Growing & Cooking with Culinary Herbs

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Seasoning Classifications

- **Spices** - roots, bark, buds, berries or fruits of aromatic plants usually grown in the tropics
- **Herbs** - leaves of plants grown in the temperate zone
- **Seeds** - from either tropical spice plants or herb plants
Harvesting and Buying Fresh Herbs

• Pick in the morning after the dew has dried but before the sun gets too hot

• Pick or buy herbs close to the time you plan to use them

• Pick or buy herbs in small bundles
Washing Fresh Herbs

1. Wait to wash herbs just before you are ready to use them
2. Gently wash under running water
3. Shake off moisture
4. Pat dry with clean paper towels
Cooking with Herbs

• Start with small amounts of herbs
  ¼ tsp dried herbs per 1 pound meat
 ¼ tsp dried per 1 pint of sauce or per 4 servings

• Experiment with both fresh and dried herbs
  ¼ tsp powdered = ⅛ to ¼ tsp crumbled = 3 tsp fresh

• There is no strict limits to the use of herbs
  If mixing herbs, use 1 strong and 1 or more mild
Cooking with Herbs

• **Cut leaves of fresh herbs very fine before adding to food**
  Fresh herbs: chop with a Chef’s knife, use kitchen scissors
  Dry herbs: rub between fingers or palms to release flavor

• **Strip leaves off fresh herbs for cooking**
  Sturdy stems: run fingers down the stem from top to bottom
  Tender stems: OK to use some of the stem

http://youtu.be/EuRhkopm06A
Cooking with Herbs

• Add fresh herbs towards the end of cooking
  Delicate herbs: add 1-2 minutes before the end of cooking
  Less delicate herbs: add at the last 20 minutes of cooking

• For chilled foods, add herbs several hours ahead
Are Herbs Nutritious?

- Adds flavor and aroma
- Very little if any nutritional value
- May use herbs to cut down salt and sugar
Using Herbs to Reduce Sugar

- Allspice
- Anise
- Cardamom
- Cinnamon
- Cloves
- Ginger
- Mace
- Nutmeg
Using Herbs to Reduce Salt

- Black pepper
- Garlic powder
- Curry powder
- Cumin
- Dill
- Basil
- Ginger
- Coriander
- Onion

- Use *fresh or powdered* garlic and onion rather than their *salt* form
- Check labels of store bought spices to see if “salt” or “sodium” are listed
Storing Fresh Herbs

1. Snip off the ends of the stems on the diagonal
2. Place herbs in a tall glass with ~ 1 inch water
3. Cover loosely with a plastic bag or plastic wrap
4. Place in refrigerator and replace water when it gets cloudy

Or

Wrap in a damp paper towel, place in an opened plastic bag and place in the refrigerator
Freezing Fresh Herbs

To freeze whole herbs:
1. Wash, shake off, pat dry with clean paper towel
2. Wrap a few sprigs or leaves in freezer wrap and place in a freezer bag
3. Seal and freeze

To freeze chopped herbs:
1. Chop and spoon into ice cube trays
2. Add water and freeze
3. When frozen, wrap cubes individually in plastic or put in freezer safe container

Use frozen herbs within 4-6 months for best quality
Drying Fresh Herbs

Wash herbs, shake and pat dry. Expose to warm, dry, well-ventilated air. Sun drying is NOT recommended

• **Air drying**
  
  Sturdy herbs- Tie in small bundles and hang them to air dry
  
  Tender herbs- Tie in small bundles and suspend in a paper bag, closing the top with a rubber band. Cut small holes in bag.

• **Microwave drying**
  
  Follow manufactures directions
Drying Fresh Herbs

• **Dehydrator drying**
  Pre-heat dehydrator to 95-115°F
  Place in single layer on trays
  Drying times may vary from 1 to 4 hours

• **Oven drying**
  Lay leaves on paper towel, without allowing leaves to touch
  Cover with another towel. 5 layers may be dried at a time.
  Dry in a very cool oven. The oven light furnishes enough heat for overnight drying.
Drying Fresh Herbs

- Leaves are dry when crispy and crumble easily between fingers
- May leave whole and crumble as used or coarsely crumble before storage
- Place herbs in airtight containers and store in a cool, dry, dark areas
- For best flavor, use within 1 year

For more drying or freezing information, visit the Nation Center for Home Food Preservation website:
http://nchfp.uga.edu/publications/publications_usda.html
Top 10 Herbs according to the Herb Society of America

• Sweet Basil (Ocimum basilicum)
• Common Thyme (Thymus vulgaris)
• Bay (Laurus nobilis)
• Common Sage (Salvia officinalis)
• Greek Oregano (Origanum vulgare)
• Chives (Alliums schoenoprasum)
• Dill (Anethum graveolens)
• Parsley (Petroselinum crispum)
• Rosemary (Rosmarinus officinalis)
• Lavender (Lavandula spp.)
GROWING HERBS WITH HYDROPONICS FOR THE HOME GARDENER
What is hydroponics

- Is the growing of plants in a liquid nutrient solution with or without the use of artificial media.
What is the difference between hydroponics & aquaponics?

- Aquaponics – is a version of hydroponics
  - Combines two systems ‘aquaculture’ growing of aquatic plants and animals and ‘hydroponics’
History of Hydroponics

- Hanging Gardens of Babylon
- Aztec floating gardens
- Hydroponics were used in WW II in western Pacific
- Plastics changed the world
Trends in food markets – increasing demand for hydroponics

- Demand is increasing for more locally grown food
- Increasing demand for fresh healthy vegetables
- A need to increase economic and environmental efficiency
A Global Food Crisis

• Rapidly increasing population
• Diversion of foods to fuel
• Water, fertilizer and fuel resources are rising in cost
• Demand on land for production
  • Urban sprawl, industrial mining, energy generation, wildlife conservation, watershed protection, etc.
Development of Hydroponics

- Efficient use of water and nutrients
- Ease of environmental controls
  - can be done in Arizona or Alaska
- Reduction of pesticides and herbicides
- Less demand on land resources
SYSTEMS FOR THE HOME GARDENER
Nutrient Film Technique
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Aeroponics
Aeration Technique
Raft (Floating) System
Aggregate Systems

- Uses inert growing media to support and surround plant roots
- Most common materials
  - Rockwool, clay pebbles, gravel, perlite, vermiculite, sand, or foam chips
Aggregate Systems
Aero Garden

- Commercial product for homeowners
- Automated light, water & nutrient reminders
- Built in grow lights
- Everything is prepackaged
- Grow salad greens, herbs, flowers, peppers
- Tomatoes do not grow well with this system
WHAT TO CONSIDER WHEN USING HYDROPONICS
Managing Your System

- Sterilization
- Nutrient solution
- Manage your pH
- Provide dissolved oxygen
- Monitor temperature
- Lighting Conditions
Troubleshooting

• Nutrient deficiency symptoms (see handout)
• When to replace nutrient solution?
  • 7-10 days intensive crops
  • 2+ months low-use crops (lettuce or herbs)
• Waste disposal
WHAT CAN YOU GROW?
Lettuce

- Good crop for beginners
- 30-85 days to harvest
Basil

• Easy to grow; will last many months
• Never remove more than ½ the shoot during harvest
• Basil needs 12 to 14 hours of artificial light
• Two basil plants will yield 7 harvests in 2.5 months equaling a $28 value
Rosemary

- Responds well to hydroponics though...
- Slow growing and low yields
- Never remove more than ½ the plant during harvest
- Growth slows when day length dips below 11 hrs.
- Transplant to harvest
  - Summer 6 weeks
  - Winter 8-12 weeks
- Watch out for powdery mildew
Spear & Peppermint

- Easy to grow
- Root cuttings in mild rooting hormone
- Transplant to harvest
  - Summer 4 weeks
  - Winter 6-7 weeks
- No. of harvests – Unlimited
- Best in full sun; can tolerate part shade
Sage

- Grows well in hydroponic systems
- Transplant to harvest
  - Summer 4-5 weeks
  - Winter 5-7 weeks
- Full sun; growth slows below 11 hour day lengths
Others

- Watercress
- Chives
- Oregano
- Marjoram
- Arugula
- Dill
- Lemon Balm
- Thyme
Thank you

THE END
Upcoming Events

**Emerald Ash Borer Management**, Galesburg – FREE!
April 15, starting at 10 am
To register call the Knox County Extension office at (309) 342-5108