

Basil

A Year Studying 12 Varieties

Pioneer Unit -- Horticulture Study Group



Horticulture Study Group - 2021

Co-Leaders: Madeline Johnson and Phoebe Lake

Members

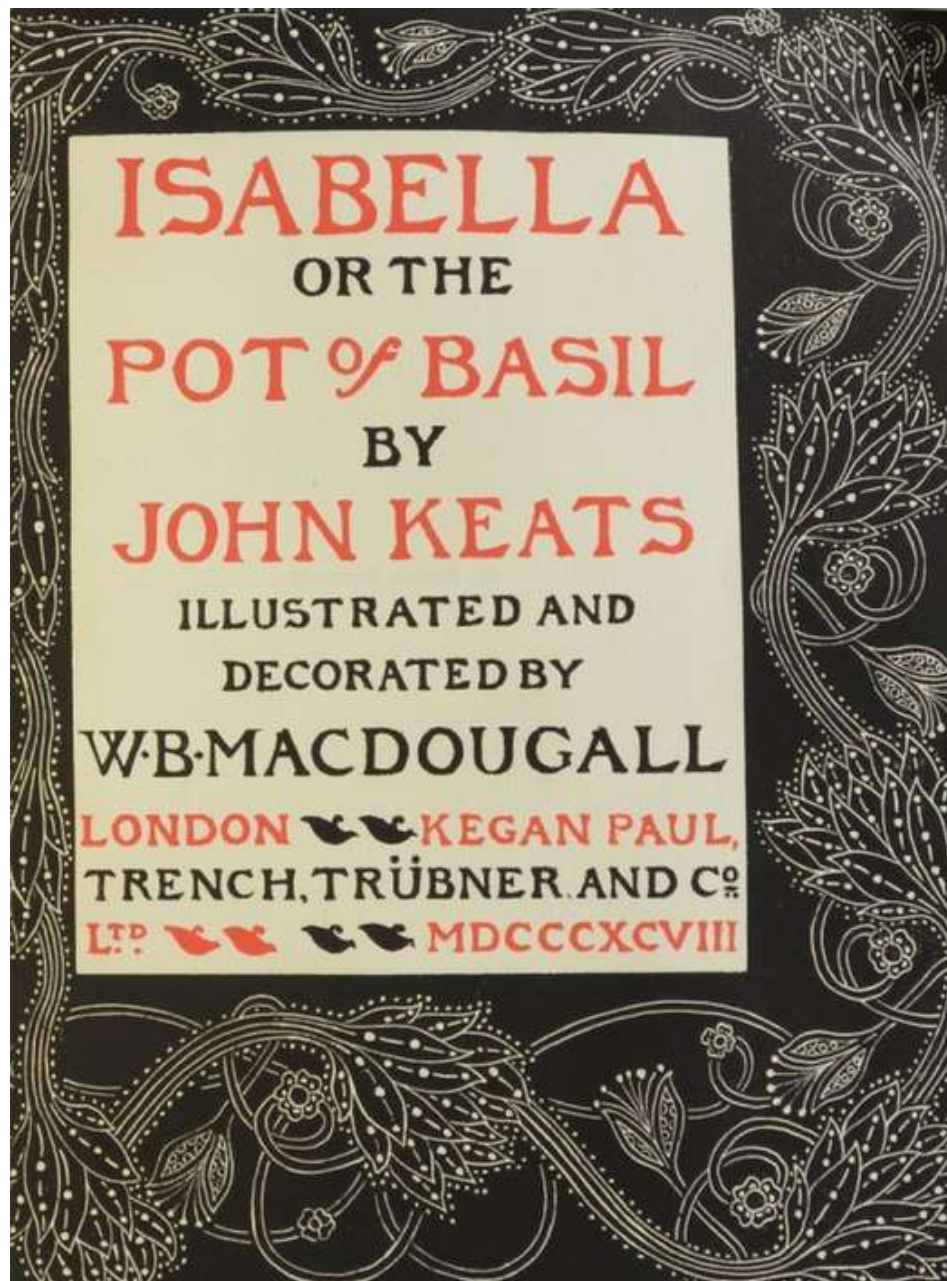
- Barbara Solis
- Becky Nichols
- Betty Pior
- Cammie Beierle
- Connie Gwyn
- Diana Sellers
- Ginger Heath
- JoAnn Reichler
- Jana Reinhart
- Joanna Hagler
- Linda Rowlett
- Mary Doebbeling
- Patty Mills
- Royceanna Kendall
- Sally Reynolds
- Susan Yancey



Basil Topics Covered

- Folklore / History
- Botany / Chemistry
- Cultivation
- Propagation
- Pests and Diseases
- Harvesting and Storing
- Culinary Uses
- Non-Culinary Uses
- Medicinal Uses
- The Study Results





Boccaccio's story from The Decameron

Folklore / History

- Conflicting Associations
 - Basil grows best if you swear while planting it (Greek)
 - Basil is sacred and wards off evil (India)
- Magical Associations
 - Carry basil (and bay) on your wedding day for a long and happy marriage
 - Carry a sprig in your pocket or wallet to bring wealth
 - Place basil in the hands of the dead to ensure safe passage
- Basil derives from a legendary crested snake called a basilisk
- Tulsi derives from its association with Vishnu and Tulasi
- Origins in Asia and Africa
- Brought to Greece between 356-323 BC



Botany/Chemistry



- *Ocimum*
- *Lamiaceae* (mint family)
- Native to temperate climates – India and Africa
- Methyl eugenol and methyl chavicol are the essential oils in *Ocimum basilicum* and *Ocimum sanctum*
- 60 to 140 species have been identified
- Height ranges from 18” to over 6’



Ocimum gratissimum

Cultivation

- Warm weather (absolutely essential)
- 6-8 hours of full sun daily
- Moist but well-drained soil
- Containers or ground
- Pruning encourages new shoots
- Flowering decreases the flavor
- At 7 weeks, pinch the center growth stem
- As a companion plant it benefits
 - Tomatoes
 - Asparagus
- Improve the taste of basil by planting borage near it



Propagation

- Easy to root from cuttings
 - Water (change daily) or soil
 - Keep in a warm and bright place
- Easy to start from seeds



Susan Yancey's Seedlings at 1 Week



Linda Rowlett's Prospera at 2 Months



Madeline Johnson's Cuttings After 2 Months

Pests and Diseases

- Fusarium Wilt
 - Keep leaves dry when watering
- Downy Mildew
 - Disease resistant varieties
- Aphids
 - Sharp sprays of water
- Japanese Beetles
 - Handpick off the plant and drop in soapy water



Downy Mildew



Harvesting

- Harvesting can extend the plant's lifespan and yield
- With small plants, start harvesting when 6 leaves appear – snip to the 2nd set of leaves
- Harvest each time a branch hits 6-8 sets of leaves
- Spray the leaves with water, the night before harvest
- Cut in the morning after the dew has dried
- Last harvest (the whole plant) before the 1st freeze



Drying

- Air Drying
 - Limit the size of the bundles
 - Secure with rubber bands since the bundles shrink as they dry
 - Hang upside down in an area with good air circulation
- Ginger's Bedspread Method
 - Place an old cover on the bed in your spare bedroom
 - Place a single layer of basil stems on the cover
 - Do not over lap the stems
- Ovens, Microwaves, Dehydrator
 - Very low temp
 - Very little time



Storing

- Place dried basil in an airtight glass container in a cool, dark place
- Freezing –always start with clean, dry leaves
- Quick Freeze
 - Place leaves in a plastic bag and freeze them
 - Add the frozen leaves (crushed) directly to the dish (do not thaw)
- Freeze in Water
 - Place whole or chopped basil in an ice cube tray and fill with water
 - Freeze
 - Place cubes in a plastic bag and use as needed
- Freeze in Oil
 - Puree 1 cup of basil with 1-2 tablespoons of olive oil
 - Place in a plastic bag, making a flat thin layer and removing all air before freezing
 - Break off what you need when you cook



Culinary Uses

- If summer had a flavor, it would taste like basil!
- Cuisines from around the world use basil extensively
 - Americans
 - Italians
 - Thais
 - Vietnamese
 - And you name a place
- Basil flavors
 - Meat
 - Vegetables
 - Eggs
 - Soups
 - Sauces
 - And you name another
- Bake, cook, or add it fresh to vinegars, salads, and sandwiches



Culinary Tips



- If the recipe says
 - ‘basil’, then use one of the sweet basil
 - ‘a sprig of basil’, then cut at least 3” unless the basil is ‘leggy’
 - ‘1 cup of basil’, then measure packed whole leaves (and then chop)
 - ‘1 cup of coarsely chopped basil’, then chop first
- Fresh basil should be cooked briefly or added as a garnish
- Use only fresh basil when making pesto
- Substitute 1 T of dried for 3 T of fresh
- Crush dried basil with your fingers before adding it to the dish

Non-Culinary Uses

- Lemon or cinnamon basils work well in potpourri
- Dried basils can be used in flower arrangements
- Insect repellent
 - Rubbed on the skin to repel mosquitos
 - Burn basil to repel mosquitos
 - Fresh sprigs over bowls of food deter flies
- Basil sugar scrub as a gentle exfoliant
- Facial toner when combined with witch hazel



Medicinal Uses – Holy Basil

- Used medicinally for 5000+ years
- “The Queen of Herbs” and “Elixir of Life” in Ayurvedic medicine
- Symptoms treated include
 - Cough
 - Arthritis
 - Vomiting
 - Indigestion
 - Insect bites
- Holy Basil is not listed as GRAS by the FDA
- Consumption options include
 - Tea
 - Fresh leaves
 - Capsule contained dried powder



The Study Objective

- Compare the growth habits of 12 varieties
 - Rate of growth
 - Plant form (in terms of height and diameter)
 - Tendency to flower
 - Preference for ground vs. container
 - Overall performance in our region



Measurements (monthly)

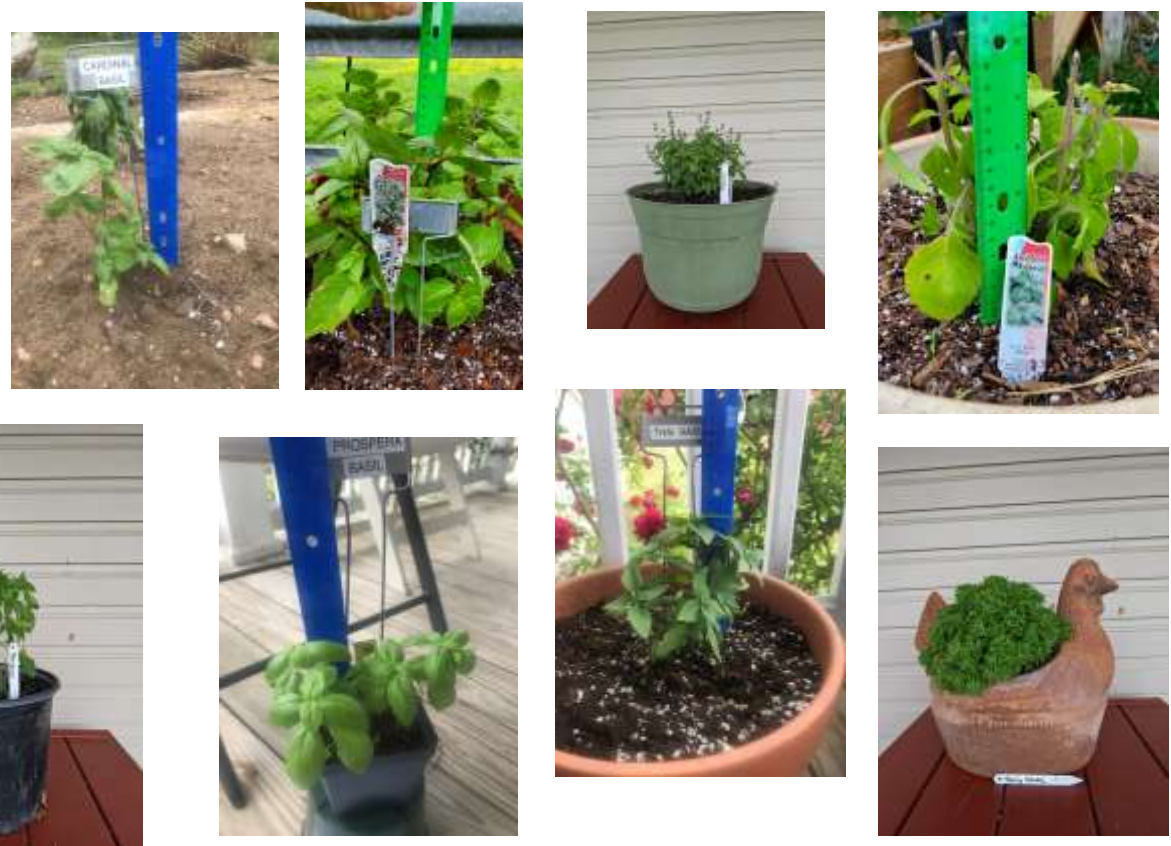
- Plant measurements
 - Tallest portion of plant
 - Widest portion of plant
 - Typical leaf size
- Soil and light measurements
 - pH
 - Moisture
 - Light
- Photos



Varieties Studied

- ❖ Cardinal
- ❖ Cinnamon
- ❖ Lemon 'Sweet Dani'
- ❖ Kapoor (Holy)
- ❖ Persian
- ❖ Prospera
- ❖ Siam Queen
- ❖ Spicy Globe
- ❖ Sweet Aussie
- ❖ Sweet Genovese
- ❖ Vana (Holy)
- ❖ Wild Color

Photos taken in April



Photos taken in May



The Study

Each Grower had 8 plants.

G –ground planting
C – container planting

	GROUP A1	GROUP A2	GROUP B1	GROUP B2
Cardinal			G	C
Cinnamon	G	C		
Lemon ‘Sweet Dani’	G	C	G	C
Kapoor (Holy)	G	C		
Persian	C	G	C	G
Prospera	G	C	G	C
Siam Queen			C	G
Spicy Globe	C	G		
Sweet Aussie			G	C
Sweet Genovese	C	G	C	G
Vana (Holy)			C	G
Wild Color	C	G		

It's not always pretty!



A pot of Sweet Genovese in August



Recent Harvest of Cinnamon in July



A Spicy Globe casualty in September

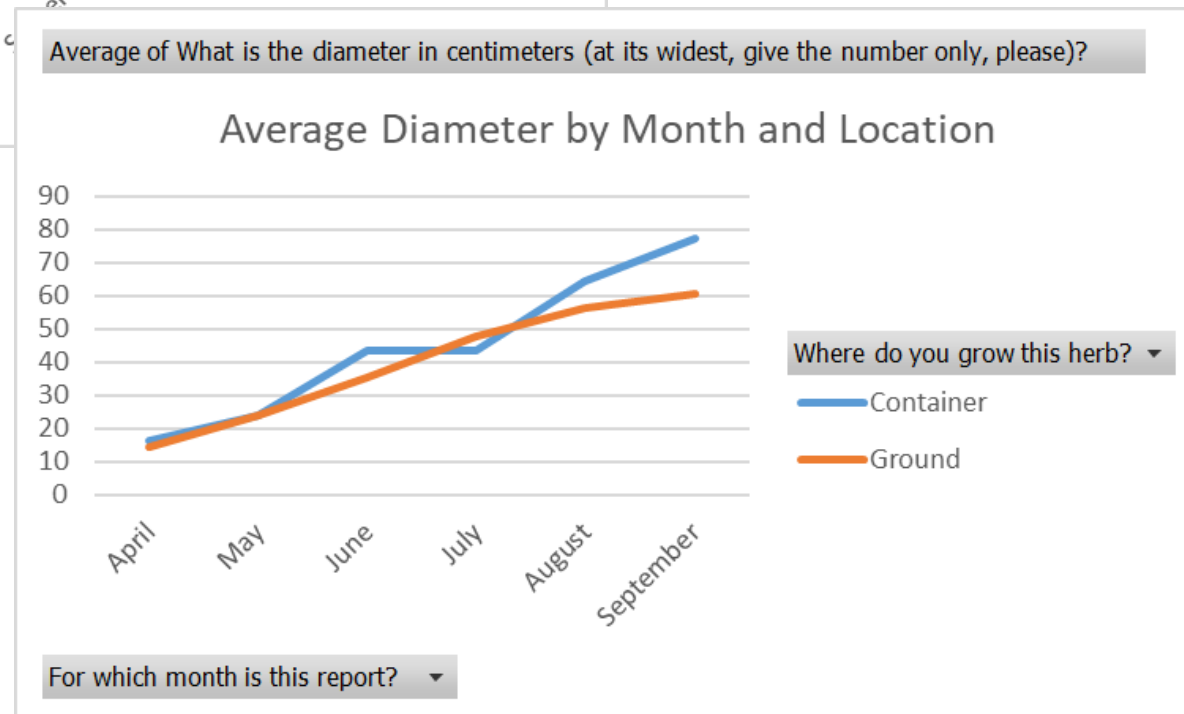
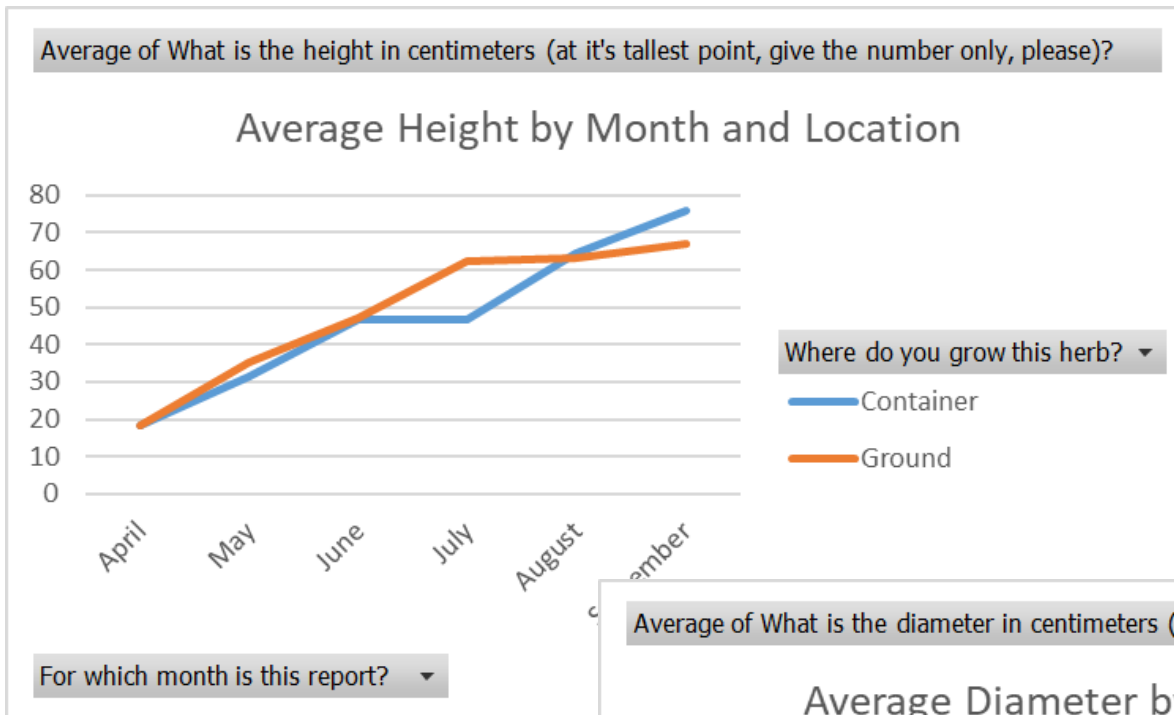
Cardinal

Photo by Diana Sellers (May)



Photo by Diana Sellers (August)

Cardinal Growth



Wild Color



Photo by Connie Gwyn (May)

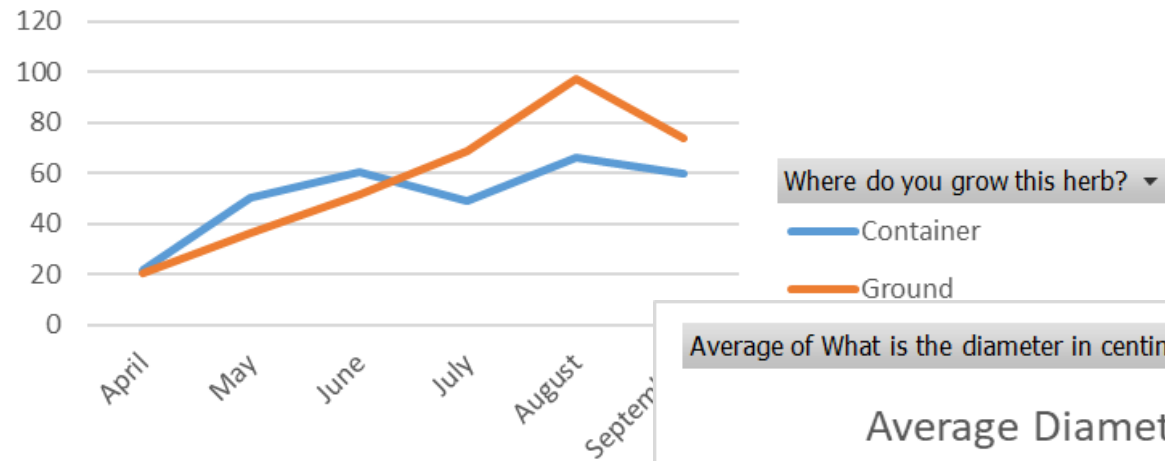


Photo by Mary Doebbeling (August)

Wild Color Growth

Average of What is the height in centimeters (at it's tallest point, give the number only, please)?

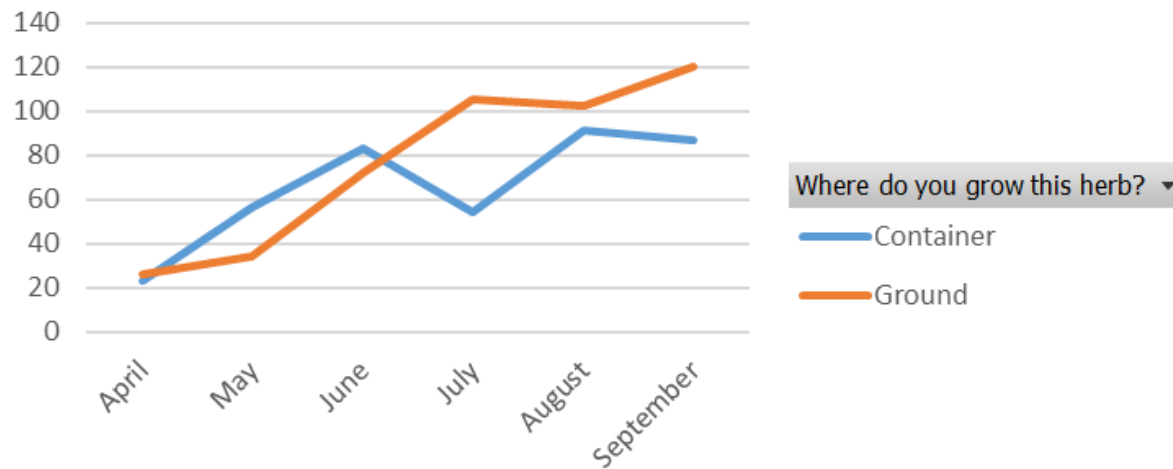
Average Height by Month and Location



For which month is this report? ▾

Average of What is the diameter in centimeters (at its widest, give the number only, please)?

Average Diameter by Month and Location



For which month is this report? ▾

Quick Comparison of Ornamental Basils

	Cardinal	Wild Color
Height	65-75 cm	60-75 cm
Diameter	60-80 cm	90-120 cm
Flowering	Aug – Freeze	April - Freeze
Container	Strong	Good
Ground	Strong	Strong



Kapoor



Photo by Ginger Heath (May)

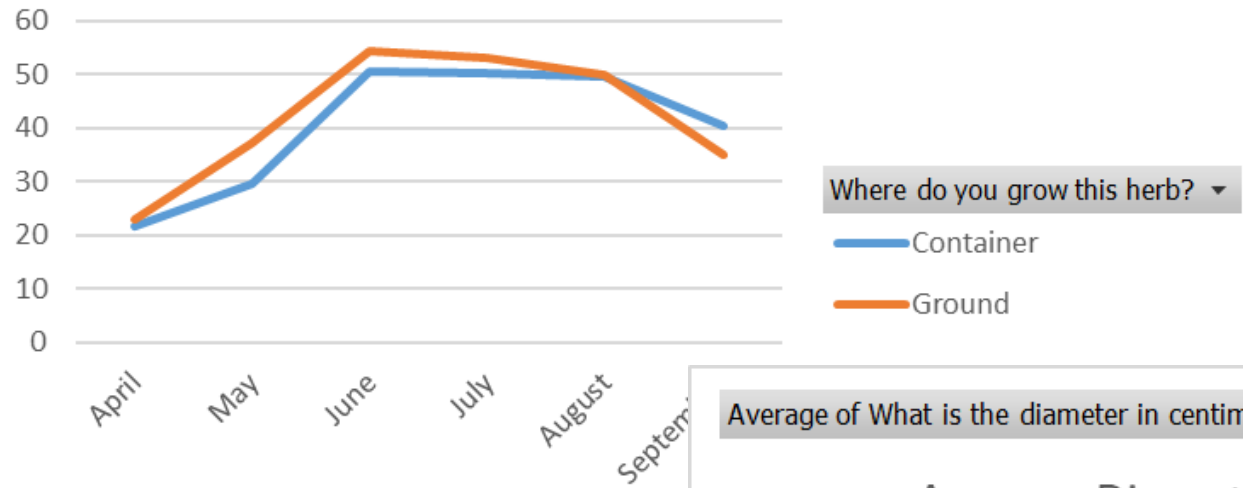


Photo by Madeline Johnson (August)

Kapoor Growth

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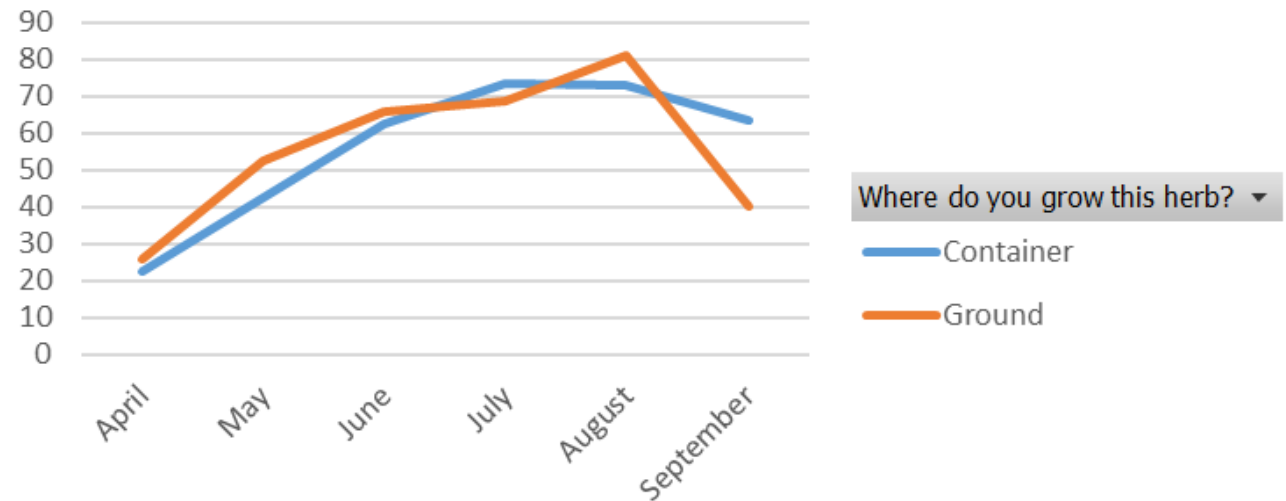
Average Height by Month and Location



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Average of What is the diameter in centimeters (at its widest, give the number only, please)?

Average Diameter by Month and Location



For which month is this report? ▾

Vana

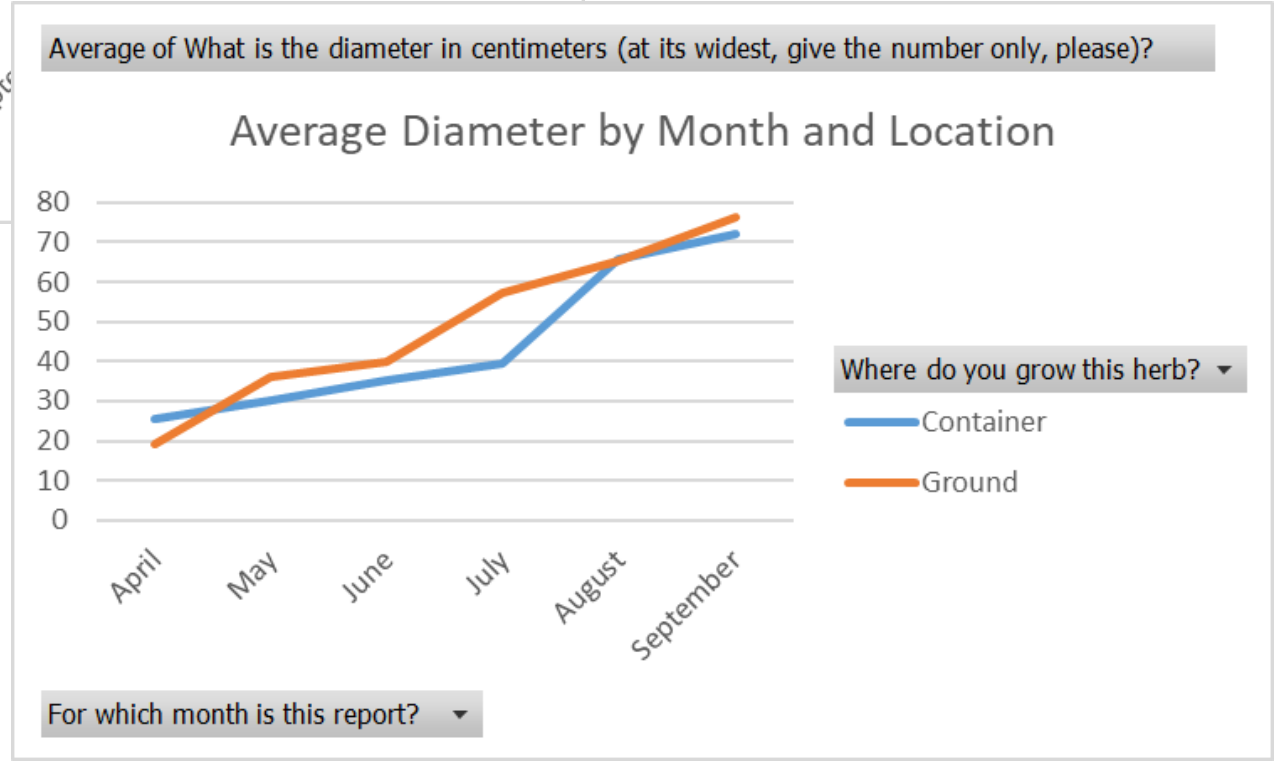
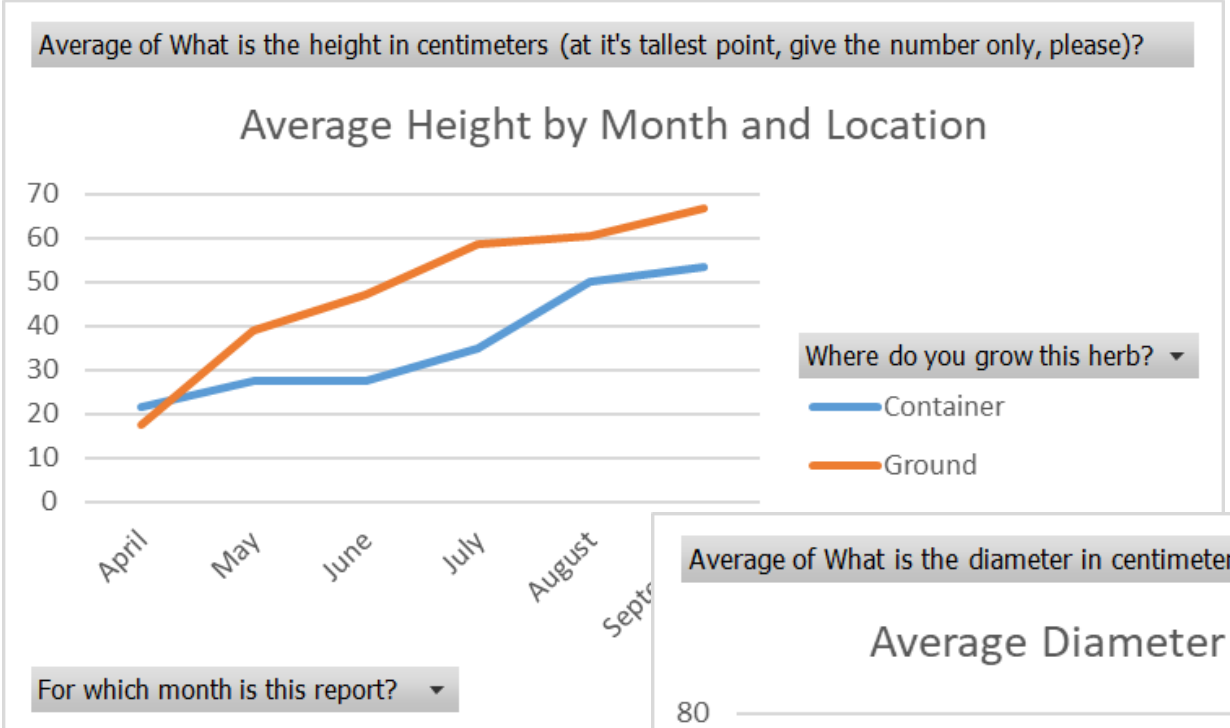


Photo by Phoebe Lake (May)



Photo by Madeline Johnson (Sept)

Vana Growth



Quick Comparison of Holy Basils



	Kapoor	Vana
Height	35-45 cm	55-65 cm
Diameter	40-60 cm	70-75 cm
Flowering	Apr - Freeze	Apr - Freeze
Container	Strong	Good
Ground	Strong	Strong



Cinnamon



Photo by Mary Doebbeling (April)

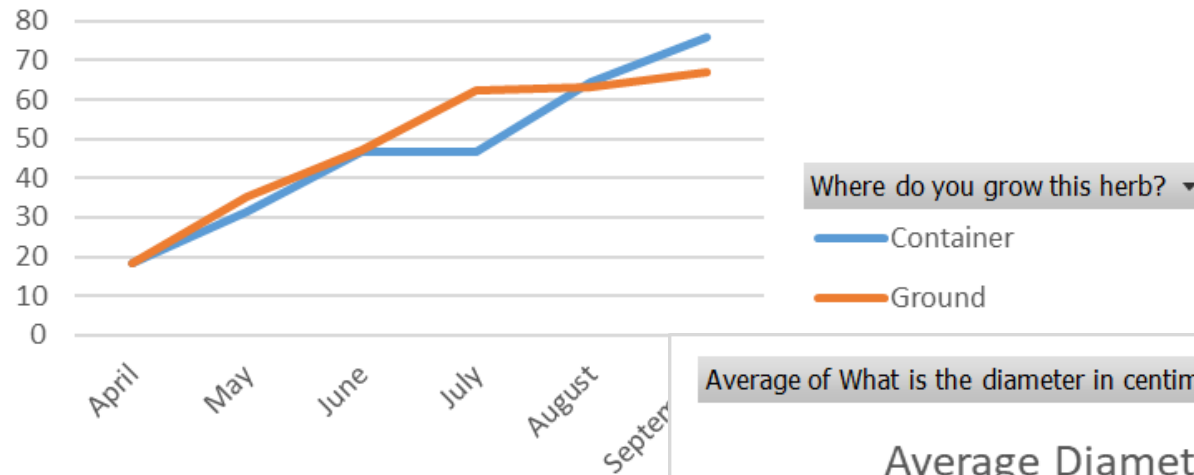


Photo by Phoebe Lake (Sept)

Cinnamon Growth

Average of What is the height in centimeters (at it's tallest point, give the number only, please)?

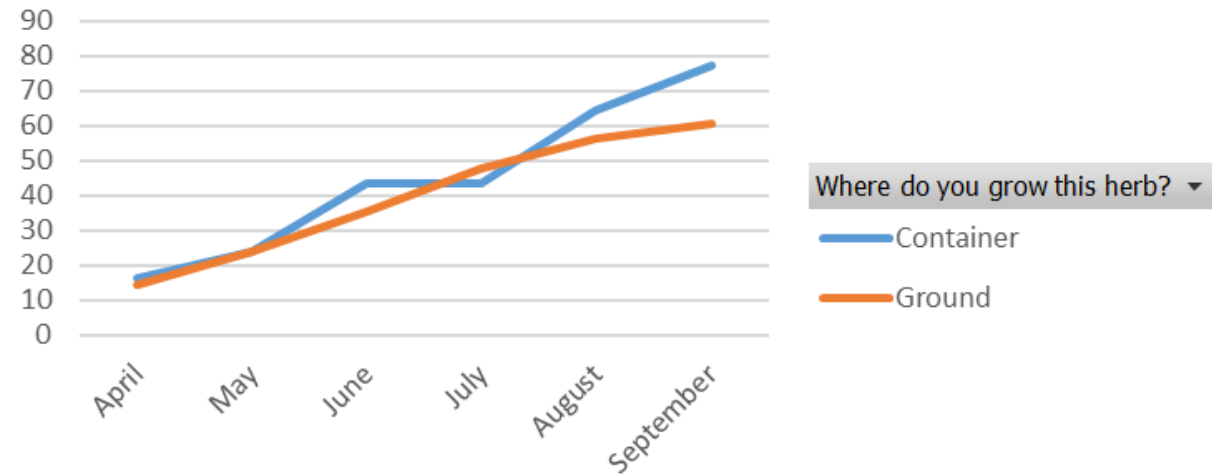
Average Height by Month and Location



For which month is this report? ▾

Average of What is the diameter in centimeters (at its widest, give the number only, please)?

Average Diameter by Month and Location



For which month is this report? ▾

Lemon 'Sweet Dani'



Photo by Connie Gwyn (May)

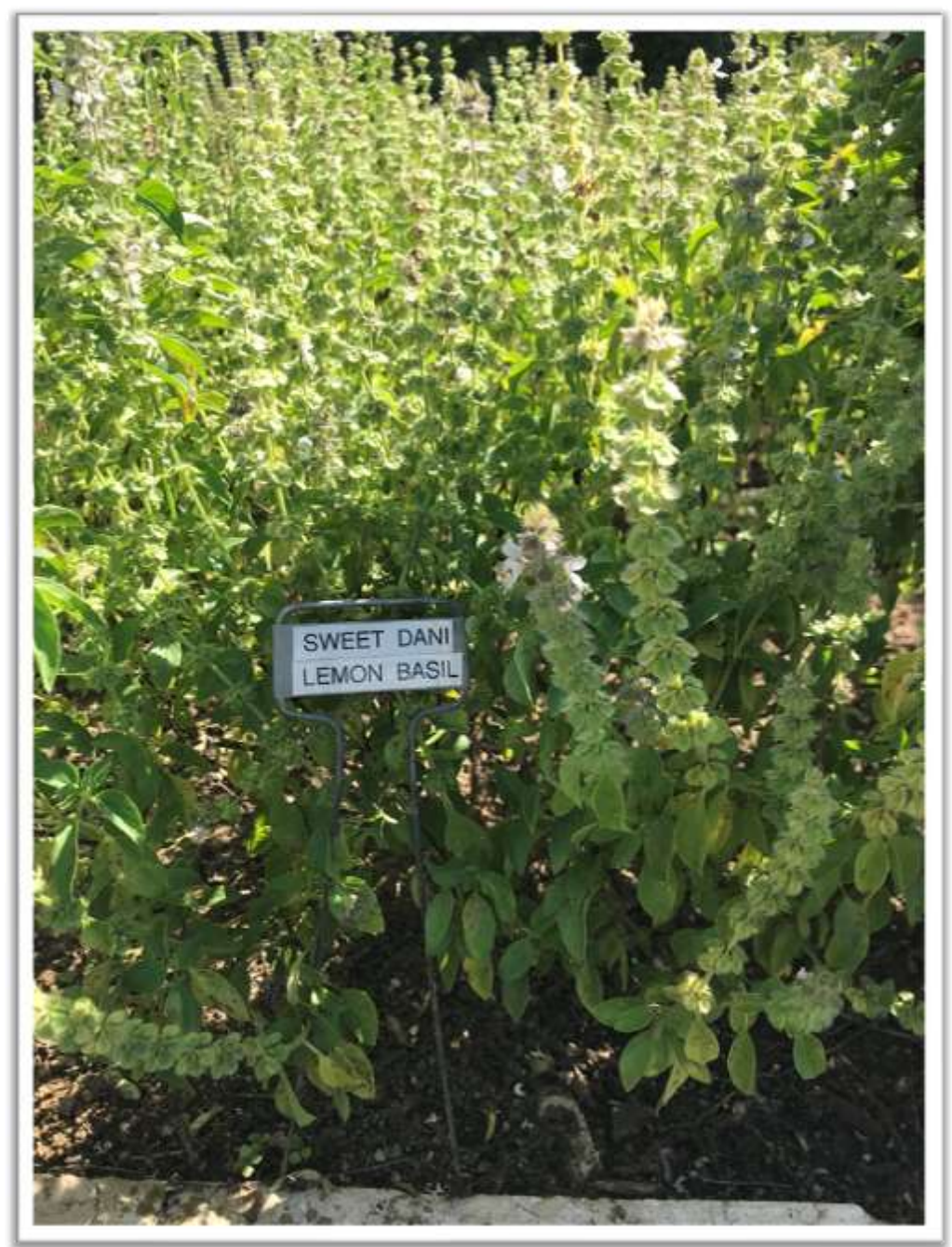
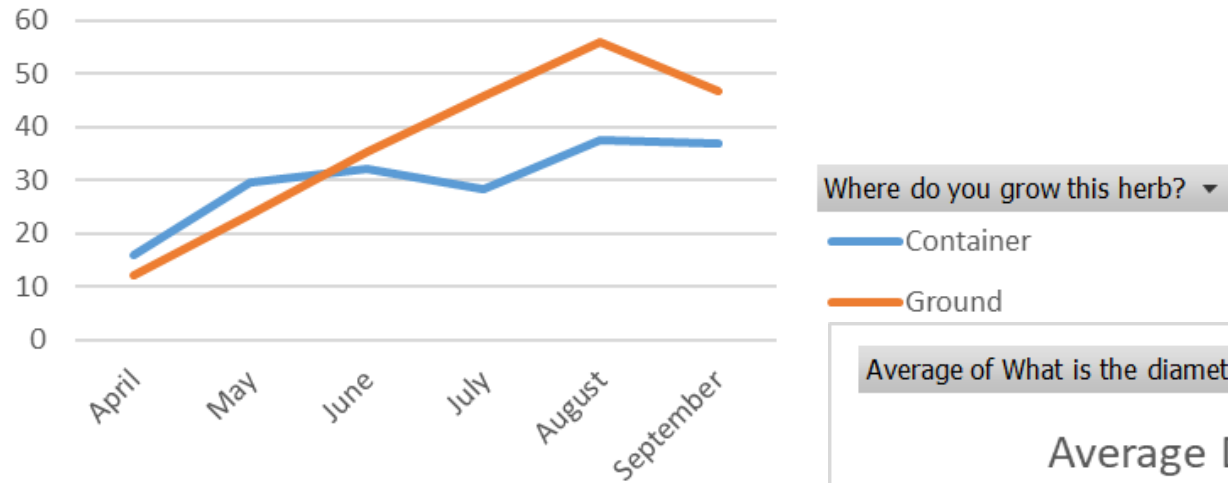


Photo by Linda Rowlett (August)

Lemon 'Sweet Dani'

Average of What is the height in centimeters (at it's tallest point, give the number only, please)?

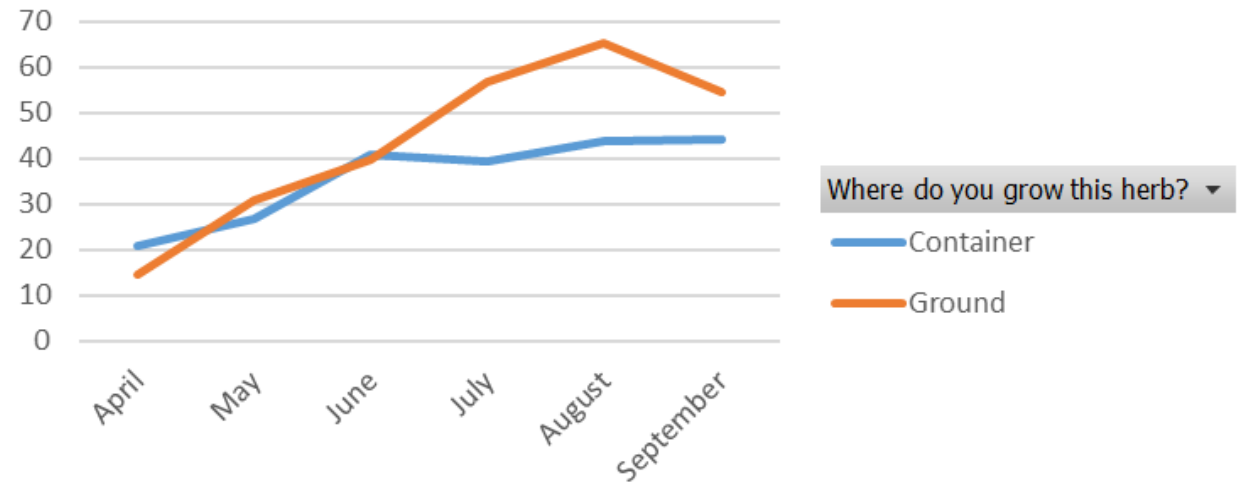
Average Height by Month and Location



For which month is this report? ▾

Average of What is the diameter in centimeters (at its widest, give the number only, please)?

Average Diameter by Month and Location



For which month is this report? ▾

Persian

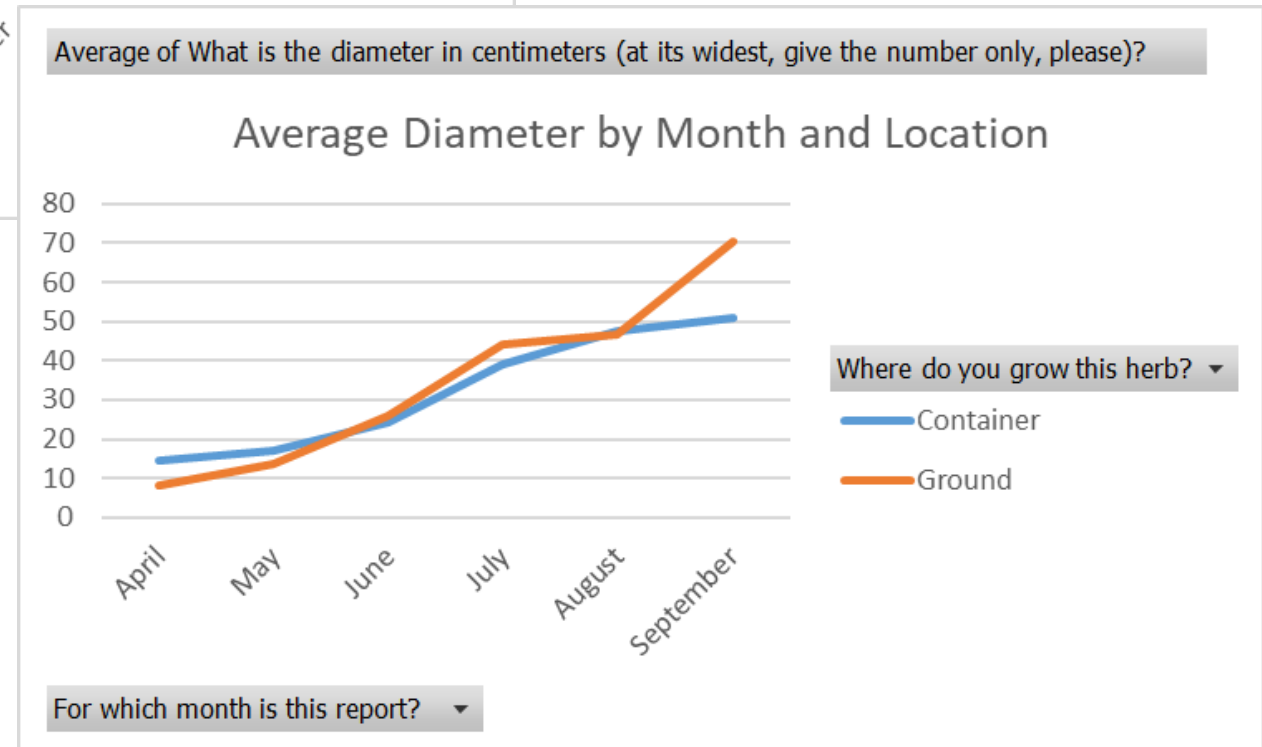
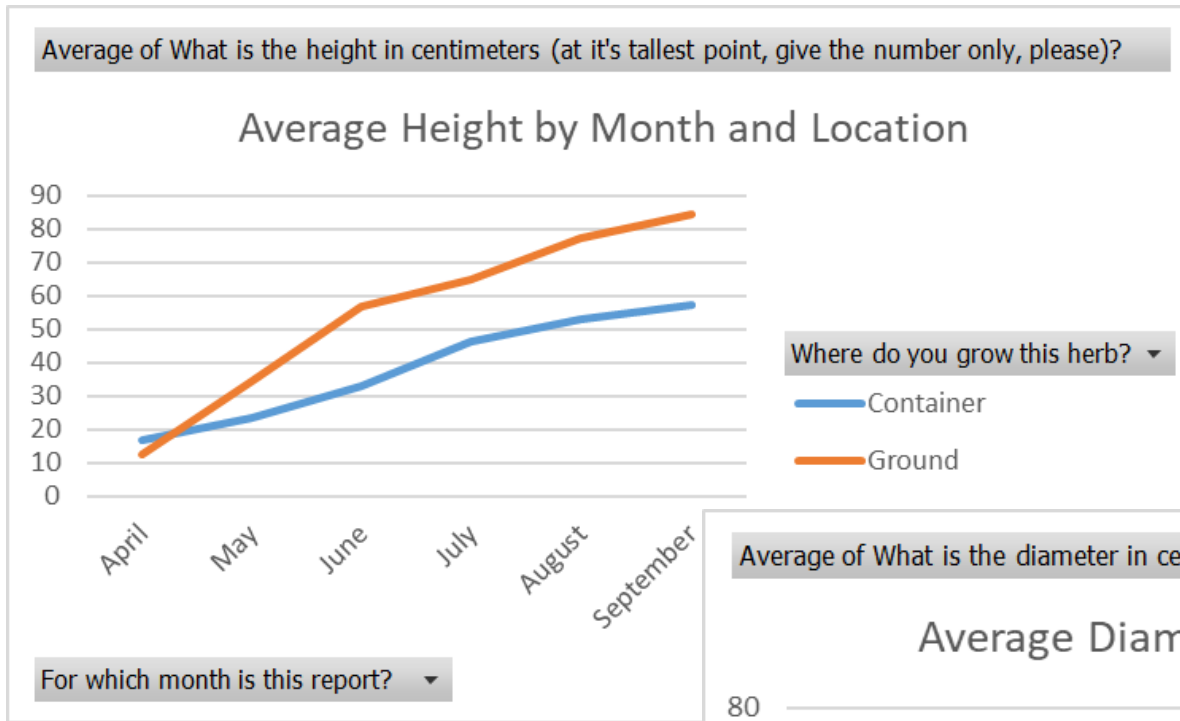


Photo by Linda Rowlett (April)



Photo by Jana Rinehart (Sept)

Persian Growth



Prospera

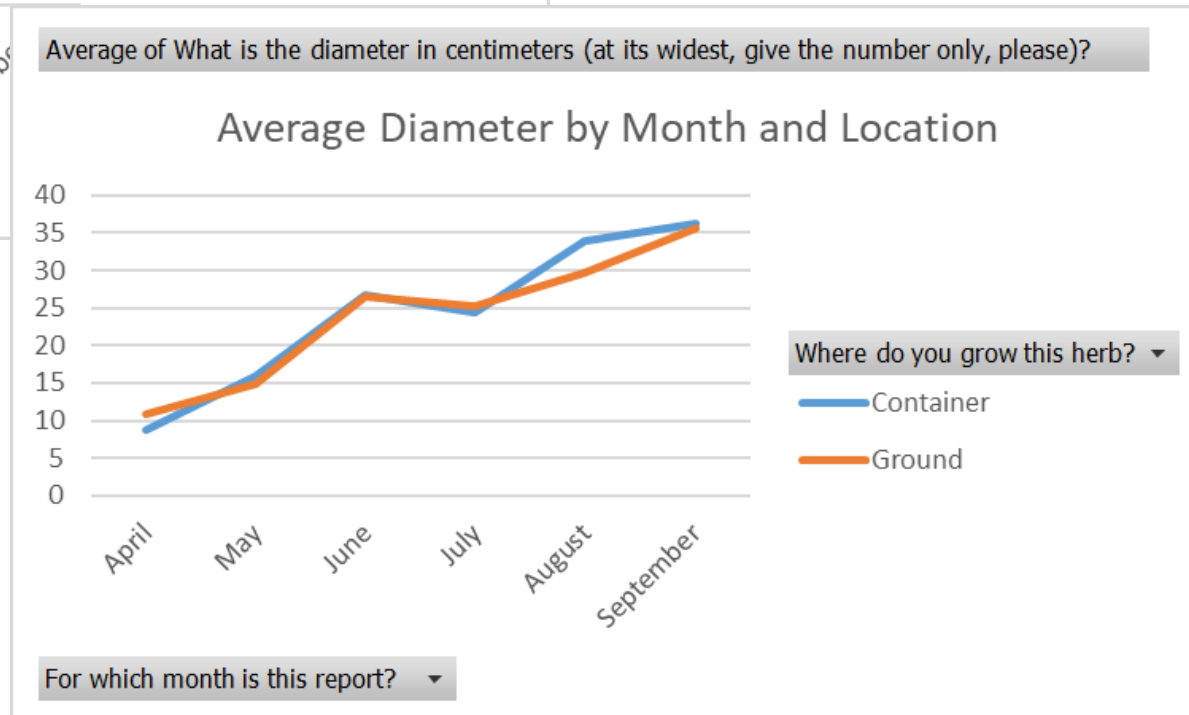
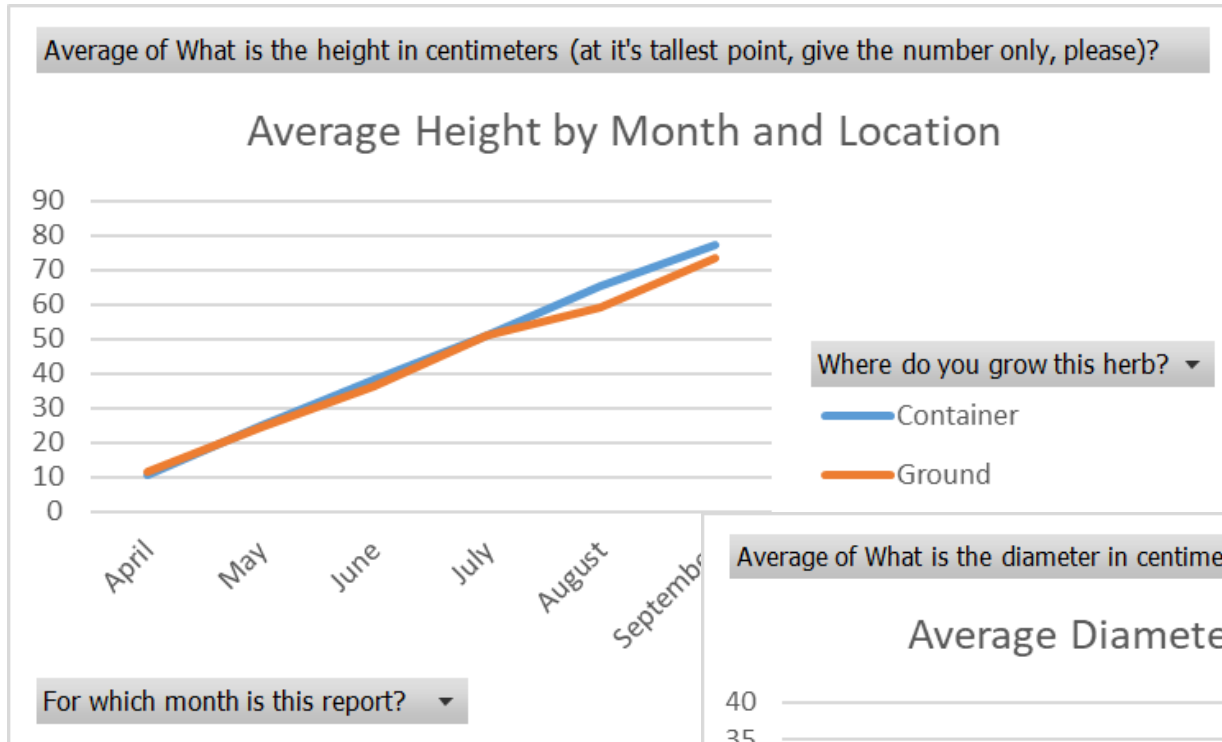


Photo by Betty Pior (May)



Photo by Jana Rinehart (Sept)

Prospera Growth



Siam Queen

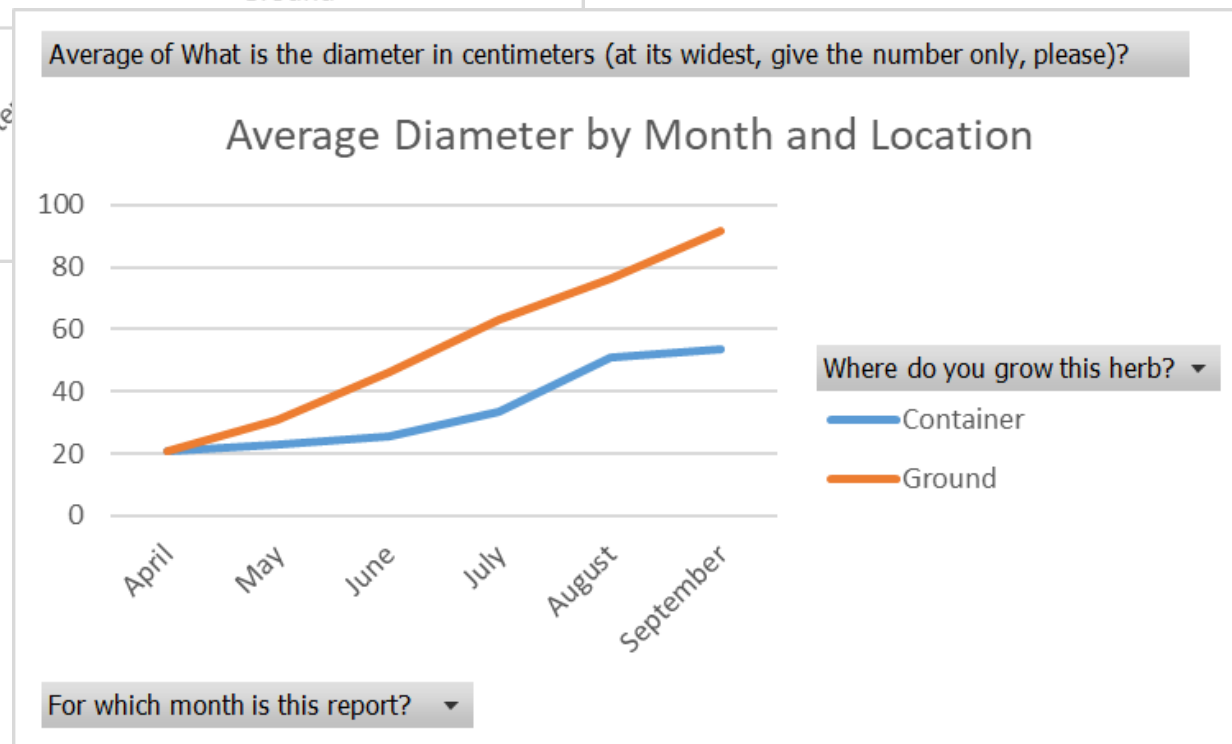
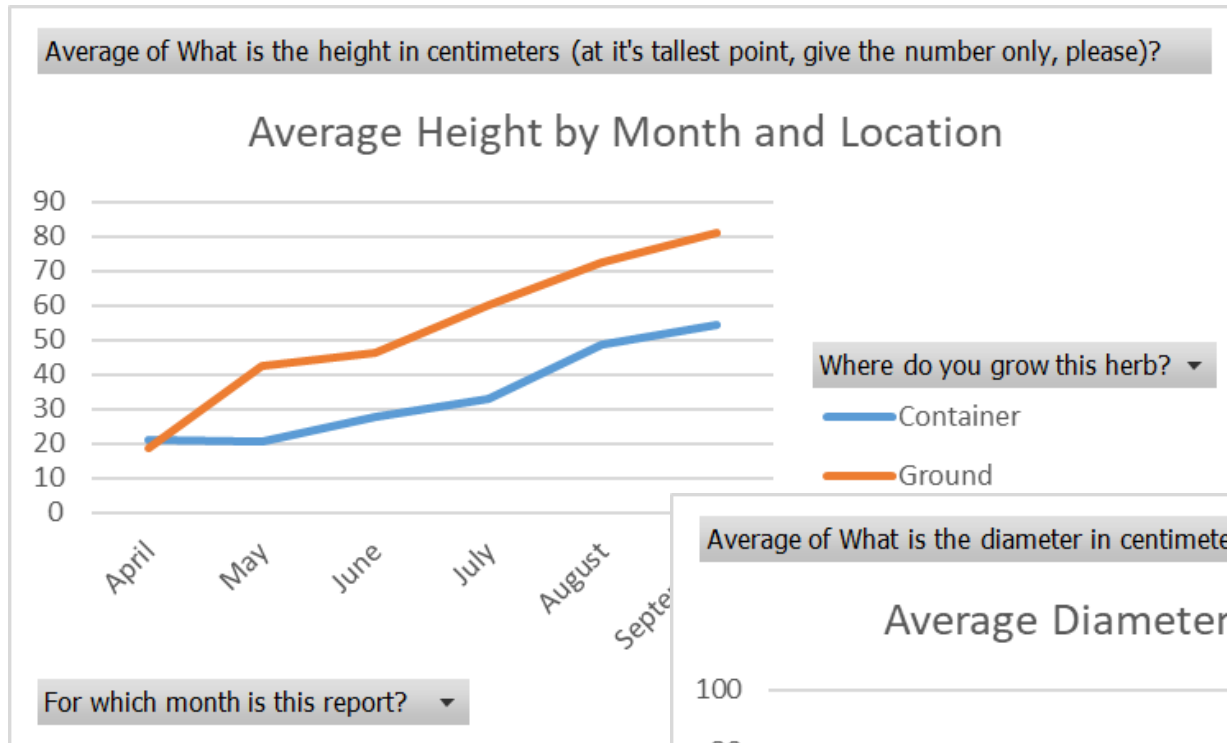


Photo by Diana Sellers (May)



Photo by Phoebe Lake (August)

Siam Queen Growth



Spicy Globe

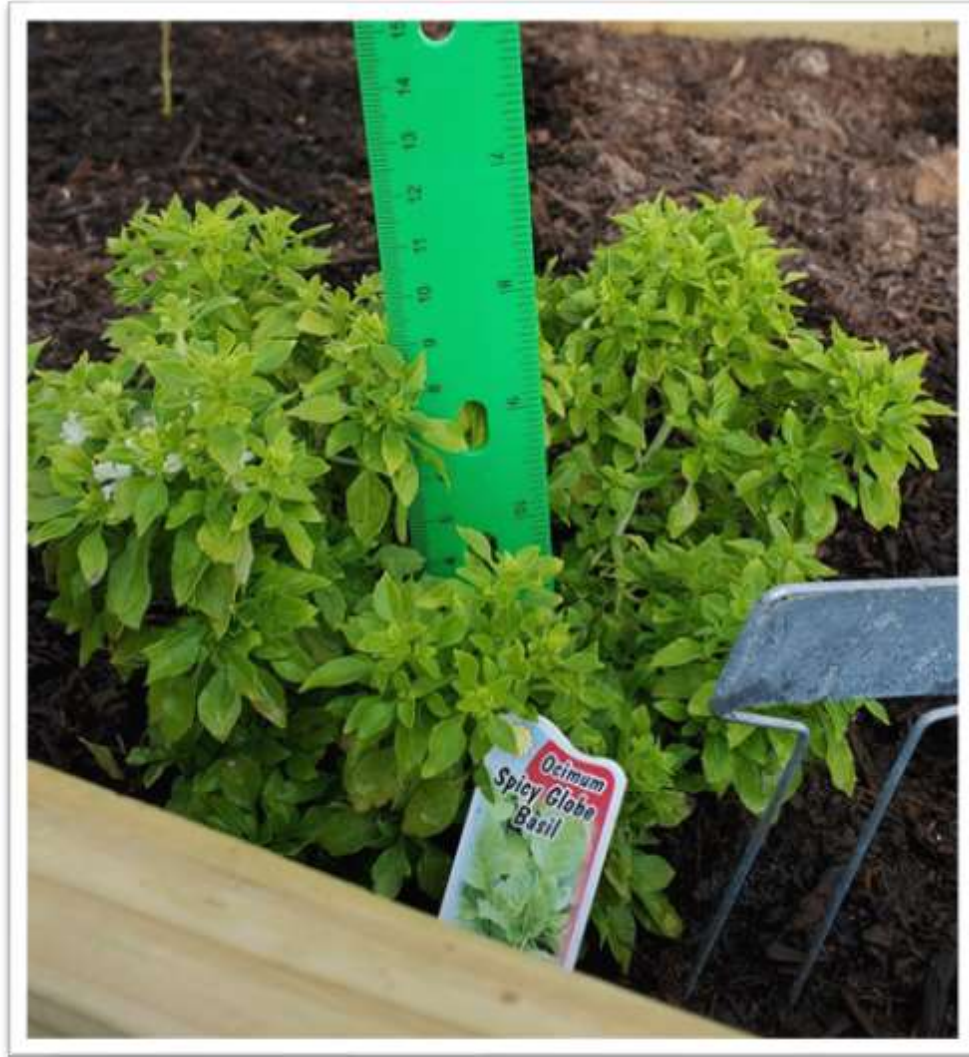


Photo by Mary Doebbeling (April)

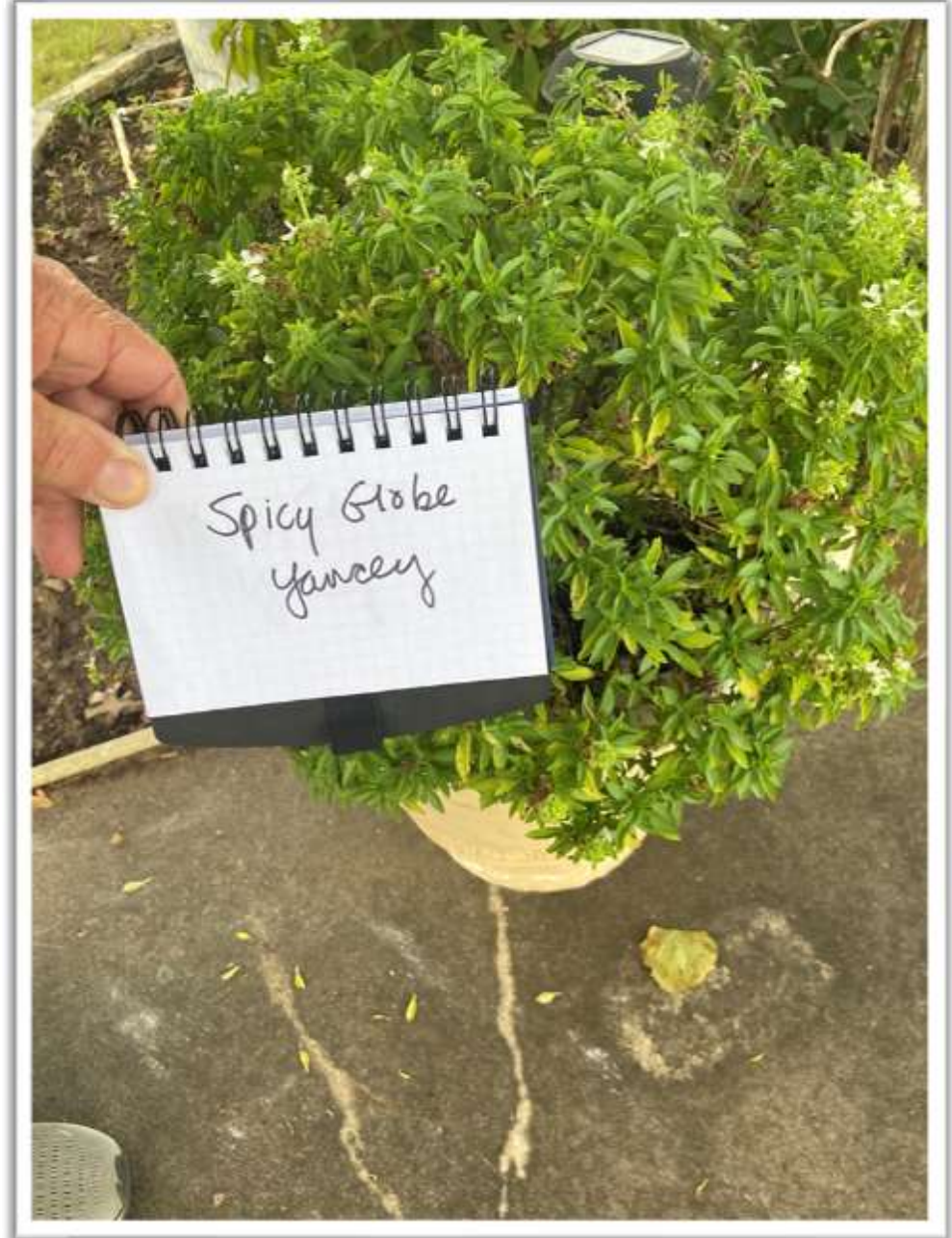
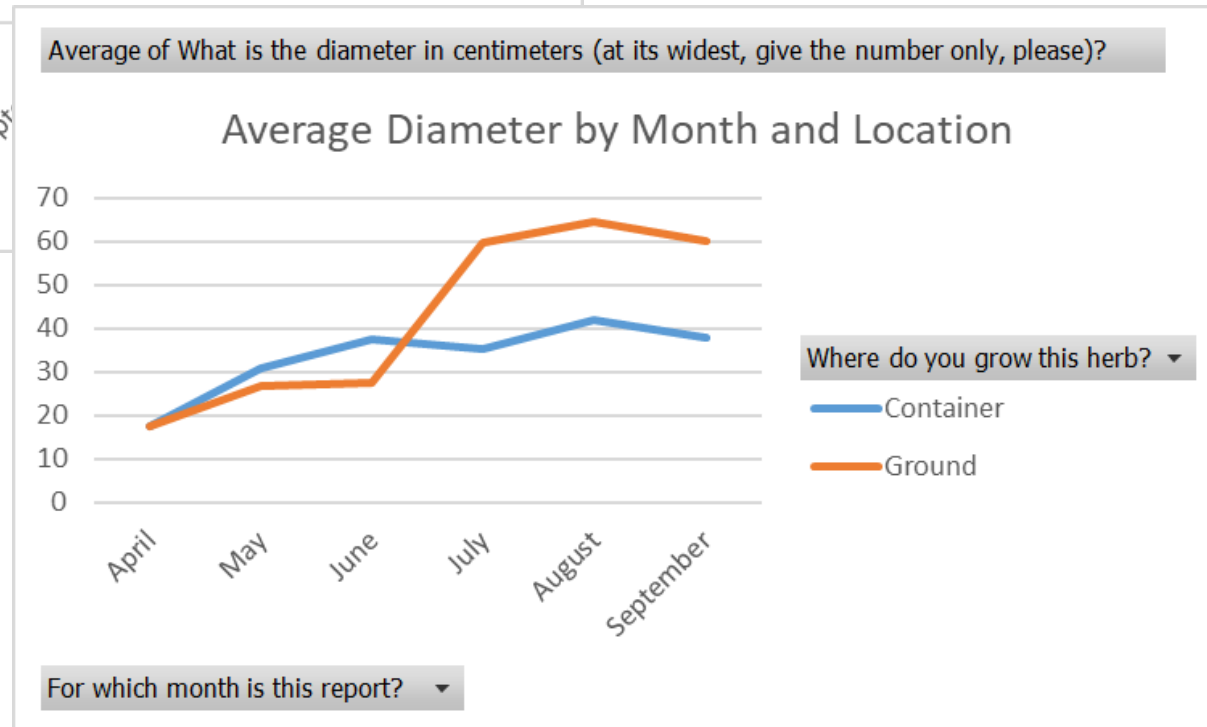
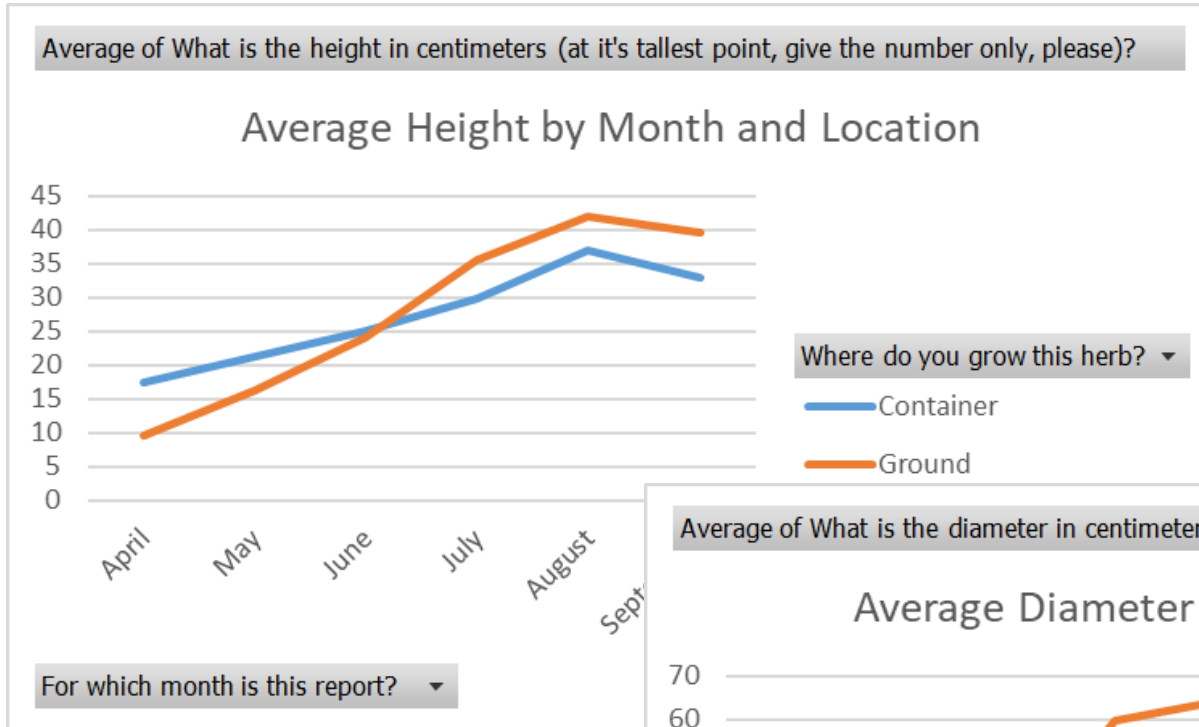


Photo by Susan Yancey (Sept)

Spicy Globe Growth



Sweet Aussie

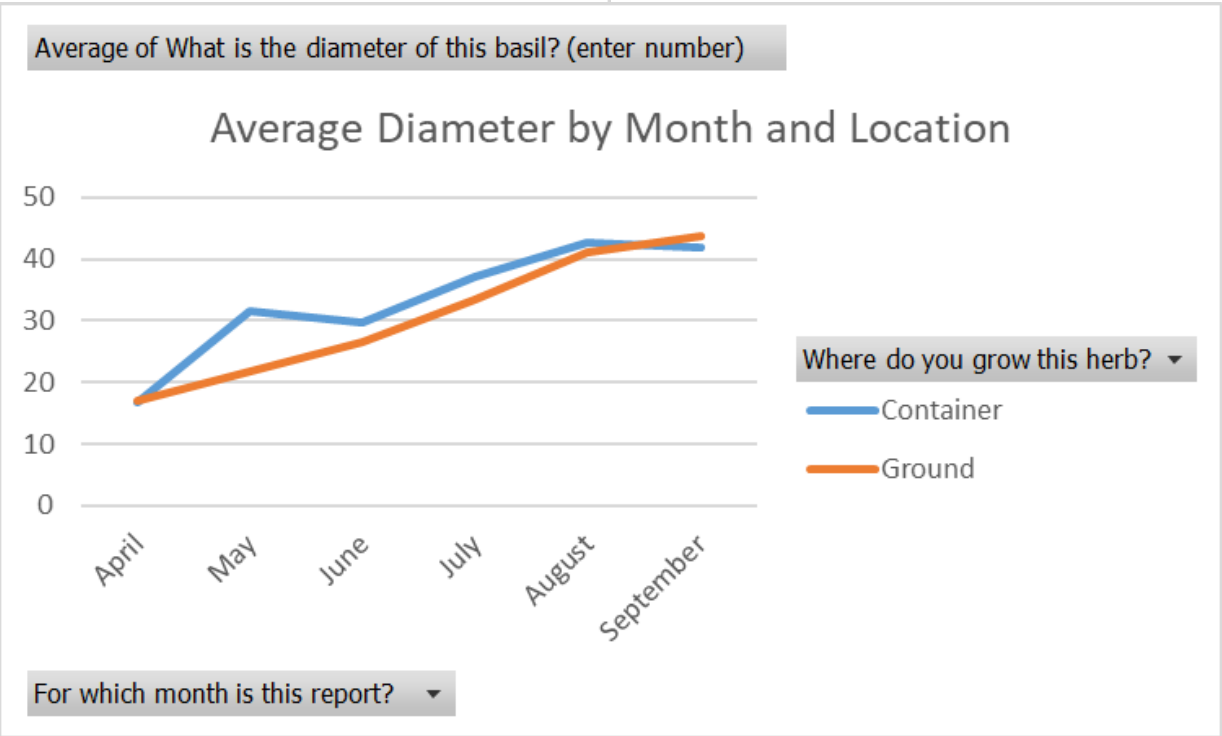
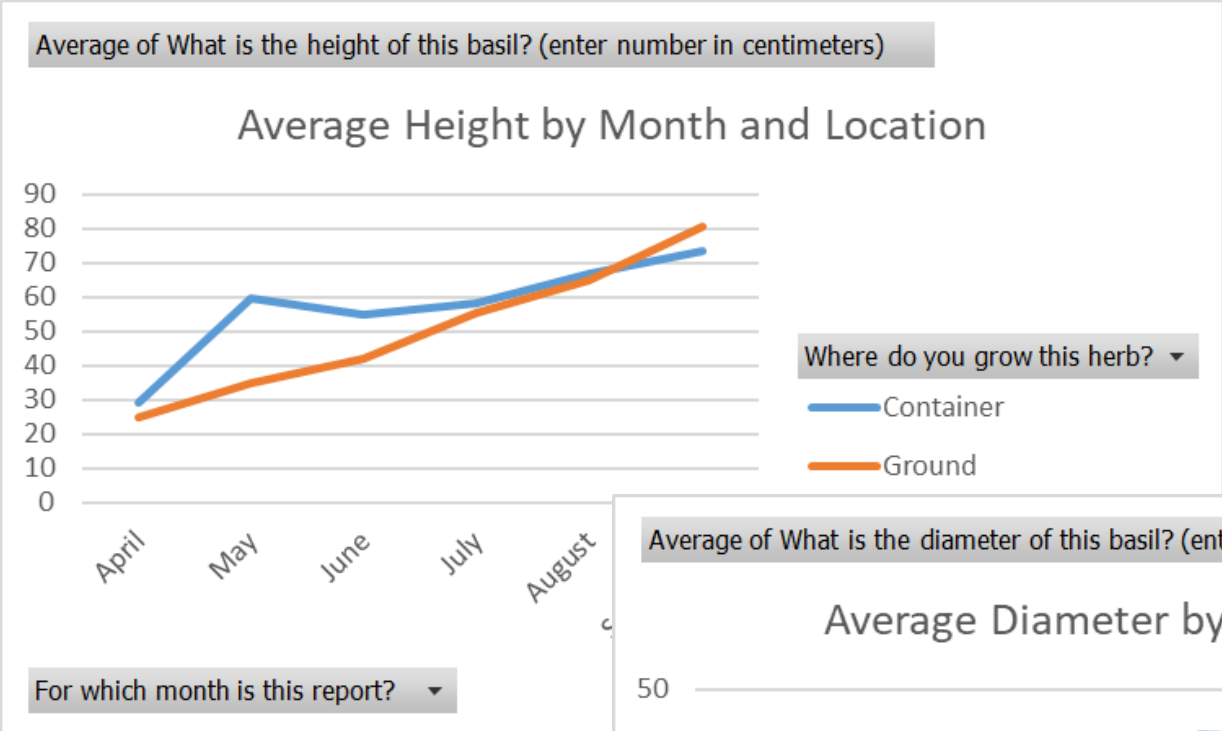


Photo by Royceanna Kendall (May)



Photo by Royceanna Kendall (August)

Sweet Aussie Growth



Sweet Genovese

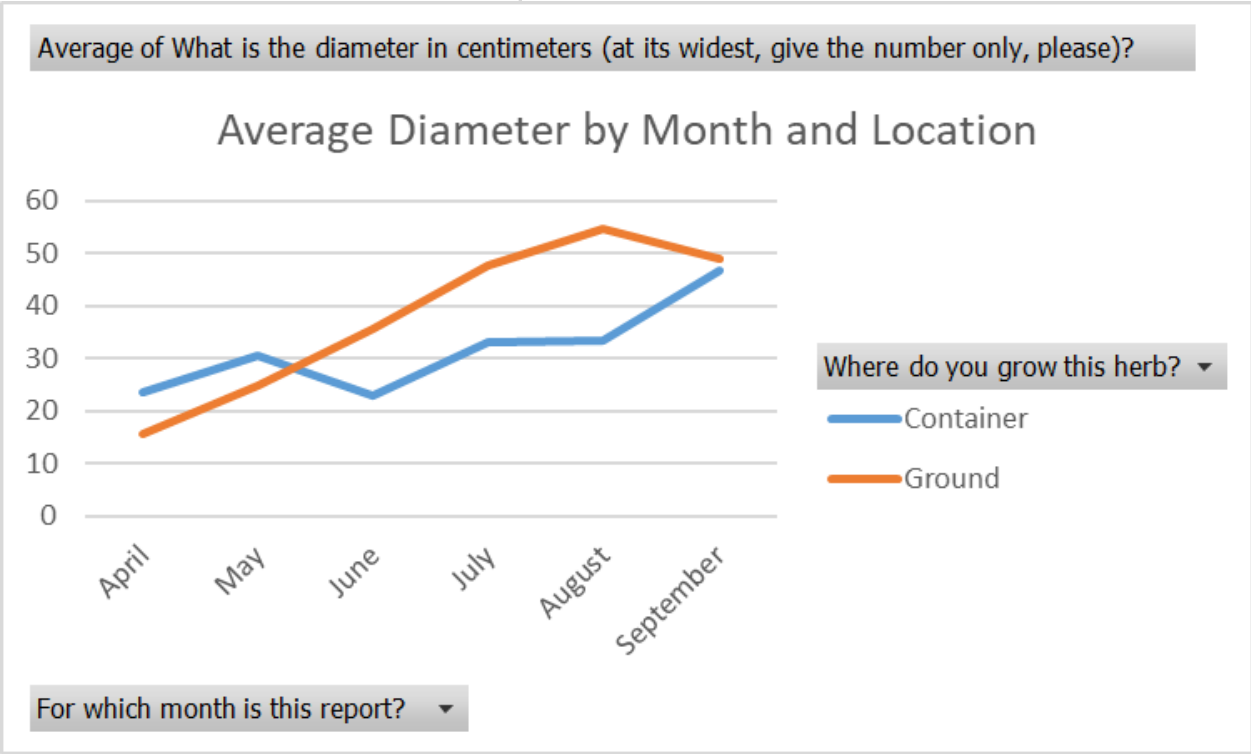
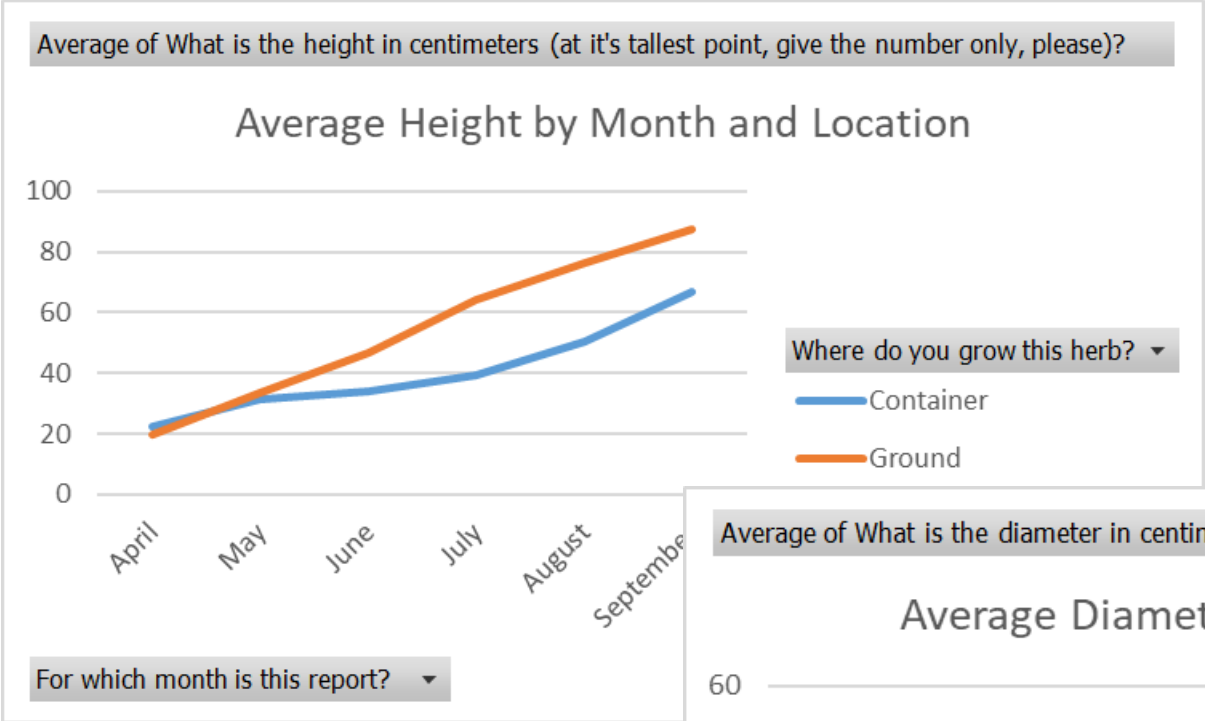


Photo by Ginger Heath (May)



Photo by Madeline Johnson (Sept)⁴⁶

Sweet Genovese Growth



Quick Comparison of Culinary Basils

		Height	Diameter	Flowering	Container	Ground
Shorter	Sweet Dani	35-45 cm	45-55 cm	Apr - Freeze	Good	Strong
	Spicy Globe	30-40 cm	40-60 cm	July - Freeze	Good	Strong
Wider	Cinnamon	55-80 cm	45-75cm	Apr - Freeze	Good	Strong
	Siam Queen	55-80 cm	55-90 cm	Apr - Freeze	Poor	Strong
	Persian	60-80 cm	50-70 cm	July - Freeze	Good	Strong
Taller	Prospera	70-80 cm	35-40 cm	July – Freeze	Strong	Strong
	Sweet Aussie	75-80 cm	40-45 cm	Aug – Freeze	Strong	Strong
	Sweet Genovese	65-85 cm	45-50 cm	July - Freeze	Good	Strong

HSG Member Sharing

2022 Horticulture Study Group

- Thyme
- 4th Thursdays of each month
- Informational Meeting /
Introduction to Thyme
 - January 27 from 10 am – Noon
 - School Bldg 9, Festival Hill
- Everyone is welcome



Basil Tastings

- 10 varieties (excluded Cardinal and Wild Color)
- Basil blended with Grapeseed Oil
- Rate your liking
- Name your top 3
- Hand in your completed forms