

Growing Culinary Herbs



Matt Jones

Horticulture Extension Agent
NCCE Chatham County

Review these slides & learn more online!

<http://go.ncsu.edu/herb-resources>

Growing Culinary Herbs

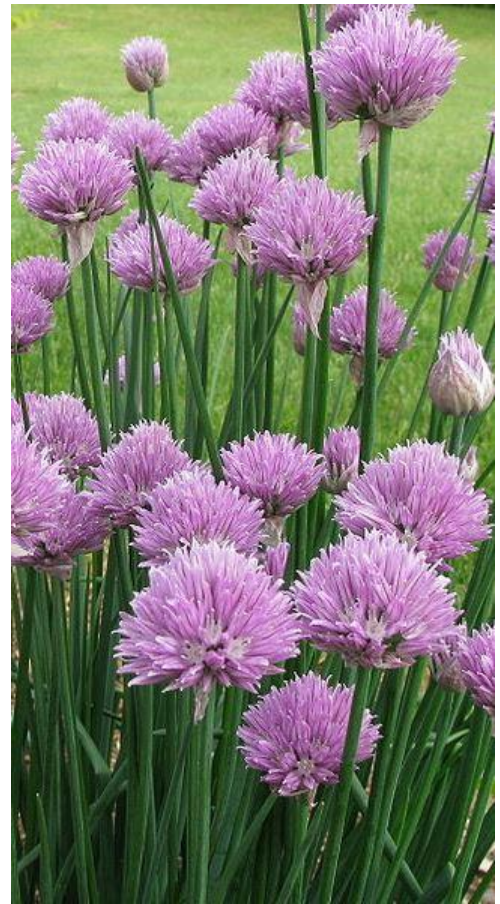
Herb growing basics

- In containers
- In raised beds

Tips for specific herbs

- Annual herbs
- Perennial herbs

Preservation tips from Pat Weisbrodt,
Master Gardener Volunteer



Chives – Leaves and blossoms are edible!

Defining Culinary Herbs

Plants used fresh or dried to enhance flavor of foods/beverages

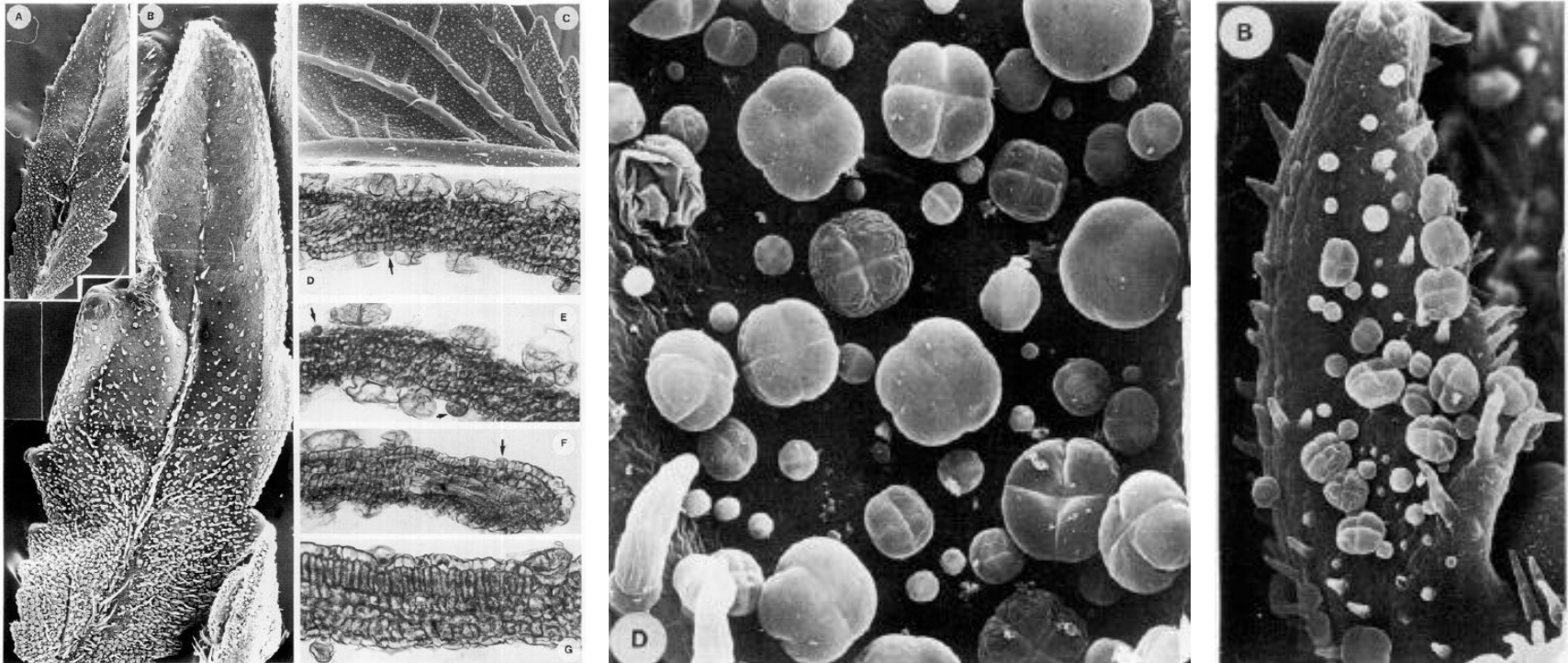
- Herbs – leaves or flowers harvested
- Spices – seeds, fruits, bark, roots harvested

Different species, different life cycles

- **Annuals** – live only one season; replanted each year
- **Perennials** – live multiple years; may go dormant in winter but return from the roots in spring
- **Shrubs** – woody plants that live many years



Trichomes Contain Aromatic Oils



Growing Culinary Herbs

The good news:

Culinary herbs are easy to grow!

- Have few pest problems
- Rarely bothered by deer or rabbits
- Require little care
- A little goes a long way!



Forshame, Bambi!

Growing Culinary Herbs

The bad news:

- Most herbs need full sun (6+ hours per day) and good drainage
- This is a challenge for shady yards and heavy clay soil
- Sound familiar?



Growing Culinary Herbs

The good news:

Culinary herbs thrive in containers!

- Easily grown on a patio/deck or other sunny area
- Also thrive in raised beds if you choose the right location



The Right Location

Sunny and well drained

- **Direct sun at least 6-8 hours per day**
 - Less sun = less flavor
 - Shade grown herbs have more disease problems
- **No standing water after rainfall**
 - Herbs grown in poorly drained soils quickly drown or develop root rot



Herbs Thrive in Containers

- Minimum 8" deep
- Drainage holes in bottom
- Clay pots are porous – ideal for most herbs!



Choosing Containers



*Containers can be made of
many different materials*

Containers must be able to:

- 1) Hold soil media
- 2) Drain water



*Add drainage
holes if needed*

Containers

Easier to manage one crop per container

- Crops vary in vigor
- Vary in water needs
- Easier to replant annuals





Container Growing Media



Peat Moss



Pine Bark



Vermiculite



Perlite



Commercial Potting Mixes

Adding Gravel to the Bottom of Pots?

- Does not improve drainage
- Creates a perched water table
- Fill entire container with uniform media



The wettest soil is at the bottom.



Gravel moves the wettest soil up in the pot, closer to the roots, which can lead to rot.

Watering Containers

- Allow containers to **dry out** between watering
- Then water thoroughly – **until water drips out of the bottom of the container**
- **Never leave sitting in saucer of water**



Overwatered Rosemary

Providing Nutrients

- Many herbs prefer lower nutrient levels
- Use slow release or organic fertilizers



Herbs in Raised Beds

- **At least 8" deep**
- **4' wide** or less
- **Length** – depends on material used and space available
- Fill with **mix** of soil and compost (30-50% compost)
- Can mulch with pea gravel or ground pine bark





Treated or untreated boards

Raised Beds

Less maintenance if not
surrounded by grass! Mulch
paths between beds

**Trex – recycled
plastic \$\$**





Corrugated Sheet Metal



Concrete Blocks

Easy to build



Wide Rows, Mounded Beds

- Make beds 1'-3' wide
- Paths 2'-4' wide
- Mound soil so beds are 6"-12" higher than paths
- Plant 2-3 staggered rows within bed
- Mulch between beds!



Soil Testing from the NCDA!

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



NC STATE EXTENSION

Master Gardener | Chatham County

**Chatham MGVs deliver
soil samples monthly
during the free period!**

Herb Flowers

Many herb flowers are edible!

- Herb flowers are favorites of many pollinators and beneficial insects
- **Flowering reduces leaf production and flavor** – remove flowers if more leaves needed
- Must allow flowers to mature if desire seed production



Oregano



Cilantro

Harvesting Herbs

- **Best time:**
 - Early morning after dew dries
 - Just before blooms open
- For most herbs harvest leaves at tips (2"-3")
- Pinch or cut just above a node



Freezing Herbs

- Rinse and chop
- Freeze in ice trays with water
- Alternative: spread on cookie sheets
- Store in freezer bags
- Lose color but retain flavor



Drying Herbs

- Air Dry
- Dehydrator
- Microwave
- Oven dry

**More tips to come from EMGV
Pat Weisbrodt !**



Culinary Herbs for Central NC

To grow successfully, need to know:

Life Cycle

- Annual - cool or warm season
- Perennial

Preferred Conditions

- Sun or Shade
- Soil Drainage
- Fertility

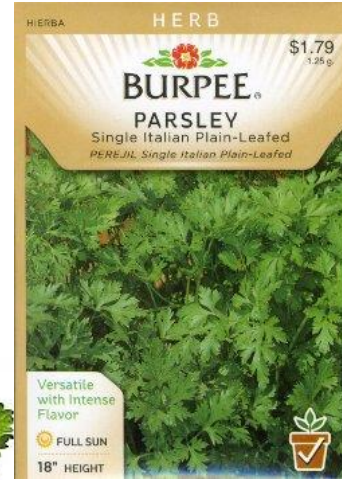


Annual Herbs

Grown from seed or transplants

When to plant:

- **Cool Season** = March/April and Sept.
- **Warm Season** = mid-April - August



Planting Calendars

Container Garden Planting Calendar for Edibles in the N.C. Piedmont

Container Garden Planting Calendar for Herbs in the N.C. Piedmont

Herbs	Harvest season	Jan.		Feb.		March		April		May		June		July		August		Sept.		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
Basil	Summer							T	T	T															
Bay	Continuous						T											T	T	T					
Borage	Spring to fall							S	S																
Chamomile	Late summer to early fall							S	S																
Chervil	Late summer into winter							S	S	S						S	S								
Chives	Spring to fall							T	T	T															
Cilantro	Early summer				S	S	S																		
Dill	Summer to fall							S	S							S	S								
Fennel	Late summer							S	S																
Feverfew	Summer					ST	ST																		
Lavender	Summer				T	T	T																		
Lemongrass	Late summer							T	T																
Lemon Verbena	Summer							T	T																
Marjoram	Summer							ST	ST																
Mint	Spring to fall				T	T	T																		
Monarda*	Summer to fall							T	T																
Oregano	Summer to fall				T	T	T																		
Parsley	Summer to fall							T	T	T						T	T								
Rosemary	Continuous							T	T	T															
Saffron Crocus	Fall						B	B																	
Sage	Summer to fall							T	T																
Salad Burnet	Spring to early summer					ST	ST																		
Scented Geranium	Spring to fall							T	T																
Stevia	Continuous							T	T																
Tarragon	Spring to fall							T	T																
Thyme	Summer					ST	ST	ST	ST																

*also known as Bergamot

B = Bulbs S = Seeds T = Transplants

Table 1. Garden Planting Calendar for Annual 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																
Artichokes, Jerusalem*	Tu = 6-8 months	9-12							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	S										
Beans, lima/ pole	75-95	6							S	S	S	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	S						
Beets	55-60	2					S	S	S						S	S	S	S								
Broccoli	T = 70-80	18				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 = 75-95	12						S, T								S	S		T	T						
Carrots	75-80	2				S	S	S	S					S	S	S	S	S								
Cauliflower	T = 55-65 S = 85-95	18				S, T	S, T	S, T	S, T							S, T	S, T	S, T								
Celery	T = 40-70 S = 120-150**	6-8				T	T	T						T	T	T	T									
Chard, Swiss	T = 32-42 S = 60-70	6				S, T	S, T	S, T	S, T							S, T	S, T	S, T								
Cilantro	50-55	2-4				S	S	S	S										S							

<https://chatham.ces.ncsu.edu/culinary-herb-calendar/>

Basil

Ocimum basilicum

- Warm Season Grower
- Easy from seed; Easy to root from cuttings
 - Sow new batch every 3-4 weeks
 - May-July
- Prevent drought stress
- Cut off flowers to keep up leaf production



Basil Varieties



'Purple Ruffles' -
purple leaf



Cinnamon or Mexican Basil



**Greek
Columnar** -
very upright,
4' tall; does
not bloom



**Thai Basil,
'Siam Queen'**
- compact 12"



'Italian Large Leaf' for pesto

'Spicy Globe'
- Small
leaves on
compact
plants



Basil Downy Mildew

- **New disease** – first recorded in NC 2009
- **Control:** destroy affected leaves, avoid overhead irrigation, spray fungicides
- **Pesto type basils are most susceptible**
- **Resistant:** some Thai, lemon, spice basils less susceptible
- **Does not overwinter in NC!** – spores transported on air currents from the south in mid summer



Debbie Roos

Other Warm Season Annuals



Cuban Oregano

Plectranthus amboinicus

Strongly fragrant, large fleshy leaves.
Grown as a houseplant or ornamental.
Sun to part. shade, well drained, moist
soil. Overwinter indoors

Stevia

Stevia rebaudiana

Heat loving, drought tolerant annual
(perennial in zone 9). Sun, well drained soil.
Add leaves to tea for a natural sweetener



Cool Season Annual Herbs

- Plant Aug-Sept for fall crop;
- Feb-March for spring
- **Die out in heat of summer**
- Can grow in winter in sunny spot with minimal heat
- **If room, allow to bloom in summer** – blooms attract beneficial insects and sow the fall crop!



Bolting

- Some plants respond to day length and temperature
- Lengthening days trigger reproductive growth (flowering)
- Cool season herbs bolt rapidly in summer
- Negatively affects flavor



Cilantro in summer

Parsley

- Soak seed for 6-8 hrs before sowing
- Survives most winters
- Dies out mid summer after flowering
- Sun – part. shade, moist, well drained soil

**Curly
Parsley**

**Italian
Flat Leaf**



Caterpillars

- Parsley worm larva feed on all members of parsley/carrot family
- Can handpick – grow perennial fennel or extra parsley as ‘nursery’ crop
- Or spray with B.t, spinosad, or neem oil



Papilio polyxenes



Will also eat:
Fennel, Dill,
Queen Anne's
Lace, Carrot



Annual Parsley Relatives



Dill

Anethum graveolens

Not as cold tolerant as parsley,
plant early fall and early spring.



Cilantro/Coriander

Coriandrum sativum

Fall and early spring for foliage –
successive sowings. Let mature for seed.

More Parsley Relatives

- **Caraway** *Carum carvi*
- **Chervil** *Anthriscus cerefolium*
- **Cumin** *Cuminum cymium*

Grown similar to dill & cilantro

Typically grown from seed – rarely find plants for sale



Perennial Herbs for Central NC



Perennial Herbs

- Most will live for several years if happy
- Most are **sensitive to overwatering**
- Typically purchased as plants
- Best time to plant outdoors: March – October
- Require little fertilizer



Check out farmers markets and local nurseries for herb plants

Mediterranean Herbs

- Many popular perennial culinary herbs – Rosemary, Sage, Thyme, Oregano
- **Require full sun, excellent drainage**
- Drought tolerant
- Irrigation and fertilizer lead to disease problems and reduce flavor
- **Expect some deaths during August!**



Oregano



Greek Oregano

Origanum vulgare
subspecies *hirtum*

Preferred culinary



Common Oregano

Origanum vulgare

Flowers in summer, less
flavorful



Sweet Marjorum

Origanum marjorana

Tricky to grow

Italian Oregano

O. marjorana x *O. vulgare*

Easier to grow

Sage

Salvia officinalis



‘Purpurascens’



‘Icterina’



‘Tricolor’



‘Berggarten’

Favorite culinary,
large leaves.

Common Thyme

Thymus vulgaris



Low growing, sensitive
to summer moisture

Lavender-colored
blooms in early summer



Lemon Thyme

Thymus x citriodorus

Lower growing with softer stems. Several gold
leaved and variegated varieties are available.

Lavenders



English Lavender
Lavandula angustifolia - not heat tolerant

French Lavender
Lavendula dentata - not cold hardy



Spanish Lavender
Lavandula stoechas
Most long lived lavender in NC

Lavandin
Lavandula x intermedia
'Grosso' does okay



Rosemary

Rosmarinus officinalis

- Tough, evergreen shrub
- Sun, good drainage
- Drought tolerant
- Deer resistant
- Ornamental and culinary – upright and trailing forms available
- Upright varieties typically reach 3'-4' tall and wide or more!



Bay

Laurus nobilis

- Evergreen shrub that is winter hardy in the piedmont
- Expect some cold damage in harsh winters
- Requires sun and well drained soil
- Grows 4'-6' or taller!



Other Perennial Herbs



Chives

Allium schoenoprasum

Extremely easy from seed or division.
Long lived, self seed. Sun well
drained soil, drought tolerant.



Garlic Chives

Allium tuberosum

Taller than chives, same requirements.
Self seeds prolifically.



Fennel

Foeniculum vulgare

- Perennial
- Sun – light shade, moist to dry soils
- **3'-5' tall**, yellow flowers in summer – attracts beneficials
- Florence Fennel is related but different, grow as a summer annual



Mints



Spearmint

Mentha spicata

Sun to part shade,
moist to average soil.

All spread
extremely
vigorously!!

Peppermint

Mentha piperita

Grow in containers above ground.



Pineapple Mint

Mentha suaveolens
'Variegata'



Apple Mint

Mentha suaveolens

Tarragon

French Tarragon

Artemisia dracunculus var. *sativa*

- True culinary tarragon
- Struggles in heat and humidity – afternoon shade helps



Russian Tarragon

Artemisia dracunculoides

- Edible tarragon relative but little flavor
- Larger, more heat tolerant plant



Mexican Mint Marigold

Tagetes lucida

- A perennial marigold!
- Marginally hardy in zone 7
- Tarragon substitute (leaves)
- Yellow flowers in fall, 3' x 2'



Other Perennial Herbs



Lemon Balm

Melissa officinalis

Very easy – sun to part shade, well drained soil. Easy from seed or cuttings.



Salad Burnet

Poterium sanguisorba

Sun to light shade, well drained soil. Leaves have cucumber flavor – best in spring and fall.



Horseradish

Armoracia rusticana

Sun, rich, moist soil. Harvest roots by digging into clump rather than digging whole clump up.

Non Hardy Perennial Herbs

Grow outside in summer, bring inside for winter



Lemongrass

Cymbopogon flexuosus



Lemon Verbena

Aloysia triphylla



Culinary Ginger

Zingiber officinale

Need help? Contact:

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

Please complete evaluations!

Thank you!