



HERB GARDEN

# Mini Herbalism Workshop

**ERIN LAFAIVE**  
**HORTICULTURE EDUCATOR**  
Eau Claire County  
UW Cooperative Extension

Photo by Kerri Kiernan





# Needs Assessment

- Presentations

- Feb. 2010 Lake Wissota Garden Club presentation

## Herbs vs. Spices

- Herbs are leaves
- Spices are bark, root, buds, seeds, berry, or fruit
  - bark (cinnamon)
  - root (ginger, onion, garlic)
  - buds (cloves, saffron)
  - seeds (yellow mustard, poppy, sesame)
  - berry (black pepper)
  - or the fruit (allspice, paprika) of tropical plants and trees





# Needs Assessment

## • Presentations

- Feb. 2014 Winter Garden Seminar presentation for the Eau Claire Area Master Gardener Association
  - ✦ Herb Gardening: Garden to Table
    - “I never thought of my herbs beyond how to eat them”
    - Kristine Zabbalos mentioned it looked like publication material
  - ✦ Found LOTS of research being conducted on herbs
  - ✦ Herb gardening information was a bit lacking and outdated
    - UWEX practically non existent
    - Scattered throughout various states

## Anise Hyssop

*Agastache foeniculum*

### To table . . . .

- **Nutrients:** A good source of vitamin C, calcium, & iron
- **Food:** Added to meats & cakes. Edible flowers, leaves for flavoring, salads, & hot or cold teas; seeds used in cookies, cakes, & muffins
- **Folklore:** for cough associated with phlegm, colds; North American First Nations people used as breath freshener, tea, & sweetener
- **Research:** essential oil toxicity concerns



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Photo by Erin LaFave

# Needs Assessment

- Presentations

- July 2014 Herb Farm Visit “In her boots: sustainable Farming for Women” by MOSES
  - ✦ 4 Elements Herb Farm and manufacturing facility
  - ✦ USDA Value Added Producers Grant \$300,000





# Commercial Growers & Farms

- 13 Herb Farms in WI



# Commercial Growers & Farms

- 4 Elements Herb Farm

“Eighty-five percent of the public prefer their tea in bags, although herbalists really like to have loose tea to get a stronger infusion,” Stevens explained.







# Needs Assessment

- **Beth Olson**, UW- Extension Nutrition Specialist
- ***Spices and Herbs: Improving Public Health through Flavorful Eating***



- In May 2014, the American Society for Nutrition was a partner in the McCormick Science Institute's *Science Summit: Spices and Herbs: Improving Public Health through Flavorful Eating*.
- The University of Colorado researchers, McCormick grant,
  - ✦ Peters JC, Polsky S, Stark R, Zhaoxing P and Hill JO

# University of Colorado research

- ***Spices and Herbs: Improving Public Health through Flavorful Eating***

- Adults ages 18–65 years old were recruited to taste three lunch conditions:
  - ✦ full fat (FF),
  - ✦ reduced fat with no added spice (RF),
  - ✦ reduced fat plus spice (RFS).
- 9-point hedonic Likert scale.
- weekly for 3 weeks to consume meals
- We enrolled 148 subjects who were predominantly female (n = 101, 68%), had a mean age of 35.9 years, and body mass index of 24.4 kg/m<sup>2</sup>.



# University of Colorado research

- ***Spices and Herbs: Improving Public Health through Flavorful Eating***

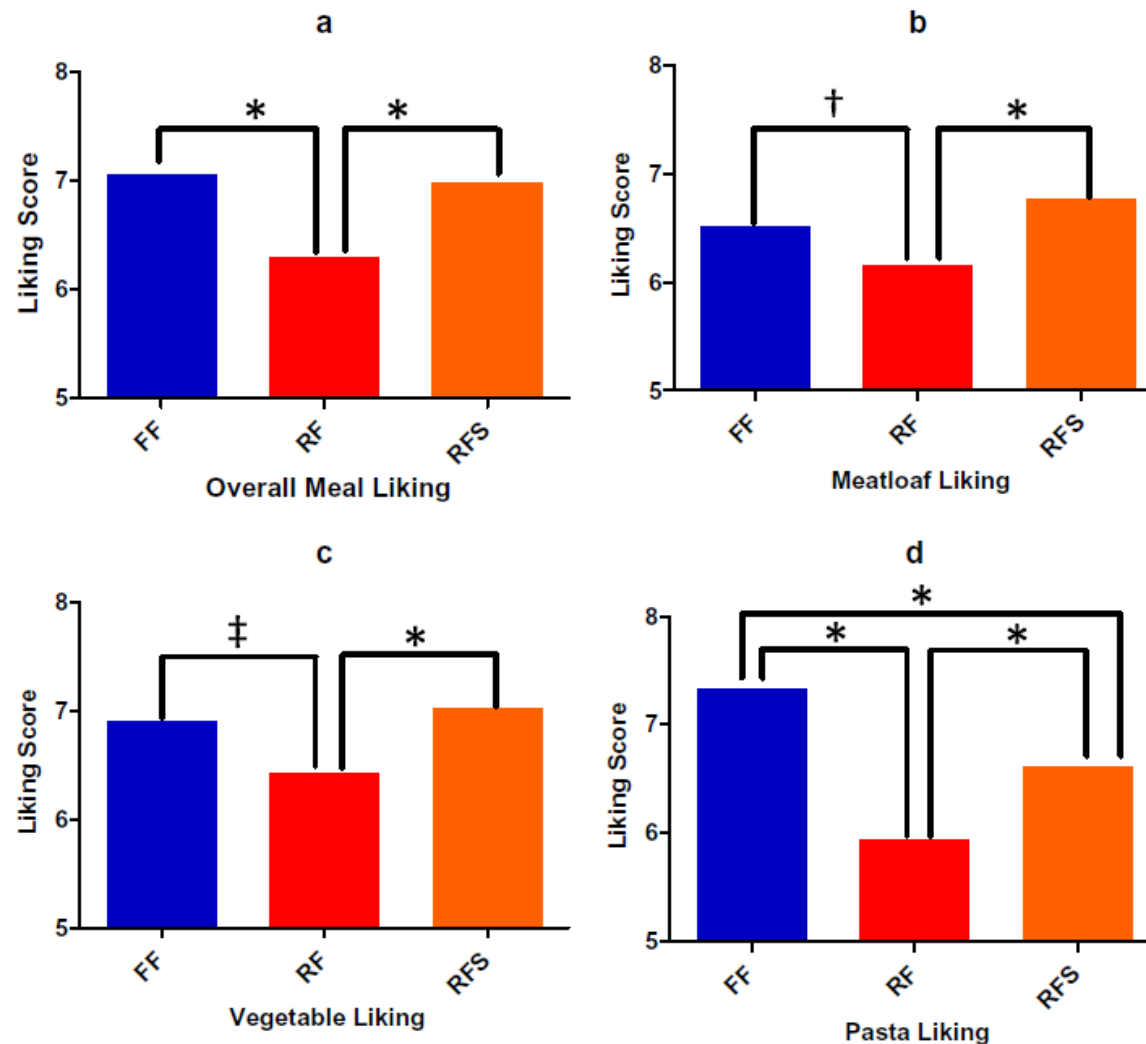
- Adding herbs and spices to reduced fat foods restored liking of the overall meal, meatloaf, and vegetables to that of FF conditions, and significantly improved the liking of RF pasta.
- Herbs and spices also show promise for increasing vegetable intake.



# University of Colorado research

186

*J.C. Peters et al./Appetite 79 (2014) 183–188*

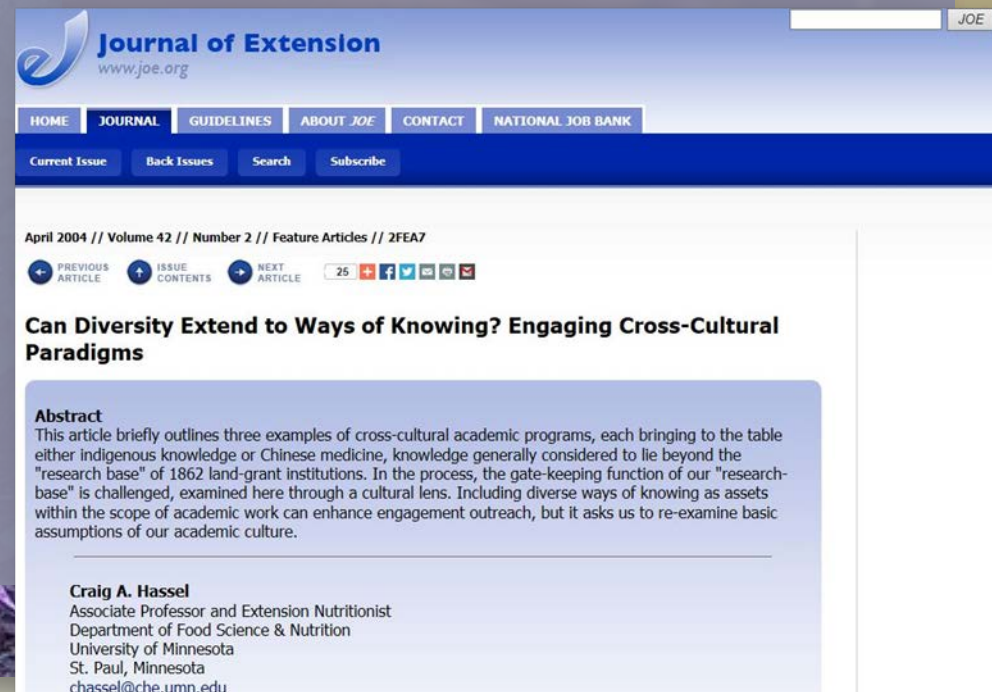


**Fig. 1.** Liking scores by test meal condition. Liking scores for full fat (FF), reduced fat with no added spice (RF), and reduced fat plus spice (RFS) meal conditions are presented. \* $P \leq 0.0002$ ; † $P = 0.02$ ; ‡ $P = 0.002$ .



# Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

- Land-grant institutions success and . . .
  - Not all sectors of society have benefited equally
    - ✦ Who has benefited and who has not?
    - ✦ Important aspects of diversity extend beyond audience to include different ways of seeing, understanding, creating, and constructing knowledge
  - Example – relationship of humans to nature
    - Mastery over
    - Harmony with
    - Subjugation to nature



The screenshot displays the homepage of the Journal of Extension (www.joe.org). The header includes the journal's logo and name. A navigation bar contains links for HOME, JOURNAL, GUIDELINES, ABOUT JOE, CONTACT, and NATIONAL JOB BANK. Below this is a secondary navigation bar with buttons for Current Issue, Back Issues, Search, and Subscribe. The main content area shows the issue information: April 2004 // Volume 42 // Number 2 // Feature Articles // 2FEA7. It also includes links for Previous Article, Issue Contents, and Next Article, along with a page number 25 and social media icons. The article title "Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms" is prominently displayed. Below the title is the abstract, which discusses the article's focus on cross-cultural academic programs and indigenous knowledge. At the bottom, the author's name, Craig A. Hassel, is listed along with his title, Associate Professor and Extension Nutritionist, and his affiliation with the Department of Food Science & Nutrition at the University of Minnesota.

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**Abstract**  
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**Craig A. Hassel**  
Associate Professor and Extension Nutritionist  
Department of Food Science & Nutrition  
University of Minnesota  
St. Paul, Minnesota  
chassel@che.umn.edu

# Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

- 3 examples of cross-cultural academic programs
  - Knowledge generally considered to lie beyond the “research base” of 1862 land-grant institutions
  - Diverse ways of knowing
    - ✦ Can enhance engagement outreach



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**Craig A. Hassel**  
Associate Professor and Extension Nutritionist  
Department of Food Science & Nutrition  
University of Minnesota  
St. Paul, Minnesota  
[chassel@che.umn.edu](mailto:chassel@che.umn.edu)

### Introduction

The public mission of land-grant research universities has become the subject of increasing question and debate over the past decade (Boyte & Hollander, 2000; Gerber, 1997; NASULGC, 1999a,b). Despite a long history of land-grant institutions, not all sectors of society have benefited equally (Boyte & Hollander, 1999). This article examines the role of cross-cultural academic programs in enhancing engagement outreach and challenges the "research base" of 1862 land-grant institutions.



# Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

“The public mission of land-grant research universities has become the subject of increasing question and debate over the past decade (Boyte & Hollander, 2000; Gerber, 1997; NASULGC, 1999a,b).

Despite a long history of success of 1862 land-grant institutions, not all sectors of society have benefited equally (Boyte & Hollander, 2000; NASULGC, 1999a).

Questions around who benefits--and who does not--from the actions of land-grant universities, are increasingly commonplace (NASULGC, 1999a,b).

Diversity may commonly be viewed as a function of gender, nationality, race, and sexual orientation of participants or audience.

But important aspects of diversity extend beyond audience to include **different ways of seeing, understanding, creating, and constructing knowledge** (Peters, 1996; Cajete, 2000; Nisbett, 2002, Semali & Kincheloe, 1999). Schaubert (2001) illustrates how diverse underlying values (such as the relationship of humans with nature: mastery over, harmony with or subjugation to nature) may contribute to historical inequities of service by 1862 land-grant institutions.”

Hassel JOE article

# Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

- 3 program examples in the nutrition, food and health domain
  - Medicinal Herb Network
  - Woodlands Wisdom Nutrition Project
  - The Dream of Wild Health Network
  - All reported significant mistrust of large, land grant research universities
    - ✦ Prior experiences informed them their knowledge tended to be discounted or ignored if it did not fit within a “scientific” model
    - ✦ Monopoly of perspective within land-grant institutions
    - ✦ Felt excluded



# Can Diversity Extend to Ways of Knowing? Engaging Cross-Cultural Paradigms

- Each example share characteristics:
  1. "grassroots" community-based effort to address a pressing societal problem
  2. mission/purpose is clearly consistent with the land-grant mission
  3. Teaching, research, and outreach are integrated within each program
  4. A marginalized constituency provides programmatic leadership and ownership
  5. intellectual grounding within a knowledge system fundamentally different from the prevailing "Western science" biomedical understanding of food and health
  6. subject matter expertise lies with participant stakeholders external to the university system
  7. Each represents an example of "participatory action research" (Carr & Kemmis, 1986; Gerber, 1997; Greenwood & Levin, 1998; Peters et al., 1999) where research, action, and participation are conjoined by a team of community members seeking to improve their situation
  8. Each has been sustained for at least 5 years



# **UW-Extension involvement**

- +Lack of Extension publications**
  - +Participant interest**
  - +Research articles**
  - +Addresses diversity (ways of knowing)**
  - +frustrations from local growers and practitioners**
- = spurred my interest in how UW-Extension might respond**




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## Herbs

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Information on common herbs for cultivation and culinary purposes. Herbs are classified by their use - aromatic, cosmetic, culinary, decorative, dye, medicinal and ornamental.

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[Harvesting and Preserving Herbs and Spices for Use in Cooking](#)



# Extension resources

Cooperative Extension Service  
University of Illinois at Urbana-Champaign  
College of Agricultural, Consumer and  
Environmental Sciences

Harvesting and Drying Herbs  
James C. Schmidt and Dianne Noland  
Department of Natural Resources and Environmental Sciences  
NRES-VC-31-97



## Horticulture Facts

An herb garden that is carefully planted and maintained is sure to reward its creator throughout the whole season. The delightfully pungent scents that emanate from the herb garden are a most pleasant reward to the senses. Even more importantly, the rewards are in the subtle culinary flavorings, fragrant potpourris, and delicious teas that are made from the herbs.

Your herbs can, of course, be used fresh all through the growing season. To extend the use of herbs into the winter months, you should plan to harvest and dry various herbs during the summer and fall months.

By using the following suggestions as a guide, the

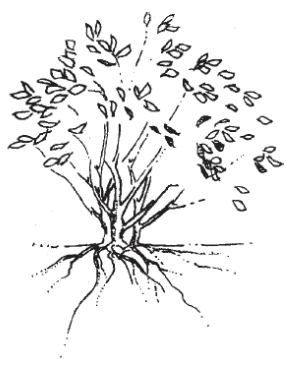
growth, given

It is in day. Gather has evapor very pleasant task at hand

**Annual Herbs**  
Leafy annuals are harvested cut just above the soil line, about 4 to 6 inches from the base.

If an annual herb is not cut, the plants will die back in the fall. Cut the plants just above the soil line. Cut for carrying into the basket or wire mesh.

**Perennial Herbs**  
Leafy perennials are harvested the annual growth at the



Herbs are plants used whole or in part for flavor, but many of these same herbs are also used for fragrance, health, ornament, and many other uses.

Records show that herb use can be traced back to the ancient Egyptians and Chinese. References in the Bible and documents from medieval monasteries show that herbs were used by most households, including those of wealthy lords and monks.

Over the years, use of herbs declined, and until recently they were relegated to a small patch growing by the back door. Today, herbs are again recognized as useful plants that make flavorful additions to culinary arts and attractive features in gardens.

seeds will fall to the ground and survive the winter, sprouting new plants the next growing season. For others, seed must be collected and stored over the winter or purchased fresh every year. Examples of annual herbs include basil and cilantro. *Note: Using saved seeds from hybrid annuals (and biennials) will likely result in plants that do not retain the hybrid characteristics.*

**Biennial:** A few herbs are biennial. Biennials form leaves in the first growing season and flowers and seed in the second season, then die.

**Perennial:** Most culinary herbs are perennials. Perennials live more than two growing seasons. Perennials grown from seed may grow slowly the first year but gain



General Horticulture • HO-28-W

### Department of Horticulture

Purdue University Cooperative Extension Service • West Lafayette, IN

### Growing Herbs

Kate Copsey\* and B. Rosie Lerner



# Fresh Herbs: a Picture of Healthy Eating

UNIVERSITY OF  
**Nebraska**  
Lincoln | **EXTENSION**

Alice Henneman, MS, RD  
*University of Nebraska–Lincoln Extension Educator*

Joanne Kinsey, MS  
*Rutgers Cooperative Extension/Rutgers University  
Family & Community Health Sciences Educator/Assistant Professor*

**RUTGERS**  
New Jersey Agricultural  
Experiment Station

**W**hether you plant them or pick them up at the grocery store or farmers' market, adding fresh herbs is a quick way to transform *ordinary* meals into *extraordinary* meals.

Besides helping flavor foods when cutting back on salt, fat and sugar, herbs may offer additional benefits of their own. Researchers are finding many culinary herbs (both fresh and dried) have antioxidants that may help protect against such diseases as cancer and heart disease.

A snip of a fresh herb into a dish instantly kicks up the appearance a notch!

Unless directed otherwise by your recipe, add the more delicate herbs — basil, chives, cilantro, dill leaves, parsley,



Many herbs, such as chives, can easily be grown in a container or garden.

## Substituting Fresh Herbs for Dried Herbs

## When to Pick or Purchase Herbs

Purchase herbs close to the time you plan to use them. When growing herbs in your own garden, the ideal time for picking is in the morning after the dew has dried but before the sun gets hot. This helps ensure the best flavor and storage quality.

## How to Store Fresh Herbs

Fresh herbs can be stored in an open or a perforated plastic bag in your refrigerator crisper drawer for a few days. If you don't have access to commercial perforated bags, use a sharp object to make several small holes in a regular plastic bag.



# Garden

Extension > Garden > Yard and Garden > Vegetables > Growing basil

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## Growing basil

Edited by Jill MacKenzie, Former Extension Specialist, Horticulture, University of Minnesota Extension, 6/07.  
Reviewed by Shirley Mah Kooyman, Adult Education Manager Minnesota Landscape Arboretum and University of Minnesota Extension, 10/07

One of the easiest and most popular culinary herbs to grow is the common or sweet basil, *Ocimum basilicum*. A member of the mint family (Lamiaceae), it is native to southern Asia and islands of the south Pacific. This tender annual is primarily grown for its aromatic leaves, used fresh or dried, to liven up numerous dishes of both Asian and Western cuisines. Basil seeds are also used in Thai foods.

Like most herbs, basil requires a sunny location that receives at least 6-8 hours of bright light per day, and well drained soil conditions. A pH range of 6.0-7.5 is ideal.

Propagation is easiest by sowing seeds directly into the ground where they are to be grown, after danger of spring frosts has passed. Sow evenly, covering with 1/4 inch of soil, and keep moist and free of weeds. Germination should take place within 5-7 days. The basil seedling is recognizable by its two broad seed



Figure 1. Basil Plants. Joey Duren





# A Grower's Guide

# Stevia

*Stevia rebaudiana*

Stevia has recently gained attention and become available in health food stores in the United States as a natural non-sugar sweetener. It is a tropical plant that is native to Paraguay and Brazil, but does well in Kansas and probably in other Great Plains states. An herb company in Missouri has recently obtained seed from a breeding selection program in Canada to improve Stevia and select for sweeter plants. Stevia was originally used in eastern Paraguay to sweeten the local tea, Yerba Mate, but the plant was also used medicinally.



**Family:** *Asteraceae*

1 / 4

powder to sprinkle on food.

# What is an herbalist?

“An herbalist is someone who respects the many gifts plants have to offer.”

“Home herbalists use herbs as food and medicine for themselves or their families . . .”

“Clinical herbalists usually have some formal training, through coursework or apprenticeships, before meeting with clients.”

## Growing Herbs for Home Use

Gardeners usually like to grow many types of plants, and some gardeners are particularly attracted to herbs. The simple definition of “herb” is a plant, but usually implies one that might be used for cooking (culinary herb) or medicine (medicinal herb). This publication describes how to grow and use some basic herbs. A reading list is included in the last section to encourage you to find out more. In addition to reading, consulting with practicing herbalists or forming a study group are good ways to learn more about herbal use.

### What is an herbalist?

An herbalist is someone who respects the many gifts plants have to offer. Home herbalists use herbs as food and medicine for themselves or their families in their daily lives. Clinical herbalists usually have some formal training, through coursework or apprenticeships, before meeting with clients. Some countries do not restrict the practice of herbal medicine, while others have clear regulations.

clients and to educate. They generally take a client-centered approach to healing, and may establish a health care agreement to clarify the role of the healer (the client) and the helper (the herbalist).

Formal training is not necessary, but home herbalists must use common sense at all times. For example, a home herbalist should not assume that a medicine that comes from a plant is safe. Some of the most powerful drugs used today are

The best advice for the home herbalist is to know as much as possible about the plant — its exact identity, which part to use and how to use it. Some plants, such as spearmint, are easy to identify by sight or smell. Others can be confused with toxic relatives. Growing the plant yourself from a known seed or plant source is best for correct identification. Another good way to learn the plants is from another experienced gardener, herb farmer or botanist. Just as a vegetable gardener knows to get the





# What is an herbalist?

Differing backgrounds

- Chinese medicine
- Ayurvedic
- Western herbalism

Principle: herbs are used to promote health, rather than to cure diseases

Not allowed to

- Diagnose, prescribe, cure, treat

## Growing Herbs for Home Use

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# Nettle

*Urtica dioica*

*From garden...*

- ▶ **Family:** Urticaceae
- ▶ **Origin:** North America, Greenland
- ▶ **Growing Conditions:** prefers damp, rich soil, in full sun to partial shade, grows in my garden where it has a well drained high organic matter soil, but I wouldn't say it's moist
- ▶ **Propagation:** no need to seed, it's a weed! Will come up by itself through rhizomes, very much similar to mint in the way it spreads.
- ▶ **Blooms:** late May to early October, I'd say later in the summer is most common







# Nettle

*Urtica dioica*

... To table

- ▶ **Nutrients:** 1 cup blanched
  - ▶ Protein 2 g (50 g)
  - ▶ Calcium 428 mg (1000 mg)
  - ▶ Vitamin A, 90 µg (700 µg)
  - ▶ Magnesium 51 mg (320 mg)
- ▶ **Food:** boiled, blanched, use as a substitute for spinach, dried & drank as a tea (fumaric acid)
- ▶ **Folklore:**
  - ▶ said to increase the oil content of other herbs
  - ▶ activate decomposition in compost
  - ▶ First Nations people used it
  - ▶ Fibers used in cords, fishline
  - ▶ fabric in burial sites in Bronze age.
  - ▶ Used for hay fever



Photo by voodooandsauce.com



Photo by myreciepes.com



# Nettle

*Urtica dioica*

research

- ▶ Clairol uses more than 40 tons/year as a hair conditioner
- ▶ study with rats found nettles could be justified for their use of:
  - ▶ Diabetes, arthritis, infectious disease
  - ▶ because of their antibacterial & anti-inflammatory & ability to lower blood glucose (Dar).







# Nettle

*Urtica dioica*

## Research

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# Nettle

*Urtica dioica*

## Research

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# Dandelion

*Taraxacum officinale*

*From garden...*

- ▶ **Family:** Asteraceae
- ▶ **Origins:** Native to Asia and Europe
- ▶ **Growing conditions:** Prefers full sun but can tolerate partial shade,
- ▶ **Propagation:** by seed
- ▶ **Blooms:** early spring





# Dandelion

*Taraxacum officinale*

... To Table

- ▶ **Nutrients:** 1 cup of leaves
  - ▶ Calcium 103 mg (1000 mg)
  - ▶ Vitamin A, RAE 279 µg (700 µg)
  - ▶ Vitamin C, 19 mg (75 mg)
  - ▶ Vitamin B-6, .14 mg (1.3 mg)
  - ▶ Folate 15 µg (400 µg )
  - ▶ Iron 1.7 mg (18 mg)
  - ▶ Protein 1.48 grams (50 grams)
- ▶ **Food:** roots, leaves, buds, flowers
- ▶ **Research:** inulin





# Dandelion

*Taraxacum officinale*

*Herbalist View.*

- ▶ **Body Systems:** liver, gallbladder, kidneys, prostrate
- ▶ **Parts used:** roots and leaves
- ▶ **Indications:** high blood pressure, urinary tract infections
- ▶ **Actions:** Diuretic; for anemia, building up the blood, appetite stimulant, mild laxative, Antioxidant, Anti-inflammatory, Anti-rheumatic, Liver Tonic, Digestive Support and mild Laxative



# Dandelion

*Taraxacum officinale*

*Herbalist View.*

## ► Contraindications, Precautions, Toxicity Factors:

- people with liver, gallbladder, or kidney disorders may need to check how dandelion may interact with current treatments.
- May lower blood sugar so diabetics need extra precaution
- Dandelion leaf may act like a diuretic, which can make drugs leave your body faster.
- Antacids -- Dandelion may increase the amount of stomach acid, so antacids may not work as well.
- Blood-thinning medications (anticoagulants and antiplatelets) -- It's possible that dandelion may increase the risk of bleeding, especially if you already take blood-thinners such as aspirin, warfarin (Coumadin), or clopidogrel (Plavix).
- Diuretics (water pills) -- Dandelion may act like a diuretic, causing your body to produce more urine to get rid of excess fluid. If you also take prescription diuretics or other herbs that act as diuretic, you could be at risk for an electrolyte imbalance.
- Lithium -- Animal studies suggest that dandelion may make the side effects of lithium worse. Lithium is used to treat bipolar disorder.
- Ciproflaxin (Cipro) -- One species of dandelion, *Taraxacum mongolicum*, also called Chinese dandelion, may lower the amount of the antibiotic ciproflaxin that your body absorbs. Researchers don't know whether the common dandelion would do the same thing.
- Medications for diabetes -- Theoretically, dandelion may lower blood sugar levels. If you take medications for diabetes, taking dandelion may increase the risk of low blood sugar.





# Stevia

*S. rebaudiana*

*From garden...*

- ▶ **Family:** Asteraceae
- ▶ **Origins:** Paraguay over 150 species
- ▶ **Growing conditions:** Prefers full sun but can tolerate partial shade, annual in zone 4
- ▶ **Propagation:** by seed indoors or purchase at a greenhouse
- ▶ **Blooms:** July, August





# Stevia

*S. rebaudiana*

... To table

- ▶ **Nutrients:** Phosphorus, iron, calcium, potassium, sodium, magnesium, zinc
- ▶ **Food:** liquid, powder, whole leaf
- ▶ **Folklore:** wide usage as a sweetener by many cultures







# Stevia

*S. rebaudiana*

## *Herbalist View*

- ▶ **Body Systems:** spleen, pancreas
- ▶ **Indications:**
- ▶ **Actions:** lower glucose
- ▶ **Research:**
  - ▶ Studies suggesting some anti-tumor properties
  - ▶ suppresses the production of inflammatory mediators
  - ▶ increase insulin sensitivity in animal studies





# Parsley

*Petroselinum crispum*

*From garden...*

- ▶ **Family:** Apiaceae
- ▶ **Origin:** Eastern Mediterranean
- ▶ **Growing Conditions:**
  - Slow to germinate
  - Direct sunlight 6-8hours
  - Biennial
- ▶ **Propagation:** Start seeds indoors 8-10 weeks before last frost but germination rate is typically low, soak seeds overnight to assist with germination; transplants like rich soil which isn't typical of most herbs; can seed directly outside too; black swallow tail butterfly;
- ▶ **Blooms:** early summer

Photo by Erin LaFaive







# Parsley

*Petroselinum crispum*

*To table, . . .*

- ▶ **Nutrients:** 1 tbsp of fresh parsley = 5 mg calcium, 21 g potassium, 320 IU vitamin A, vitamin C
- ▶ **Food:** Pesto
- ▶ **Folklore:** eliminate kidney stones; treat UTIs
- ▶ **Research:** breast cancer



Photo by W1MGV.com





# Parsley

*Petroselinum crispum*

*Herbalist view*

- ▶ **Body Systems:** digestive, urinary tract
- ▶ **Indications:** Urinary inflammation, expel stones and gravel, edema, kidney tones, cystitis
- ▶ **Actions:** Diuretic, carminative, aperient, antispasmodic, antiseptic, exportant, dutirheumatic, sedative, emmenagogue (seeds), anthelmintic, antioxidant, aperient, galactagogue
- ▶ **Doses:** standard infusion or 10-30 drops tincture



Photo by W1MGV.com





- I'm enrolled in the Master Herbalism Program at The Green Wisdom School of Natural & Botanical Medicine. [www.greenwisdom.weebly.com](http://www.greenwisdom.weebly.com)

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