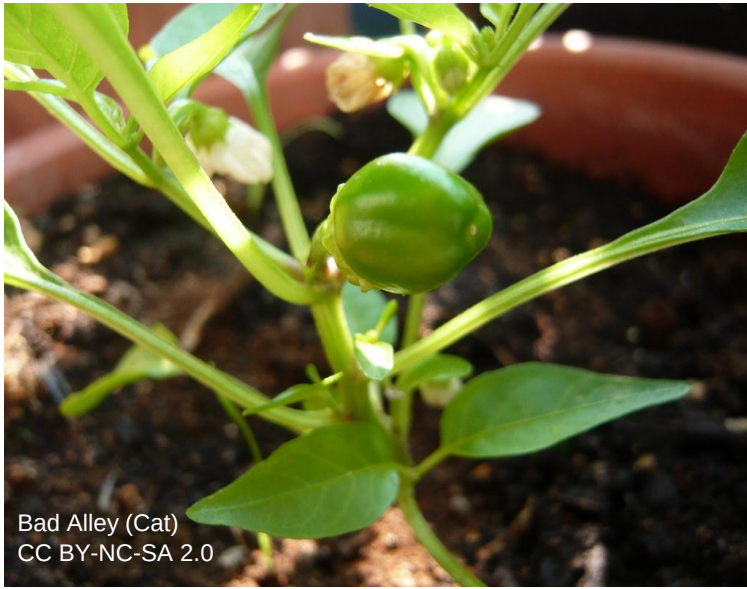
Growing Peppers

Fertilizer

- Soil Test
  - If unavailable 3 lbs. 5-10-10 per 100 ft^2
  - pH 5.8-6.5
- **Side Dressing**

  0.5 lb. actual N /1000 ft^2 1 month after transplant*

  = 0.5 lbs. of blood meal or 0.3 lbs. $CaNO_3$ per 100 ft^2



Watering

- 1” per week equivalent
- Moisten to a depth of 6 inches
- Critical during fruit development
- Consistent moisture to reduce Blossom End Rot

Growing Peppers

Ratooning

- If flower/fruit production declines by late summer…
- Cut to 6-8” to induce re-growth
- Fertilize 2-3 lbs. 5-0-10, 4-0-8, or 10-0-20 per 100 ft.^{2}
- Harvest until first frost

NC COOPERATIVE EXTENSION

Open Pollinated

Bell Pepper Cultivars

‘Jupiter’

‘Purple Beauty’

‘Capistrano’

NC COOPERATIVE EXTENSION

Hybrid

Bell Pepper Cultivars

‘Giant Marconi’

‘Valencia’

‘Lilac’

NC COOPERATIVE EXTENSION

Open Pollinated

Hot Pepper Cultivars

‘Anaheim’

‘Carolina Cayenne’

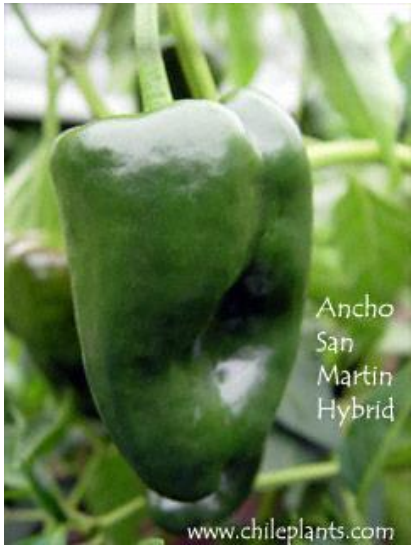
‘Jalapeño M’

Hybrid

Hot Pepper Cultivars

‘Tigerpaw NR’

Habanero



‘San Martin’

Poblano/Ancho

‘TAM Jalapeño’

Picking Peppers

Harvest

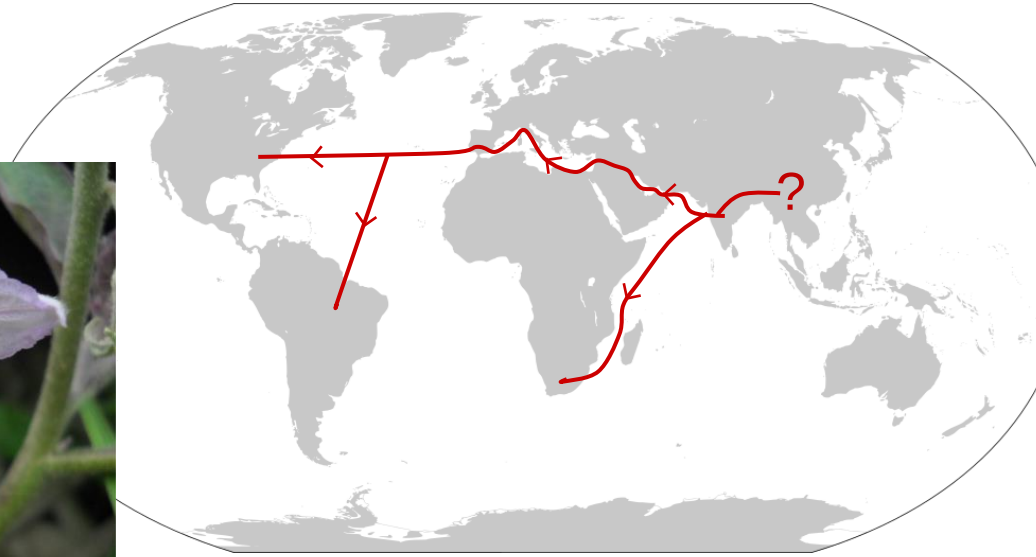
- 75-80 days after transplant
- Use a knife or pruners (delicate stems)
- Be careful with hot peppers!
- **Bell Peppers** Green or just after mature color is achieved
- **Jalapenos** When fruit turns dark green
- **Hot peppers** When color & size of cultivar is achieved

Storage

- 45-50°F up to two weeks
- Air dry (hot peppers)

Eggplant (Aubergine, Brinjal)

Solanum melongena (Solanaceae)



Relatives: potato, tomato, nightshade, pepper

What you eat: Immature fruits (botanical berries)

Eggplant…ing

Start Seeds Indoors

- ¼ in. deep
- Seed heating mat 75-85° F
- 8 weeks before last frost (Mid-Feb.)
- https://go.ncsu.edu/veggieseedresources

Transplants (purchased or grown yourself)

- Mid-April through mid-June, August
- Plant as deep as root ball or pot
- 18-24 inches apart

Growing Eggplant

Ratooning

- First crop competed by July
- Cut to 6-8” to induce re-growth
  - Leave 2-3 leaf axils
- Fertilize 2-3 lbs. 5-0-10, 4-0-8, 10-0-20 or other 1:2 N:K per 100 ft.^{2}
- Harvest until first frost


SE US Veg. Crop Handbook

NC COOPERATIVE EXTENSION

Italian-Type

Eggplant Cultivars

‘Black Beauty’

‘Dusky’

NC COOPERATIVE EXTENSION

East Asian-Type

Eggplant Cultivars

‘Ichiban’

‘Ping Tung Long’

NC COOPERATIVE EXTENSION

South Asian-Type

Eggplant Cultivars

'Calliope' (Indian)

'Kermit' (Thai)

Harvesting Eggplant

Harvest

- 60-90 days after transplant
- Sufficient size, glossy color
- Indentation remains when pressed
- Use a knife or pruners (thick pedicels)
- 1-2 times per week

Storage

- 45-50°F up to two weeks

Southern Peas (cowpeas)

Vigna unguiculata (Fabaceae)

Field Pea

- Vining, dark cooking liquid

Crowder Pea

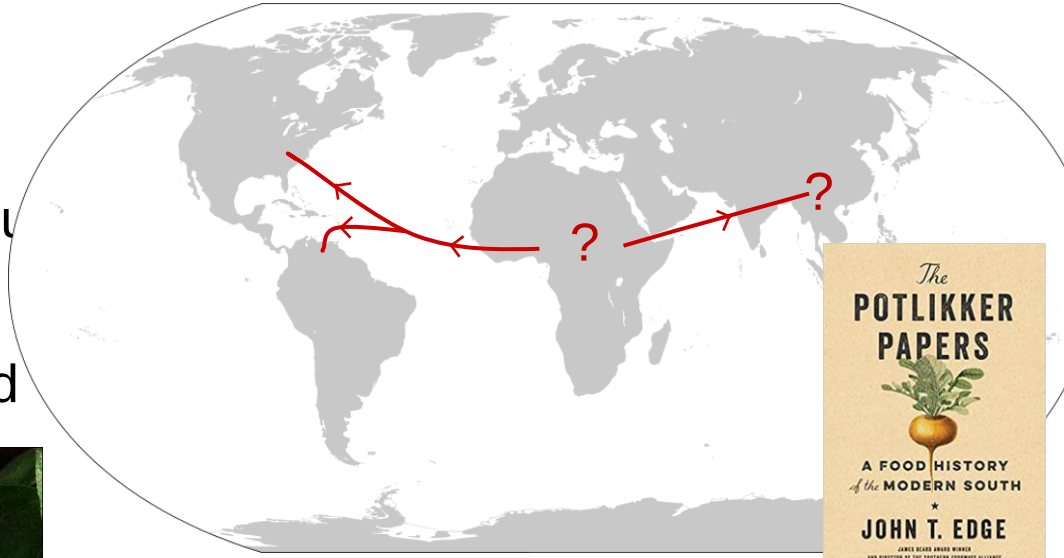
- Starchy seeds, dark cooking liqu

Cream Pea

- Small plants, light cooking liquid

Back-eyed Pea

- Intermediate



Relatives: **peas, beans, all other legumes**

What you eat: **Immature seeds**

Planting Southern Peas

Plant Seeds Directly Outdoors

- Must have warm soils, > 60 ° F
- ¾ - 1 ½ in. deep
- 3-6 in. apart within rows, 3-4’ between
- Two weeks after last frost
  - May – June, Aug.
- Succession plant every 3 weeks

Growing Southern Peas

Fertilizer

Soil Test

- If unavailable 2 lbs. 5-10-10 per 100 ft^2
- Careful: too much N = low yield
- pH 5.8-7.0

Watering

- Water after planting
- Irrigation normally not necessary

NC COOPERATIVE EXTENSION

Southern Peas

Blackeye Cultivars

'California Blackeye #5'

'Purple Hull Pinkeye'

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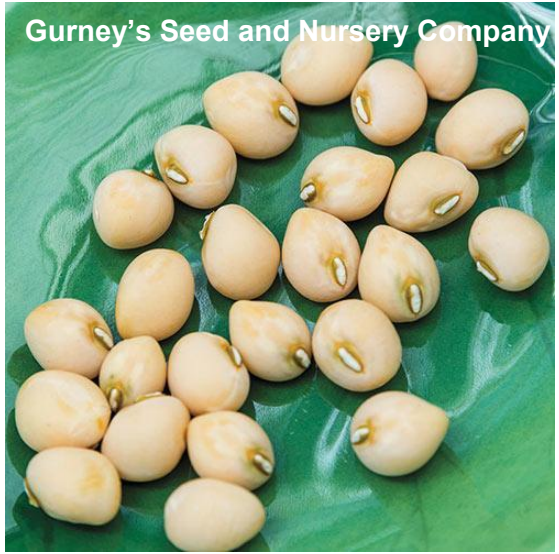
Southern Peas

Cream and Crowder Cultivars



‘Zipper Cream’

‘Mississippi Purple’

‘Colossus 80’

Harvesting Southern Peas

Harvest

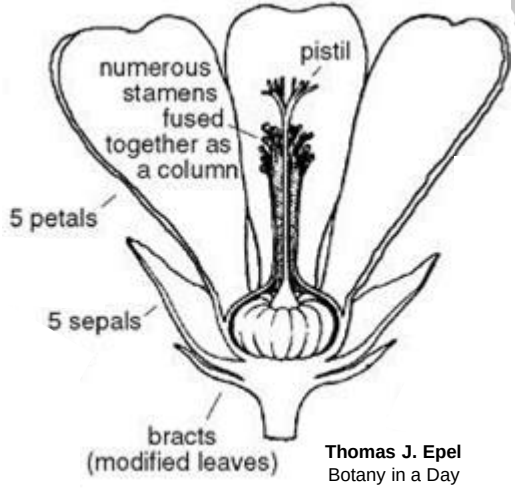
- 55-125 days after planting
- Produce for 3-5 weeks
- Easily shelled, seeds swollen in pod
- Before pods start to dry, change color
- Keep in shade while harvesting
- Shell after harvesting

Storage

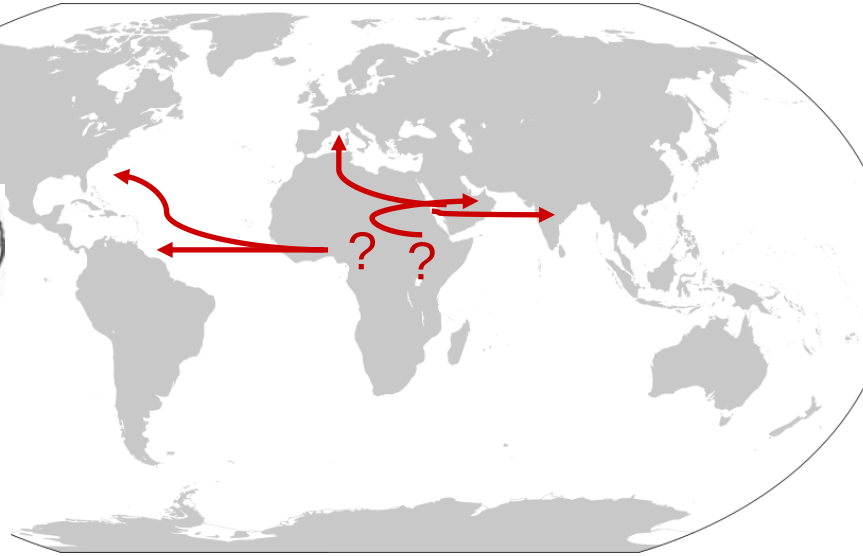
- Blanch, cool, and freeze fresh peas
- Or allow to dry on plant

Okra

Abelmoschus esculentus (Malvaceae)



Thomas J. Epel
Botany in a Day



Relatives: **hibiscus, cotton, cacao**

What you eat: **immature fruits**

Planting Okra

Seed

- Soils ≥ 70° F
- ¾ in. – 1” deep, 2-3” apart
- Thin to 12” spacing
- May and August

Transplants

- Start indoors in late March


Sow True Seed


nonelvis
Cc BY-NC-SA
2.0

Growing Okra

Fertilizer

- Soil Test
- pH 5.8-6.5
- **Side Dressing**

  0.5-1 lb. actual N /1000 ft^2 when 2 ft. high

  = 5-10 lbs. of blood meal per 1000 ft^2

Watering

- 1” per week equivalent
- Moisten to a depth of 6 inches

Growing Okra

Ratooning

- Flower/Fruit production may decline by late summer
- Cut to 6-8” to induce regrowth
- Fertilize 2-3 lbs. 5-0-10, 4-0-8, or 10-0-20 per 100 ft.^{2}
- Harvest until first frost

Okra Cultivars

‘Clemson Spineless 80’

‘Red Burgundy’

‘Cajun Delight’

Okra Cultivars

‘Cow Horn’

‘Lee’

‘Annie Oakley II’

Harvesting and Storing Okra

Harvest

- Continuous, every other day
- Fruits 2-3 in. long (most varieties)
  - 60-70 days from seed
- Use a knife or pruners
- Wear gloves

Joi Ito, Flickr
CC BY - 2.0

Storage

- Short refrigerator life
- Do not wash before storing
- Pickling: https://foodsafety.ces.ncsu.edu/fermentation-and-pickling/

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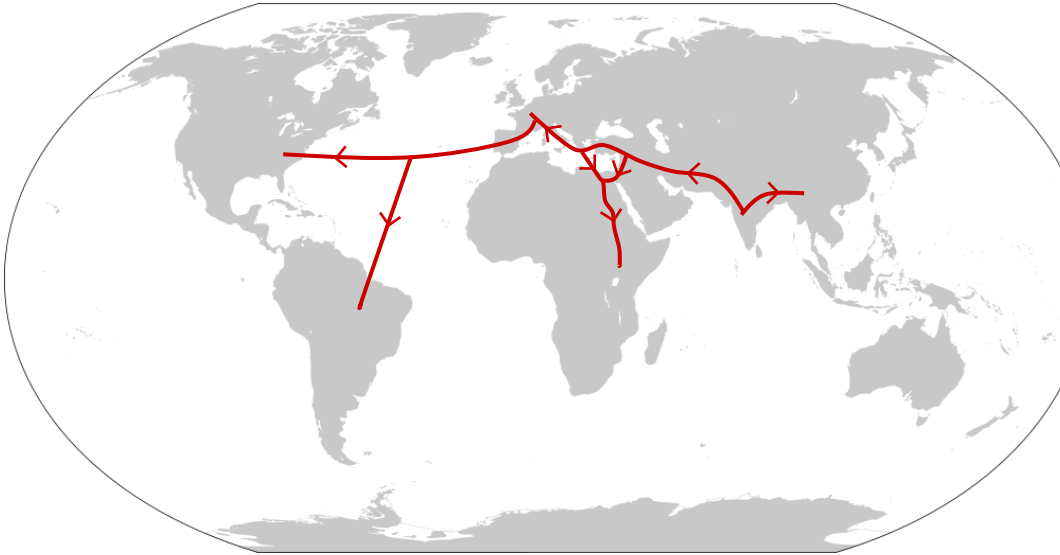
Cucumber

Cucumis sativus (Cucurbitaceae)



Relatives: Squashes, pumpkins, gourds

What you eat: Immature fruits (pepo)

Cucumber

Cucumis sativus (Cucurbitaceae)

Female (Pistillate) Flower

Male (Staminate) Flower

Neil Bromhall
https://completegarden.wordpress.com/

Monoecious, Protandrous Flowers

- Male flowers produced in greater numbers during early development
- No fruit initially – don’t worry!

Planting Cucumber

Seed

- Soils ≥ 70° F
- ½ ” deep, 2-3” apart
  - Thin to 8-12” when vines 4-5”
- Mid-Apr. – Mid-Aug.
- **Spreading:** 5’ between rows
- **Trellising:** 3’ between rows

Transplants

- Start 2-3 weeks before last frost (late March)
- Plant at final spacing as above

Growing Cucumber

Fertilizer

- Soil Test
  - If unavailable, 3 lbs. of 5-10-10 per 100 ft.^{2}
  - pH 6.0-6.5
- **Side Dressing**

  0.5 lb. actual N per 100 ft. of row

  = 5 lbs. of blood meal or

  2 lbs. calcium nitrate per 100 ft· row

Barbara H. Smith
Clemson Extension

Watering

- Shallow root system
- Mulch helps: pine straw or mulch
- Water soil, not leaves (disease)

Cucumber Cultivars

Pickling

Slicing

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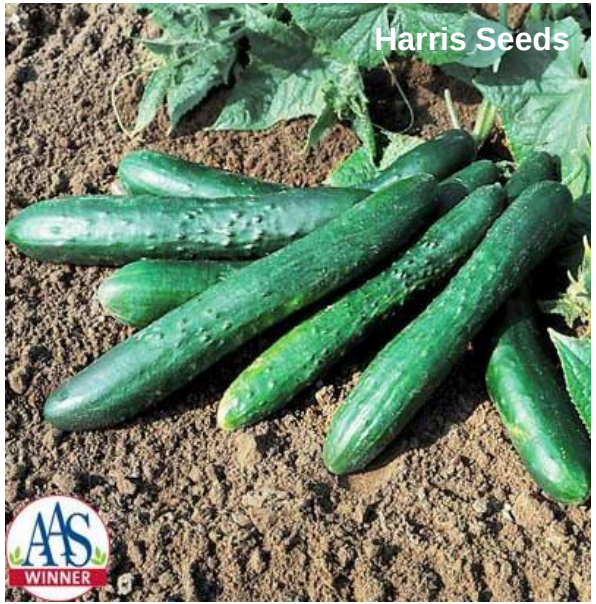
Vining Slicing

Cucumber Cultivars

‘Dasher II’



‘Sweet Success’

‘Straight 8’

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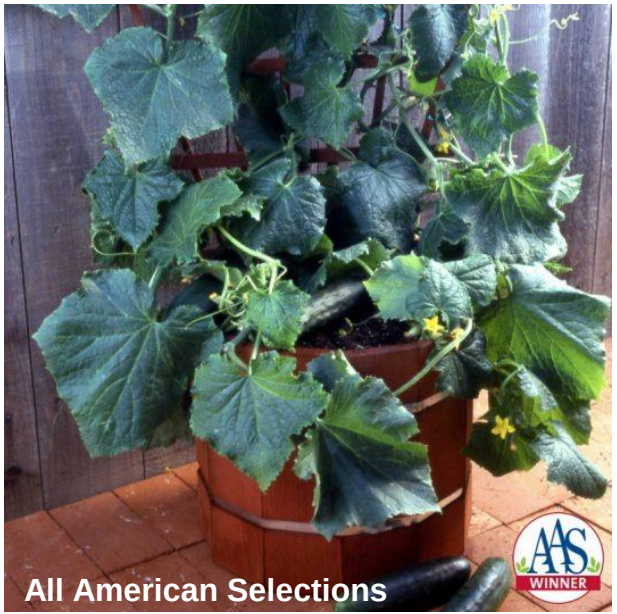
Bush Slicing

Cucumber Cultivars

‘Fanfare’



‘Salad Bush’

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Pickling

Cucumber Cultivars

‘Calypso’

‘National Pickling’

Harvesting and Storing Cucumber

Harvest

- Continuous
- Before skin starts to yellow
- Pickling: 2-6 in. long
- Slicing: 6-10 in. long
- Use a knife or pruners

Storage

- Refrigerate for up to a week
- Pickling: https://foodsafety.ces.ncsu.edu/fermentation-and-pickling/

Need Help with Garden Problems?

NC STATE EXTENSION

Master Gardener | Chatham County

Plant Clinic: MW 1:00-4:00, F 9:00-12:00

chathamemgv@gmail.com

919-545-2715

Send us your problems!

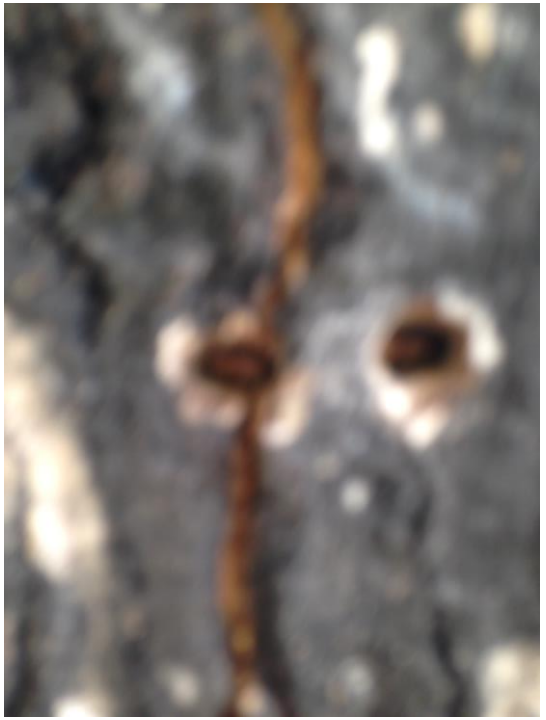
Questions we may ask:

- Crop and cultivar
- Describe signs and symptoms
  - Include photos!
- When you started noticing problems
- Cultural conditions
  - Light, soil, water, planting time etc.

Send Us *Good* Photos!

Photos should:

- Include healthy and unhealthy parts
- Have a scale object
- Be in focus
- Show an up-close image
- Show the whole plant
- The more, the better



Diagnosis: cataracts?

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