Upcoming Webinars

• April 17– Best Practices on Health and Hygiene When Handling Foods for the Public
  – Julie Wagendorf, Director, North Dakota Department of Health’s Division of Food and Lodging
Zoom Controls

- Meeting Topic: Field2Fork - Tom Kalb Growing Vegetables
- Host: Extension FCW
- Invitation URL: https://zoom.us/j/609371435
- Participant ID: 22

- Mute/unmute
- Open chat box
- Question/Answer Controls
- Chat box
Please Complete the Survey

• Please complete the short online survey that will be emailed to you after today’s webinar. It will take just a couple minutes!

• Be sure to sign up for an opportunity to win a prize in the drawing. After submitting the survey, a form to fill out with your name/address will appear.

• Acknowledgement: This project was supported by the U.S. Department of Agriculture’s (USDA) Agricultural Marketing Service through grant 14-SCBGP-ND-0038.
Getting Started with Herb Gardening

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What is an Herb?

• Plants referred to as “herbs” are used as garnishes or flavor enhancers
  – Leaves, seeds, flowers
  – Typically used fresh

• Collection of chemicals known as essential oils are responsible for flavors and aromas
  – Concentrations vary by plant part

• Herbs can add flavor without adding fat or sodium
Growing Culinary Herbs

• Most are easy to grow
• Have few pest problems
• Rarely bothered by deer or rabbits
• Require little care
• A little goes a long way
Growing Culinary Herbs

• Adequate light, water, and fertilizer
  – Minimum 6 hours daylight
  – Drainage
  – Light fertilization

• Container grown or in the garden
  – Site doesn’t have to be big
  – Locate close to house/kitchen
  – Some herbs (mint, borage) are spreaders or heavy re-seeders (dill, chamomile)

• Direct seeded or transplants (Read package)
Starting Herb Seeds Indoors - When to sow?

• Check seed package
• Last frost date
• Growth rate of plant
• Desired date to transplant
  ✓ Frost tolerance
### Last Frost Dates

<table>
<thead>
<tr>
<th>City</th>
<th>Last Frost</th>
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<tbody>
<tr>
<td>Fargo</td>
<td>May 10</td>
</tr>
<tr>
<td>Bismarck</td>
<td>May 19</td>
</tr>
<tr>
<td>Grand Forks</td>
<td>May 22</td>
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<tr>
<td>Minot</td>
<td>May 15</td>
</tr>
<tr>
<td>Jamestown</td>
<td>May 17</td>
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<tr>
<td>Williston</td>
<td>May 27</td>
</tr>
<tr>
<td>Devils Lake</td>
<td>May 8</td>
</tr>
<tr>
<td>Rugby</td>
<td>May 30</td>
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</tbody>
</table>

*Updated 4.8.19 from Old Farmers Almanac*
Proper Growing Media

• Use a seed starter mix
  ✓ Peat moss, compost, perlite

• Potting soil is acceptable

• **DO NOT** use topsoil or garden soil
Temperature

• Warm soil temps (70-80\degree) promote germination
  ✓ Seedling heat mats
  ✓ Avoid windowsills

• Room temps are sufficient after germination
Moisture

• Keep soil moist but not wet
  – Wrung-out sponge

• Drainage is critical

• Use water at room temperature
Lighting

• Light *quantity* – *not quality* – is key

• Beware of leaning, spindly plants
Planting Herb Seeds

• Label containers
• Plant at least 5 seeds
  – Or a pinch
• Lightly cover
  – Rule of thumb is to plant seed just 2x its thickness under soil
• Thin to one plant/pot
• Pinch tops at 6-8 weeks
# Herbs for North Dakota Outdoors

<table>
<thead>
<tr>
<th>Herb</th>
<th>Life Cycle Classification</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Basil</td>
<td>Annual</td>
<td>Clove scent; Tomato dishes</td>
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<tr>
<td>Borage</td>
<td>Annual (self-seeding)</td>
<td>Bee Attractant</td>
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<tr>
<td>Dill</td>
<td>Annual (self-seeding)</td>
<td>Pickles, fish, meat, dips</td>
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<tr>
<td>Fennel</td>
<td>Perennial *annual in zone 3</td>
<td>Licorice flavor; Appetite Supressant</td>
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<tr>
<td>Mints</td>
<td>Perennial</td>
<td>Enhance teas, lamb</td>
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<tr>
<td>Oregano</td>
<td>Perennial *annual in zone 3</td>
<td>Strong aromatic flavor; Tomato dishes</td>
</tr>
<tr>
<td>Parsley</td>
<td>Biennial</td>
<td>Garnish; soups and stews</td>
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<tr>
<td>Sage</td>
<td>Perennial *annual in zone 3</td>
<td>Silver gray; pork sausages</td>
</tr>
<tr>
<td>Savory (summer)</td>
<td>Annual</td>
<td>Garnish; meat</td>
</tr>
<tr>
<td>Thyme</td>
<td>Perennial *annual in zone 3</td>
<td>Chowders, seafood, &amp; vegetables</td>
</tr>
</tbody>
</table>
Plant Hardiness Zones

[Map of the United States showing hardiness zones with a color gradient indicating different zones across the country.]
Good Herbs for Beginners

• Common or sweet basil
• Dill
• Parsley
• Perennial herbs
  – **Zone 3**: chives, peppermint, spearmint, parsley (biennial)
  – **Zone 4**: Anise hyssop, lemon balm, French tarragon, thyme
  – Some herbs will self-seed
Herbs that Attract Pollinators

Herbs that Attract Butterflies
• Chives
• Dill
• Thyme
• Marjoram
• Catmint
• Mint
• Yarrow
• Parsley
• Oregano
• Lavender **zone 5

Herbs that Attract Bees
• Basil
• Borage
• Anise hyssop
• Lemon balm
• Sage
• Chamomile
• Rosemary
• Chives
• Dill
• Oregano
• Lavender **zone 5
Harvesting Herbs

• Start when plant has enough foliage to maintain growth
• Harvest early in the morning, after dew dries but before the heat of day
• Harvest before flowering – leaf production, oil
• Harvest annual herbs until frost
• Harvest perennial herbs until late August
• Tarragon and lavender can be sheared to half their height in early summer to encourage second fall flowering
How do I use herbs?

• Rinse fresh herbs under running water

• Use sharp clean scissors or sharp knife to chop into tiny pieces
How much should I use?

2 teaspoons fresh herbs
= ¾ teaspoon dried herbs
= ¼ teaspoon powdered herbs

• **Strong flavored** – Bay leaves, rosemary & sage
  – 1 tsp/6 servings

• **Moderate flavored** – Basil, dill, mint, marjoram, & oregano – 2 tsp/6 servings

• **Mild flavored** – chives and parsley – use generously
Fresh Herb Storage

- Fresh herbs may last up to 1 week in the refrigerator
  - Trim ends of stems
  - Arrange in glass or vase with 1 inch water
  - Cover loosely with plastic bag to allow for air circulation
  - Change the water daily
- Wash under cool water, pat dry
Herb Preservation

- Air Drying
- Oven/Dehydrator
- Microwave
- Freezing
Air Drying

• Pick plants at their peak
  – Just before blossom

• Bunch washed herbs

• Tie stems with string

• Hang upside down for about 2 weeks
  – Be sure they are completely dry before storing
Oven/Dehydrator Drying

• Wash herbs

• Set oven to 100° or lowest setting
  – Test hourly

• Heat until brittle

• Dehydrator
  – follow manufacturer’s instructions
Microwave Drying

• Wash
• Place bunches between 2 paper towels
• Microwave on high for 1-3 minutes
• Check every 30 seconds
• Cool – test to see if herbs are brittle
Freezing Herbs

• Wash
• Air tight freezer bags-freeze
• Place chopped herbs in ice cube trays
  – Cover with water and freeze
  – Pop out cubes & put in freezer bags
  – Drop whole cube in soup or stew
Herb and Spice Storage

• Away from moisture
• Tightly covered jars
• Store in cool place
• Do not store in a window or sunlight
• Do not store near heat sources

* For best flavor, use within one year
Anise Hyssop *Zone 4 Perennial

- Cookies, cakes, breads, candy, beverages, soups, fruit salads
- Short-lived perennial, 3-5 ft
  - Mint family
- Sunny location
  - not pH sensitive
- Insufficient moisture causes wilting
- Harvest leaves and flowers – licorice scent
- Flowers attractive to pollinators
Basil

- Pairs well with many dishes, but most commonly used in tomato sauces, pastas and pesto
- Annual herb – very cold sensitive
- 68°F soil, full sun, well-drained soil
- Dead-head to discourage flowering
- Handle carefully to prevent damage

Numerous varieties – Genovese preferred culinary type
Chamomile

• Teas

• Easy to grow annual
  – Potential to become a weed, reseeds easily

• Low growing

• Adapts well to many soil types
Chives

- Soups, chowders, salad dressings, potatoes, meat, poultry, fish, eggs, and cheese

- Easy to grow clump forming perennial
  - Also reseeds if not dead-headed

- Full sun only requirement
  - Adaptable to many soil types
  - Containers
Cilantro/Coriander

- Ethnic cuisines – Mexican, Chinese, South American, Vietnamese

- Seed – Coriander

- Foliage – Cilantro or Chinese Parsley

- Full sun and regular water

- Middle ages - aphrodisiac
Dill

- Highly versatile – dry or fresh
  - Leaves or seeds
- Annual, thrives in cool weather
- Self-seeding
- Foliage use – ‘Bouquet’ or ‘Dukat’
- Popular in pickles, sauces, salads, fish, chicken and soups
Garlic

- Used to flavor salsa, stir-fry, spaghetti sauce, soups, stews, pickles, salads, salad dressing and breads
- Hardy perennial – onion family
- Hardneck and softneck
  - Hardneck hardy for ND
  - ‘German Red’ and ‘Spanish Roja’
  - Hardneck – fewer larger cloves
  - Softneck – more smaller cloves
Lavender

- Native to hot, dry Mediterranean climates
  - Perennial zones 5-9
- Oils most concentrated in flowers
- Culinary uses include teas, beverages, savory dishes with meats and vegetables
- A little goes a long way
- ‘Hidcote’ and ‘Munstead’
Lemon Balm

- Perennial – mint family
  - Zone 4-9
- Use in teas, soups, sauces, vinaigrettes, marinades, seafood, salads, substitute for lemon peel
- Loses much of its flavor when dried – best used fresh
- Leaf flavor turns bitter when flower buds appear
Oregano

- Some varieties perennial in Zone 4
- Pungent, spicy, slightly bitter
- Commonly used in Italian, Greek, and Spanish dishes
  - Pairs well with meats, tomato dishes, and eggs
- Well-drained, sandy soil
  - Don’t overwater!
- Aka wild marjoram in Mediterranean
Marjoram

- Annual with oregano-like flavor
  - Floral and woodsly flavor
  - Light and subtle – end of cooking
- Use in place of oregano for a gentler flavor
- Meats, vegetables, seafood, egg and tomato dishes, stuffing, soups and stews
Mints

- Fast growing spreaders
- Hardiness depends on variety (Zone 3-11)
- Rich moist soil
  - Partial shade
- Used in beverages, salads, lamb, fish, poultry, peas, carrots, new potatoes
Parsley

• Biennial – Zone 4-9
• Member of carrot family
• Important food source for Black swallowtail larvae
• Light fresh taste
• Flat-leaf varieties better flavor
• Used in sauces, salads, and soups
  – Lessens need for salt
Tarragon (French)

- French tarragon hardy to Zone 4 with protection
- Sunflower family
- Flavor sweet/bitter
  - Vanilla and licorice, slightly peppery
  - Bitter taste more pronounced in Russian variety
- Mostly used for vinegar, pickles and sour dishes
- Soups, stews, broth-based dishes, sauces
Rosemary

- Perennial in Zone 5+
  - Can be grown as annual
- Evergreen plants with needlelike foliage
- Spicy aromatic flavor
- Popular in Mediterranean dishes
  - Beef, veal, pork, lamb, stuffings, soups, sauces, and salad dressings
- Can be overpowering
Thyme

- Earthy with lemon and mint tones
- Hardiness depends on variety
- Full sun, sandy well-drained soil
- Flavor – earthy with lemony and minty notes
- Meat and vegetable dishes, stuffing, fish sauces, chowders, soups
- Makes great ground cover

Varieties: Common, French, English, Lemon, Creeping
Fennel

- Perennial related to parsley
  - Annual in zone 3
  - Enjoys cool weather
- Foliage resembles dill
- Anise-flavored veggie
  - Use seeds, leaves, or bulb
  - Some varieties don’t produce bulbs
- Used in French & Italian cuisines
- Use as you would celery
Have fun!

• Be a little adventurous

• Experiment to find what you like

• Try preparing a pizza or pasta dish with dried oregano and basil vs. fresh
References


• *University of Illinois Extension: Herb Gardening – Harvesting, Drying and Storing Herbs*.


Questions?
www.ag.ndsu.edu/fieldtofork