



# Herbs

FSMG Intern Class

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Free State Master Gardener  
Vegetable Specialist



# Agenda

- Background & History
  - Culinary Herbs
  - Medicinal Herbs
  - Harvesting & Use
  - Garden Plans
- 



# First things first...

- How do you say it??
- What is it?
  - Herb: green, leafy part of the plant
  - Spice: root, stem, seed, fruit, flower or bark of the tree or plant
  - Plants can be both

# How We Know Herbs

- Historical
- Fragrant
- Culinary
- Medicinal






# Herbs in History

- ▶ Used by humans 6,000 yrs
  - ▶ Culinary, ceremonial, medicinally
- ▶ *The Yellow Book of Internal Medicine* China 1,000 BC
- ▶ India's Vedic texts 4,000 yrs
- ▶ Greece, Egypt – Hippocrates 460 BC
- ▶ Bible 2,000 yrs
- ▶ The Canon of Medicine – Arabia (980-1037)
- ▶ *Joyful Newes Out of the Newe Founde Worlde*, 1569
- ▶ Herbalism was common knowledge
  - ▶ Rise of Pharmaceuticals in 18<sup>th</sup> – 20<sup>th</sup> century
  - ▶ Resurgence of herbalism in 1960's




# Why Grow Herbs?

- It's easy
  - It's satisfying
  - They are good for you
  - Pollinators love them
  - Companion plants in garden
- 



# Talking Herbs

- Zone
  - Type of plant: Perennial, Annual, Biennial
  - Species
  - Sun requirements
  - Soil requirements
  - Height and Spread
  - Propagation
  - Parts Used
  - Culinary uses
  - Medicinal uses
  - Other facts
- 



# Culinary Herbs





# Top 12 Culinary Herbs

- Basil
  - Chives
  - Cilantro
  - Dill
  - Garlic
  - Mint
  - Oregano
  - Parsley
  - Rosemary
  - Sage
  - Tarragon
  - Thyme
- 

# Basil

*Ocimum basilicum* zone 10 Annual

- ▶ 35 species
- ▶ Full sun
- ▶ Sow seeds in moist, med-rich well-drained soil
- ▶ H 1-2' S 6-12"
- ▶ Sprigs can be rooted in water
- ▶ Leaves, flowers, seeds, self-seeds, nip flowers
- ▶ Fresh or dried, oil
- ▶ Warm, spicy flavor, Italian dishes, compliments garlic
- ▶ Chest congestion, rub fresh leaves on insect bites to relieve itch

*Genovese*



*Purple Ruffles*

*Holy Basil*



# Chives

*Allium schoenoprasum* zone 3-9 Perennial

- 700 species, onion, garlic, leeks, shallot family
- Full, part sun
- Rich, well-drained soil
- H 6-18" S 1-2'
- Seed, transplant
- Leaves, flower, bulb
- Use fresh, frozen, dried does not retain flavor
- Good in egg & cheese dishes, salads, vegetables
- Circulation, digestion
- Deters aphids



Garlic Chives

# Coriander (Cilantro)

*Coriandrum sativum*

zone 10 Annual

- 2 species
- Full, part-sun
- Well-drained soil
- H 2-3' S 6-12"
- By seed in spring, self- seeds
- Leaves, seeds, stem, root
- Fresh or dried leaves
- Seeds dried whole or crushed in breads, soup, curry
- Indigestion, muscular aches, pains
- Bolts in heat, bees love it
- Love it or hate it – your genetics
- Seeds found in King Tut's tomb



# Dill

*Anethum graveolens* zone 10 Annual

- ▶ 2 species
- ▶ Full sun
- ▶ Well-drained soil, neutral to slight acid
- ▶ H 2-3' S 6-12"
- ▶ Seeds in spring, may self-sow
- ▶ Leaves, seeds, flower head, fresh or dried
- ▶ Indigestion, constipation, seeds sweeten breath
- ▶ Anise-like flavor
- ▶ Fish, pickles, egg dishes, salad
- ▶ Don't grow near fennel
- ▶ Used in charms against witches



# Garlic

*Allium sativum*

zone 4-9 Perennial

- 700 species
- Full sun
- Well-drained, composted soil
- H 1.5-2' S 5-6"
- Cloves in fall Oct/Nov
- Bulbs
- Raw, juiced, dried
- Meats, seafood, vegetables, roasted
- Bacterial infections, skin problems, high blood pressure
- 2 cloves crushed daily effective antiviral during cold & flu season



# Mint

*Mentha sp.*

Zone 6-11 Perennial, Annual

- 25 species
- Sun to part-shade
- Well-drained soil
- H 1-3' S1-3'
- By seed, tip or root cuttings
- Leaf
- Fresh or dried, oil
- Menthol flavor, drinks
- Indigestion, congestion, inflammation, headache
- Can be invasive, bottomless pots
- Symbol of hospitality



*Peppermint*

*Chocolate  
Mint*



*Ginger Mint*

# Oregano

## *Origanum vulgare*

Zone 5-11 Perennial

- ▶ 20 species
- ▶ Sun
- ▶ Well-drained soil
- ▶ H 1-2' S1-2'
- ▶ Root cuttings
- ▶ Leaf
- ▶ Fresh or dried, oil
- ▶ Pungent flavor, Italian dishes
- ▶ Headache, insomnia, achy muscles, stiffness
- ▶ Attractive to pollinators
- ▶ Brings joy to the dead, happiness at weddings
- ▶ Medieval strewing herb – mixed with straw for floor covering





# Parsley

*Petroselinum crispum*

zone 10 Annual, Biennial

- 3 species
- Sun, part-shade
- Moist, well-drained neutral to alkaline soil
- H 6-12" S 6-12"
- By seed or transplant, soak or freeze seeds, slow germinate
- Leaves, seeds, root (*tuberosum*)
- Use fresh, dried, frozen
- Soups, sauces, egg & cheese dishes, meat & fish, vegetables
- Indigestion, fluid retention, gout, clears toxins
- Rich in Iron, Vitamin A, C and E
- Chew to freshen breath
- Sacred to Persephone, Queen of the Underworld

*Flat Leaf*



*Curly*



# Rosemary

*Rosmarinus officinalis* zone 8-11 Perennial, Annual

- 2 species
- Full sun, part-shade, shelter from cold
- Well-drained, alkaline, sandy soil, no wet feet
- H 4-5' S 3-6'
- Cuttings
- Leaf, flower
- Fresh, dried, frozen, oil
- Lamb, pork, chicken, vinegars, marinades, bread
- Headaches, fatigue, indigestion, circulation
- Means "Dew of the Sea"
- Symbol of fidelity, remembrance

*Prostrate*



*Tuscan Blue*



# Sage

*Salvia officinalis*

zone 5-8 Perennial

- ▶ 900 species
- ▶ Full sun
- ▶ Humus rich, well-drained soil
- ▶ H 1-2' S 1-2'
- ▶ By transplant or cuttings
- ▶ Leaves, oil
- ▶ Use fresh, dried
- ▶ Pork, lamb, strong meats, vegetables
- ▶ Colds, coughs, sore throats, insect bites
- ▶ Strong, best used by itself
- ▶ Important bee plant
- ▶ Means "To be well"



Common



Tricolor



Pineapple

# Tarragon

*Artemisia dracunculus* zone 4-11 Perennial

- 300 species
- Sun
- Rich, well-drained neutral to alkaline soil
- H 1'-3', S 1'-1.5'
- Root cuttings
- Leaves, oil
- Fresh, frozen, pickled in vinegar
- Best in chicken & egg dishes, salad dressing, sauces
- Digestion, menstrual issues, rheumatism, toothache
- Licorice aroma



# Thyme

*Thymus vulgaris* zone 4-8 Perennial

- 350 species
- Sun, part-shade
- Well-drained soil
- H 6-12" S 6-12"
- By seed, transplant or cuttings
- Leaves, flowers
- Use fresh, dried
- Meat, stews, root vegetables, vinegars
- Sore throat, coughs, hoarseness
- Protects paper from mold
- Means "Courage"

*English*



*Variegated*

*Wooly*





# Other Culinary Herbs

- 
- ▶ Angelica
  - ▶ Bay
  - ▶ Borage
  - ▶ Fennel
  - ▶ Lemon Balm
  - ▶ Lemongrass
  - ▶ Lemon Verbena
  - ▶ Lovage
  - ▶ Savory, Summer
  - ▶ Savory, Winter

# Angelica

*Angelica archangelica* Zone 4 - 9 Perennial, Biennial

- ▶ 50 species
- ▶ Part-shade
- ▶ Moist to wet, rich soil
- ▶ H 5-8' S 2-4'
- ▶ Seeds, early spring, self-seeds
- ▶ Leaves, stems, roots, seeds
- ▶ Use fresh or dried
- ▶ Stems crystalized, seeds for sweetening, leaves, celery-like flavor
- ▶ Helps coughs, digestive cramps, rheumatic pain
- ▶ Attracts beneficial insects
- ▶ Believed to protect against evil and cure all ills



# Bay, Sweet Laurel

*Laurus nobilis*

Zone 8-11 Perennial

- ▶ 50 species
- ▶ Sun, part-shade
- ▶ Moist, humus rich soil
- ▶ H 5-10' S 4-11'
- ▶ Cuttings, layering
- ▶ Leaves, fresh, dried
- ▶ Meat based stews, soups, fish dishes
- ▶ Indigestion, purifies air, antimicrobial
- ▶ Laurel wreathes crowned Roman generals





# Borage

*Borago officinalis* zone 10 Annual

- 3 species
- Sun, light shade
- Light, well-drained, dry soil
- H 1-2' S 1-1.5'
- Seed in early spring, self-seed
- Flowers, leaves
- Cucumber flavor, salads, candied flowers
- Lower fevers, skin wash, mouthwash, hormone balancing
- Freeze flowers in ice cubes for festive drinks



# Fennel

*Foeniculum vulgare* zone 6-11 Biennial

- 1 species
- Sun
- Well-drained, neutral to alkaline sandy soil
- H 3-4' S1-2'
- Seed, self-seeds
- Bulb, leaves, seeds, oil
- Salads, garnish, as a vegetable, teas, breads
- Seeds chewed to aid digestion, sweeten breath, diuretic



# Lemon Balm

*Melissa officinalis*

zone 4-9 Perennial

- ▶ 3 species
- ▶ Sun, part shade
- ▶ Evenly moist, well-drained soil
- ▶ H 1.5-2' S 6-12"
- ▶ Seed, stem cuttings, division, self seeds
- ▶ Leaves
- ▶ Salad, soups, sauces, vinegars, tea, game & fish
- ▶ Headaches, indigestion, calming nerves, bathe cuts, insect bites
- ▶ Greek word for "honey bee"



# Lemongrass

*Cymbopogon citratus*

zone 9-11 Perennial

- 56 species
- Sun, light shade
- Moist, well drained rich soil
- Division, seed
- H 3-4' S2-3'
- Leaves, stalks, oil
- Thai, Indian recipes
- Lower fever, stress relief, aches & pains, insect repellent



# Lemon Verbena

*Aloysia triphylla* zone 9-11 Perennial

- 37 species
- Sun
- Moist, well-drained, humus rich soil
- H 3-8' S 2-3'
- Seed, cuttings, division
- Leaves, flowers
- Fresh, dried, oil
- Teas, potpourris
- Insomnia, nervous stress, exhaustion, high blood pressure, acne



# Lovage

*Levisticum officinale* Zone 3-7 Perennial

- ▶ 1 species
- ▶ Sun to Part-shade
- ▶ Humus rich, moist, well-drained soil
- ▶ H 4-6' S 2-3'
- ▶ Root division, seeds, early spring
- ▶ Fresh, leaves, roots, seeds
- ▶ Soup, salad greens, seeds like pepper
- ▶ Helps exhaustion, rheumatism
- ▶ Old English cottage herb, means "love-ache"



# Summer Savory

*Satureja hortensis*

Annual

- ▶ 30 species
- ▶ Full sun
- ▶ Average, well-drained soil
- ▶ H 6-18" S 1-2'
- ▶ Seeds, start indoors, may self-sow
- ▶ Leaves, peppery flavor
- ▶ Fresh
- ▶ Soups, sauces, vinegars, egg & poultry dishes, marinades
- ▶ Rub on insect bites, expectorant, gas reducer
- ▶ Believed to be an aphrodisiac



# Winter Savory

*Satureja montana*

- ▶ 30 species
- ▶ Full sun
- ▶ Average, well-drained soil
- ▶ H 6-18" S 1-2'
- ▶ Seeds, early spring, self-seeds
- ▶ Leaves, shoots
- ▶ Fresh
- ▶ Soups, sauces, vinegars, egg & poultry dishes, marinades
- ▶ Rub on insect bites, expectorant, gas reducer
- ▶ More pungent than summer savory

Zone 5-8 Perennial







# Medicinal Herbs

And Other Lesser Known

# Aloe

## Aloeaceae

zone 9-11

- ▶ 325 species
- ▶ Filtered sun, light shade
- ▶ Gritty, well-drained soil
- ▶ H 1-3'
- ▶ By offset any time
- ▶ Young leaves, sap
- ▶ Anti-inflammatory, antimicrobial, vitamin C & E
- ▶ Rapid healing of burns, rashes, cuts, dermatitis
- ▶ Chronic constipation, colitis, IBS



# Beebalm (Bergamot)

*Monarda didyma*

zone 4-10 Perennial/Annual

- 15 species
- Sun, part shade
- Variety soil
- H 2-3' S 6-12"
- Seed, cuttings, division
- Leaves, flowers
- A.k.a. Oswego tea, Earl Grey
- Herbal teas, salads, drinks, potpourri
- Relieve nausea, insomnia, lowers fevers
- Attracts hummingbirds, bees, butterflies



# Calendula, Pot Marigold

*Calendula officinalis*

*Hardy Annual*

- ▶ 20-30 species
- ▶ Sun, light shade
- ▶ Evenly moist, well-drained soil
- ▶ H 1-2' S 1-1.5'
- ▶ Seed, will re-seed
- ▶ Flowers, young leaves
- ▶ Fresh, dried petals
- ▶ Herbal baths, soap, edible flowers, rice, soup, poultry dishes
- ▶ Ointments for skin healing, tea for mouthwash, dyes
- ▶ Deadhead for longer bloom



# Chamomile, German

*Matricaria recutita*

- 5 species
- Sun, part shade
- Well-drained sandy soil
- H 6-12" S 6-12"
- Seed
- Flowers, oil
- Bitter, reduces inflammation, pain, promotes healing of burns
- Pollinator plant

Hardy Annual



# Chamomile, Roman

*Chamaemelum nobile* zone 3-10 Annual/Perennial

- ▶ 4 species
- ▶ Sun, part shade
- ▶ Well-drained sandy soil
- ▶ H 6-12" S 6-12"
- ▶ Seed
- ▶ Flowers, oil
- ▶ Apple-like fragrance & flavor
- ▶ Teas, salad, bath
- ▶ Companion plant in garden



# Comfrey

*Symphytum officinale* zone 4-9 Perennial

- ▶ 25-35 species
- ▶ Sun, part shade
- ▶ Moist, well-drained soil
- ▶ H 2-4' S 2-3"
- ▶ Division, seed
- ▶ Leaves, roots
- ▶ Dried, fresh
- ▶ Poultice, bruises, scar & skin healing, bone-healing, boils, draws out infections
- ▶ Can be invasive



# Lavender

*Lavandula*

- ▶ 25 species
- ▶ Sun
- ▶ Well-drained, sandy, alkaline soil
- ▶ H 2-3' S 1-2'
- ▶ Seed, Cuttings
- ▶ Purple, pink, yellow, white
- ▶ Flowers, leaves, oil
- ▶ Cakes, cookies, sugar
- ▶ Potpourri, perfume, insect repellent
- ▶ Calming, headaches, insomnia, skin wounds

zone 5-11 Perennial

*English 5-8  
Angustifolia*



*Spanish 8-11  
Stoechas/acid*

*French 8-11  
Dentata*





# Nasturtium

*Tropaeolum majus*

*Tender Annual*

- 80-90 species
- Sun, part-shade
- Average, well-drained, average to poor soil
- H 1-10" S 1-10"
- Seed, after frost
- Flowers, leaves
- Trailing vine, dwarf bush
- Companion plant, deters cucumber beetle, whitefly
- Watercress flavor, buds can be pickled, flowers in salads, drinks
- Contains Sulphur, baldness, antiseptic



# Roselle

*Hibiscus sabdariffa*

Zone 9-11

- 2 species
- Full Sun
- Fertile soil
- H 7-8' S 3-4'
- Seed, start early or after frost, prefers heat
- Flowers (calyx), leaves, stems, seeds
- Rich in Vit C, calcium, niacin, riboflavin and iron
- Native to West Africa, India and Malaysia
- Cranberry-flavored bright red beverages, jelly, pie, and tea
- Digestive aid, lower fever



# Salad Burnet

*Poterium sanguisorba*

zone 3-11

- 18 species
- Sun, light shade
- Well-drained, alkaline evenly-moist soil
- H 1-3' S 8-15"
- Seed, self-seed
- Young leaves
- Salads, garnish, cucumber flavor
- Dried leaves in tea



# Stevia

*Stevia rebaudiana*

zone 11+

- 280 species
- Sun
- Moist, sandy, acid soil
- Cuttings
- Young leaves
- Dried, grind leaves for sweetener
- 10-15 times sweeter than sugar



# St. John's Wort

*Hypericum perforatum*

zone 4-8

- 400 species
- Sun, part shade
- Well-drained to dry soil
- H 2-3' S 18-24"
- Seed in fall, division in spring, self-seeds
- Whole plant
- Infusions, oil
- Anti-viral, anxiety, insomnia, shingles, sciatica, fibrositis
- Interacts with many Rx



# Yarrow

*Achillea millefolium*

zone 3-10

- 85 species
- Sun, part shade
- Well-drained, rich soil, tolerates hot, dry
- H 1-3' S 8-12"
- Division in spring, seed
- Whole plant, dried, fresh
- Inflammation, head colds, wounds
- Can be invasive, good pollinator plant





# Harvesting & Preserving





# Harvest



- Early morning usually best
- On a dry day
- Use sharp shears, scissors
- Lay flat in a basket
- Pick out damaged, diseased leaves
- Seasonally based on herb and part
  - late spring to early fall



# Preserving

- Dried
- Frozen
- Oil
- Sugar
- Salt
- Alcohol



# Drying Herbs



- Use less than fresh
  - 1t. dried = 1T. fresh
- Most herbs can be dried
  - Tie in small bunches with string & hang upside down
- Dehydrator
- Screen Drying Racks
- Oven (or hot cars)
- Low light
- Constant temperature
- Far enough apart to allow air circulation
- Label
- Check for mold



# Freezing Herbs

- ▶ Same quantity as fresh
- ▶ Mainly for cooking
- ▶ Use ice tray
  - ▶ Top with oil or water
  - ▶ After frozen, transfer to zipper bag for long term storage
  - ▶ Use cubes like fresh herbs
- ▶ 1/3 cup of oil to 3 cups of herbs



# Herb Butter



# Sugar

- Wonderful for Lavender
  - Strip buds in 1 cup superfine sugar
  - Store in screw top jar
- Vanilla Bean
  - Split and scrape vanilla bean in sugar
  - Store in screw top jar
- Use in cakes, cookies, biscuits, muffins, sugar scrubs





# Salt

- Fresh herb mixture – washed and dried leaves, snipped
- Lay out on baking sheet
- Pour ½ c sea salt on top, mix together
- Leave in cool oven - 90 degrees until dry
- Grind together
- Store in screw- top jar

# Oils, Tinctures



- ▶ Cold-pressed, organic oils
  - ▶ 2 c. Olive, grape seed, sunflower
  - ▶ Add fresh, washed leaves to oil
  - ▶ Leave for 2 weeks
  - ▶ Strain oil and use
- ▶ Tincture – alcohol based remedy
  - ▶ ½ c. fresh leaves, muddled
  - ▶ 1c. Brandy, vodka, everclear
  - ▶ Mix in dark, glass container
  - ▶ Leave for 3 weeks in cool, dark place
  - ▶ Strain and store





# Companion Plants

May improve soil, attract beneficial insects, discourage harmful insects

- Basil
- Borage
- Calendula
- Chamomile
- Chives
- Clover
- Coriander
- Dill
- Fennel
- Garlic
- Hyssop
- Lavender
- Lemon Balm
- Marjoram
- Mint
- Nasturtium
- Parsley
- Rosemary
- Sage
- Summer Savory
- Thyme
- Yarrow



# Insect-repellent plants

- 
- ▶ Citronella
  - ▶ Cinnamon
  - ▶ Clove
  - ▶ Eucalyptus
  - ▶ Lemongrass
  - ▶ Lavender
  - ▶ Patchouli
  - ▶ Pennyroyal
  - ▶ Peppermint
  - ▶ Rose Geranium
  - ▶ Sweet Orange
  - ▶ Vetiver



# Herb Gardens

Designs & Layouts



# Herb Gardens

- Culinary garden
  - Medicinal garden
  - Knot garden
  - Spiral garden
  - Container garden
  - Incorporated in landscape
- 

# Culinary Garden



# Medicinal Garden

Borage

Calendula

Chamomile

Clary Sage

Comfrey

Feverfew

Garlic

Lavender

Lemon Balm

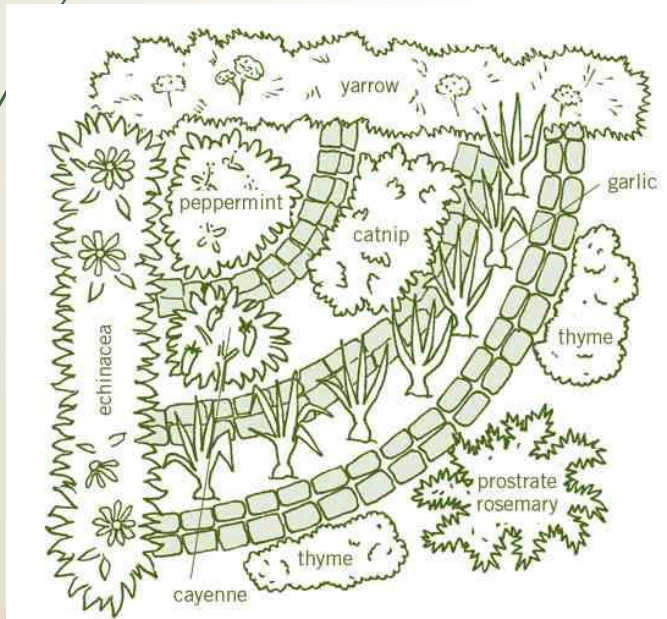
Peppermint

Purple Coneflower

Apothecary Rose

St-John's Wort

Yarrow



# Knot Gardens

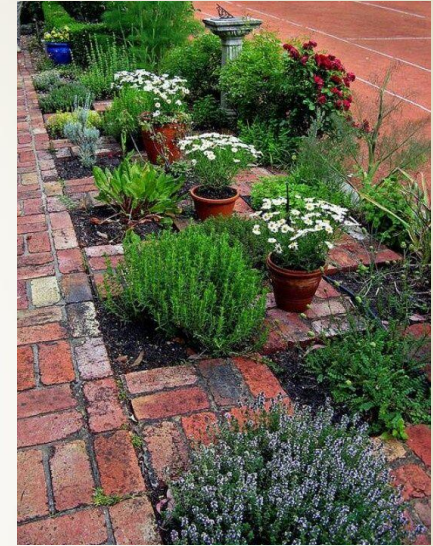


# Container Garden





# Incorporated in Landscape



# Spiral Herb Garden

- **Sunny Dry** - top of herb spiral
- **Sunny Moist** - middle of herb spiral
- **Sunny Wet** - bottom of a herb spiral





*What else???*