

# The Herbal Dispatch

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**The Medicinal Botanicals Program**  
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## Over the Garden Gate

By Ann Nye  
 WVHA President

MSU and WVHA held their Celebration of Herbs Fall Conference at the historic site of Jackson's Mill in Lewis County, WV, on Saturday October 10, 2009. The event was attended by 70 people, 60 women and 10 men.

Many vendors participated in the event; they were: Anne Romance (herbal products), Dot Montgillion (jams and herbal products), Ann Nye (cordials), Kathy Flewelling (salves and creams), Lis Caudill (perennials), Honeysuckle Hill Gardens (plants and shrubs), Windbeam Nursery (plants and shrubs), Judy Roylance (minerals for gardens), Susan Patterson (photography), Andrea Lay (herbal products), Paul Goland (mushroom logs), Lynn Degen (clothing), Myra Bonhage-Hale (herbal products), Eva Ristl (herbal products), Carol McCarthy (plants and clothes), and Eve Von Deck (books).

In the vendor's room, there were six educational/demonstrative tables set up by Mountain State University (MSU), West Virginia Herb Association (WVHA), United Plant Savers (UpS), Master Gardeners of Charleston, Appalachian Academy of Medicine, and Ellie Cronlund's chair massage.

The day began with weed walks led by Sue Cosgrove and David Ahrend; a Paper-Folded Christmas Ornaments for Potpourri class led by Carol Schweiker; and a Seed Saving class with Carol McCarthy. Next, there came the presentations



Value adding (Annie Seay); Building a Workshop with Straw Bales (John Seay); Making Bath Salts (Melissa Dennison); and Herbal Infused Oils and Salves (Andrea Lay).

At noon, forester Russ Richardson spoke on Japanese Stilt grass, Ginseng, and Forest Surveys for Farms. Throughout the day there were raffles of items donated by our vendors and members of WVHA.

Early afternoon presentations began with When It's Important to Buy Organic (Annette Gall) and continued with At-Risk Native Medicinal Plants (a UpS slide show), Making Tinctures from Roots (Anne Romance), Making Tea Mixes (Dot Montgillion), and Herbs for Hair-Homemade Hair Rinses and Other Tips for Beautiful Hair (Eva Ristl).

Mid-afternoon presentations began with Cooking with Herbs (Myra Bonhage Hale) and continued with Dyeing with Plants (Becky Nesbit) and Felting with Wool (Dawn Conner).

Afternoon presentations ended with a trio of classes by Dr. Hassam Amjad: The Language of Flowers and their Medicinal and Health Benefits, Fibromyalgia, and Tea-the Elixir of Life.

The dessert contest was won by Carol Schweiker for her Berry Sorbet.

The day of learning and fun ended with a Tea Party and "Roast" of our own Dot Montgillion, a widely known jam maker, herbalist, and teacher of all things herbal. To honor her, family and friends contributed pictures and stories for a "This is Your Life" presentation. Keeping this secret for months resulted in a truly surprised Miss Dot.

MSU and WVHA are so grateful to Myra Bonhage-Hale and Sue Cosgrove for their great help with publicity and to Susan Patterson for "volunteering" to be our registrar. We are also grateful for the help and support given by all our wonderful vendors; the Patterson girls, Hope, Taylor, and Samantha; Shannon Mcgill and Greg Monette, who along with Hope Patterson made the raffles so much fun; Lynn Lassiter, for all her last minute printing and many contributions to our success; David Ahrend; Ellie Conlund; Rich Wolf; Gerald Wing; Lis Caudill; Dr. Morales; Dean Myles; The Board of WVHA; and especially Melissa Dennison, she outdid even herself with her work on the raffle, the dessert contest, and the party for Dot. Thanks each and every one of you. It was a most special day.

### The Herbal Dispatch

A monthly publication of the Medicinal Botanical Program

The goal of this newsletter is to inform readers of the Program's educational, research and outreach activities and events; and of results of the latest research on the chemistry, cultivation, processing and preventive and therapeutic use of botanicals.

Information presented here is for educational purposes only and not intended to diagnose, cure, treat or prevent disease. Authors are responsible for their views, which not necessarily reflect those of MSU.

Mario R. Morales  
 Editor/Publisher

## The Soil Biology Primer-Part X

By Elaine R. Ingham  
Oregon State University

### THE LIVING SOIL: PROTOZOA

Protozoa are single-celled animals that feed primarily on bacteria, but also eat other protozoa, soluble organic matter, and sometimes fungi.

They are several times larger than bacteria – ranging from 1/5000 to 1/50 of an inch (5 to 500  $\mu\text{m}$ ) in diameter. As they eat bacteria, protozoa release excess nitrogen that can then be used by plants and other members of the food web.

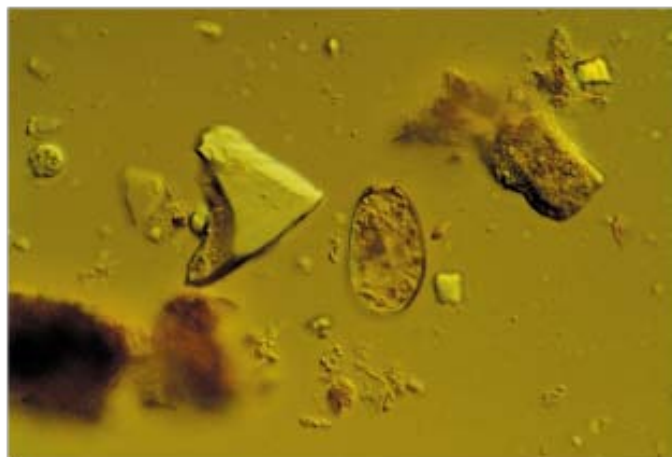


Figure 1: Protozoa play an important role in nutrient cycling by feeding intensively on bacteria. Notice the size of the speck-like bacteria next to the oval protozoa and large, angular sand particle.

**Credit:** Elaine R. Ingham, Oregon State University, Corvallis



Figure 3: Flagellates have one or two flagella which they use to propel or pull their way through soil. A flagellum can be seen extending from the protozoan on the left. The tiny specks are bacteria.

**Credit:** Elaine R. Ingham, Oregon State University, Corvallis

Protozoa are classified into three groups based on their shape: *Ciliates* are the largest and move by means of hair-like cilia. They eat the other two types of protozoa, as well as bacteria. *Amoebae* also can be quite large and move by means of a temporary foot or

“pseudopod.” Amoebae are further divided into *testate amoebae* (which make a shell-like covering) and *naked amoebae* (without a covering). *Flagellates* are the smallest of the protozoa and use a few whip-like flagella to move.

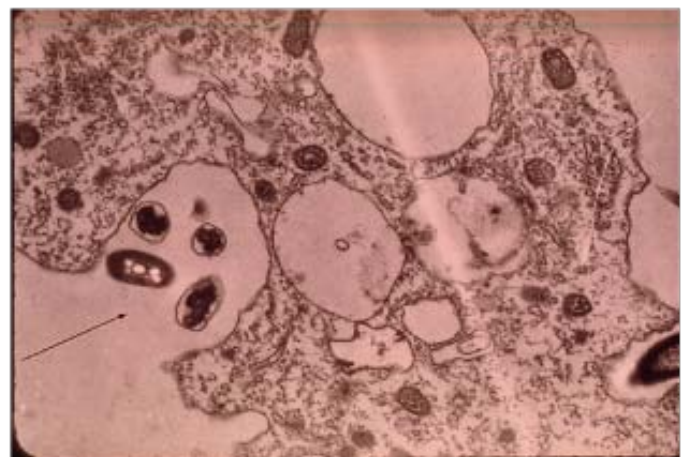


Figure 2: Bacteria ingested by an amoeba.

**Credit:** No. 35 from Soil Microbiology and Biochemistry Slide Set. 1976. J.P. Martin, et al., eds. SSSA, Madison, WI

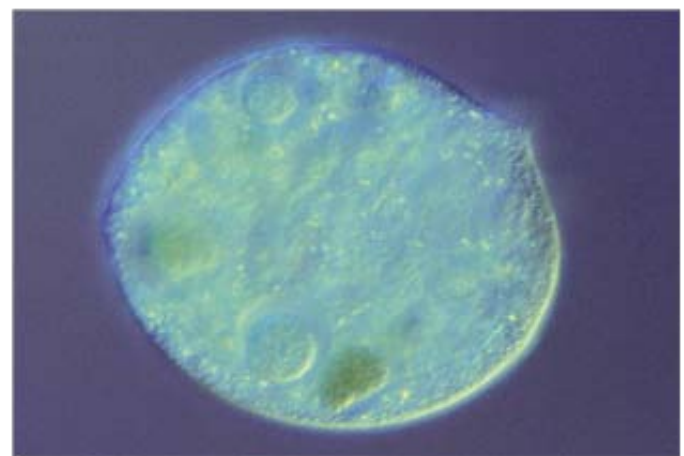


Figure 6: Ciliates are the largest of the protozoa and the least numerous. They consume up to ten thousand bacteria per day, and release plant available nitrogen. Ciliates use the fine cilia along their bodies like oars to move rapidly through soil.

**Credit:** Elaine R. Ingham, Oregon State University, Corvallis

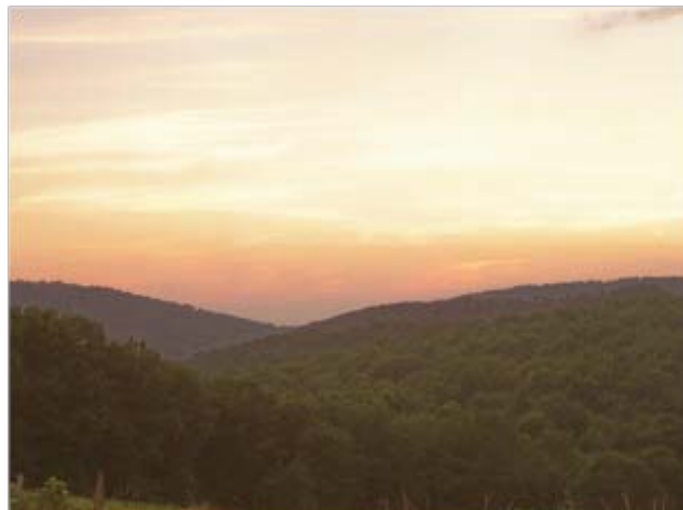
## Medicinal Herbs: Cultivation and Utilization

Greetings friends,

Well, another growing season full of highs and lows, rain and sun, and weeds and more weeds is fading into memories. But the good memories seem to always outlast the bad. There is nothing like being out in the field, as the sun starts to peek over the ridge, slowly spreading its warm orange glow across the morning sky. The smell of fresh mowed hay and the distant sounds of Mother Nature awaking can only bring a smile to one's face. Now that I have finished most field work for this season, I can stop and reflect on the summer's accomplishments and begin to think about next year and the upcoming 8<sup>th</sup> Annual Appalachian Opportunities Spring Symposium. This annual event held in collaboration with The USDA ARS Appalachian Farming

Systems Research Center and the West Virginia Herb Association has become the hub of academic and hands-on herbal know-how in Southern West Virginia. Last spring many friends gathered to learn from medicinal plant experts their experiences in investigating the medicinal properties of plants and the many ways to use them.

Next year, the event will be held on Saturday May 1, 2010 on the Mountain State University Beckley campus. For those who are familiar, the event will be hosted in O'Dell Hall, same as last year. We have chosen this date to coincide with National Herbal Day, May 1, 2010. The herb of the year in 2010 is dill. The symposium will have two tracks, one for herb production and one for herb utilization. The production track will concentrate on propagation and cultivation of



woodland herbs and native mushrooms using organic techniques. The utilization track will review the latest practical use of herbs for health and disease prevention. Remember to mark your calendar for May 1, 2010 and come celebrate National Herb Day with us and have a "dill" lightful time. We are in the early stages of

planning so if there is a topic you would like to learn more about please send us your thoughts. For more information on the conference contact Dean Myles, at 304-929-1687 or [dmyles@mountainstate.edu](mailto:dmyles@mountainstate.edu).

Thanks,  
Dean

## Preventing Swine Flu

Provided by  
Bonnie Buchman, PhD

Dr. Vinay Goyal is an MBBS, DRM, DNB (Intensivist and Thyroid specialist) having clinical experience of over 20 years. He has worked in institutions like Hinduja Hospital, Bombay Hospital, Saifee Hospital, Tata Memorial, etc. Presently, he is heading our Nuclear Medicine Department and Thyroid clinic at Riddhivinayak Cardiac and Critical Centre, Malad (W).

I feel the following message given by him makes a lot of sense and is important for all

to know:

The only portals of entry are the nostrils and mouth/throat. In a global epidemic of the nature of the Swine Flu, it is almost impossible to avoid coming into contact with H1N1 in spite of all precautions. Contact with H1N1 is not so much of a problem as proliferation is.

While you are still healthy and not showing any symptoms of H1N1 infection, some very simple steps, not fully highlighted in most official communications, can be practiced (instead of focusing

on how to stock N95 or Tamiflu) to prevent proliferation, aggravation of symptoms and development of secondary infections:

1. Frequent hand-washing (well highlighted in all official communications).
2. "Hands-off-the-face" approach. Resist all temptations to touch any part of the face (unless you want to eat, bathe or slap).
3. Gargle twice a day with warm salt water (use Listerine if you don't trust salt). After initial infection

of the throat/nasal cavity, H1N1 takes 2-3 days to proliferate and show characteristic symptoms. Simple gargling prevents proliferation. In a way, gargling with salt water has the same effect on a healthy individual that Tamiflu has on an infected one. Don't underestimate this simple, inexpensive and powerful preventative method.

4. Similar to 3 above, clean your nostrils at least once every day with warm salt water. Not everybody may be good at Jala Neti or

## Dill: 2010 Herb of the Year

**By Dean Myles, Coordinator  
Medicinal Botanicals Program  
Mountain State University**

*Anethum graveolens* L. is a widely used culinary and medical herb commonly known as Dill. Dill is a garden annual with a round erect stem with white strips 2 to 4 feet in height [3]. The leaves are finely dissected into linear segments [2]. They are blueish-green in color with a deep groove on the upper surface [3]. These threadlike leaves are about 1 in (2.5 cm) long and have the characteristic dill fragrance [1]. The small yellow flowers are borne in large, rounded, compound umbels occurring on a stiff, hollow stem. The fruit is a flattened pod about a 1/8 inch long. All parts of the dill plant are strongly aromatic.

Traditionally dill has had a long history as a culinary and medical herb. Recorded use is consistent from the time of the Egyptians 5,000 years ago [5]. Dill's use is also evidenced in the writings of Dioscorides and Pliny. The fragrant, dried herb was placed in cradles to lull babies to sleep. Dill was used for its magical properties to

prevent mischievous witchcraft. In the middle Ages, a pouch of dried dill was worn over the heart to protect and to clear the mind. It was infused in wine for increasing passion.

The leaves are typically used as a flavoring [2]. The leaves are considered to be anti-spasmodic, digestive, carminative, and may soothe irritated gastrointestinal and urinary tracts. The leaves are also reported to have numerous bioactive compounds. The seed is considered to be anti-spasmodic, antibacterial, carminative, mildly diuretic, galactagogue, stimulant and stomachic (digestive aid) [3, 4], used either in infusion or eating it whole. The essential oil in the seed relieves intestinal spasms, griping, settles colic in young children and improves bad breath. Dill is also a useful addition to cough, cold and flu remedies, and can be used as an antispasmodic for hiccups, stomach or menstrual cramps [4, 5]. Dill will also help increase the flow of milk (galactagogue) in nursing mothers and prevent breastfeeding babies having

colic. The seeds have been used in Ayurvedic medicine for respiratory tract infections [3].

Dill is food for the caterpillar of the black swallowtail butterfly [1]. Dill flowers can also attract beneficial insects to the vegetable garden. Lacewings and syrphid fly adults eat the pollen of dill, and their larvae prey on plant sucking aphids.

Dill is easily grown in moderately rich well drained loose soil with full sun [4]. The pH range is 5.3 to 7.8. Directly plant seeds in the garden after the first frost. Germination occurs in one to two weeks. Dill is self seeding and should re-germinate year after year. Dill leaves are harvested as needed. Dill is usually used fresh, but it can be dried. The seeds are harvested just as they begin to turn brown, usually 2-3 weeks after the flowers have finished [1]. Cut seed heads off and dry in a paper bag until the seeds can be shaken from the seed heads.

1. Floridata.com L.C. *Anethum graveolens* Accessed 10/9/09 at



© 2003 Floridata.com

2. [http://www.floridata.com/ref/A/anet\\_gra.cfm](http://www.floridata.com/ref/A/anet_gra.cfm)
2. Foster, S., Duke, J., 2000 **Medicinal Plants and Herbs Eastern/Central Ed.** Houghton Mifflin Co. NY
3. 2000, PDR for Herbal Medicines Thomson Medical Economics, NJ.
4. Plants for a future database *Anethum graveolens* Accessed 10/16/09 at <http://www.pfaf.org>
5. Monterey Bay Spice Company *Dill Seed for Cooking* Accessed 10/16/09 at <http://www.herbco.com/p-291-dill-seed-whole.aspx#>

Photograph courtesy of Floridata.com L.C at [http://www.floridata.com/ref/A/anet\\_gra.cfm](http://www.floridata.com/ref/A/anet_gra.cfm)

## Preventing Swine Flu (Cont'd)

Sutra Neti (very good Yoga asanas to clean nasal cavities), but blowing the nose hard once a day and swabbing both nostrils with cotton buds dipped in warm salt water is very effective in bringing down viral populations. Neti pots and sinus rinse kits are available at the drug store and relatively

inexpensive (under \$15).

5. Boost your natural immunity with foods that are rich in Vitamin C (Amla and other citrus fruits). If you have to supplement with Vitamin C tablets, make sure that it also has Zinc to boost absorption.
6. Drink as much of warm liquids (tea, coffee, etc) as

you can. Drinking warm liquids has the same effect as gargling, but in the reverse direction. They wash off proliferating viruses from the throat into the stomach where they cannot survive, proliferate or do any harm.



## Hard Times Make State's 'Green Gold' Tempting

*The Columbus Dispatch*  
Randy Ludlow, Sep 24, 2009

Greed in the pursuit of Ohio's "green gold" might lead to the arrests of dozens of diggers and dealers who are illegally profiting from the harvest of wild ginseng.

At \$400 a pound for the dried roots of the plant in demand in Asia for its medicinal properties, picking ginseng for export can be a lucrative pastime.

But a statewide Ohio Department of Natural Resources investigation has found that some diggers apparently are violating state laws to further pad their pockets.

More than 30 people face potential criminal charges for poaching ginseng from private property, harvesting the plant out of season (Sept. 1 to Dec. 31) and failing to certify ginseng with the state before export.

No one has been charged as wildlife officers continue to investigate, said Beth Ruth,

department spokeswoman.

Last year, 3,626 pounds of ginseng were legally harvested in Ohio's mature woodlands. At \$400 a pound, that might have been a haul of nearly \$1.5 million.

The state regulates ginseng digging to discourage over-harvesting, preserve wild plants and allow them to reach maturity, said Ron Rogers, wildlife law-enforcement supervisor for central Ohio.

The slow-growing herb favors rich soil and dense shade, often on slopes, and can take five years to grow a root the size of a little finger. Last year, it took an average of 302 plants to produce a pound of roots. Older plants produce bigger, better roots.

Wildlife officers have interviewed diggers and dealers in an attempt to identify violators, Rogers said. "There's money involved there's powerful incentive for folks to go out and dig out the plant illegally."

The department estimates

### Pricey plant

Ginseng, prized for its roots' medicinal properties, has been depleted by over-harvesting.



### Ohio ginseng harvest

There are an estimated 2,000 to 4,000 ginseng diggers in Ohio.

	LICENSED DEALERS	TOTAL POUNDS COLLECTED	TOTAL POUNDS CERTIFIED FOR EXPORT	AVERAGE ROOTS PER POUND
2007	46	3,126	3,076	290
2008	49	3,626	2,701	302

Sources: U.S. Department of Agriculture, Ohio State University, Virginia State University, Ohio Department of Natural Resources, Salisbury University

THE COLUMBUS DISPATCH



*Ginseng roots this large have become rare, as the sputtering economy has encouraged pickers to harvest younger plants with smaller roots.*

2,000 to 4,000 diggers hunt the plant for sale to 49 registered dealers, mostly clustered in eastern and southeastern Ohio.

Ginseng buyer Ricky Campbell, owner of Newton Ridge Gun Shop outside Malta in Morgan County, said investigators showed up at his place with a search warrant. "But I just let them in. I didn't have anything to hide," he said.

The sputtering economy might be driving ginseng poaching and violations, he said. Campbell, 61, who has dug ginseng since 1965, started

dealing in the plant in the 1970s.

"They're digging it up fast because people are unemployed and more people are looking for it to make a little money," he said. He was buying dried roots for \$380 a pound yesterday, but wouldn't share his selling price.

Campbell says some diggers jumped the season by harvesting ginseng before Sept. 1. "I know areas with thousands of plants that already were picked clean," he said. "There's money there and people will buy out of season."

## Mountain State University

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### About the Medicinal Botanical Program

This Program was created as result of a Specific Cooperative Agreement between Mountain State University and the USDA/ARS-Appalachian Farming Systems Research Center in Beaver, WV. The establishment of this agreement came through the efforts of Senator Robert C. Byrd and a Congressional Appropriation.

The mission of the Program is to promote the medicinal plant industry in WV through research, education and outreach. The Program conducts research aimed at the identification and development of native plants as specialty vegetable/forage crops. Educational offerings include symposia, workshops and farm visits.

## Astragalus Beats the Flu

### Astragalus-Clinical Applications

Astragalus is antiviral, carminative, antispasmodic, and hepatic. It improves glucose tolerance and acts as a vasodilator.

In China, astragalus has been used as an energy tonic for deficient spleen qi and yang conditions. It has been used to treat wasting and thirsting conditions, as well as diarrhea, fatigue, and prolapse of the uterus.

Astragalus is used to control fluids in cases of excess sweating and to reduce fluid retention.

- [Fundamentals of Naturopathic Endocrinology by Michael Friedman, ND](#)

Other Chinese doctors have found that astragalus offers more effective relief than the drug nifedipine (Procardia) for angina pain.

More than 80 percent of angina patients improved on astragalus treatment without the dizziness, giddiness, heartburn, or headache that nifedipine can cause.

Animal studies suggest that

astragalus can help prevent the development of cholesterol plaques after an arterial wall has been damaged, which can keep the coronary arteries from becoming too narrow. Astragalus also is useful in the treatment of viral myocarditis, a flulike infection that affects the heart.

- [Prescription for Herbal Healing: An Easy-to-Use A-Z Reference to Hundreds of Common Disorders and Their Herbal Remedies by Phyllis A. Balch, CNC](#)

Also, since flu vaccines are formulated based on viruses that have caused outbreaks in the past, they may or may not be effective in preventing flu caused by this year's virus.

Astragalus helps to build the immune system, and thus make you less vulnerable to the flu.

Take 250 to 500 milligrams in the morning three times a week during the flu season.

**Note:** Do not take this herb if you have a fever.

American ginseng helps to boost the immune system and strengthen the body. Take 200



milligrams one-half hour before breakfast once or twice a week during the winter months.

- [Smart Medicine for Healthier Living : Practical A-Z Reference to Natural and Conventional Treatments for Adults by Janet Zand, LAc, OMD, Allan N. Spreed, MD, CNC, James B. LaValle, RPh, ND](#)

Consider taking ginseng or astragalus to promote health, stamina, and viral immunity.

Take colostrum, beta-glucan, and other immune-boosting supplements.

Take extra vitamin C and zinc. For frail, older people, reduce the dosage by half.

From: [NaturalNews.com](http://NaturalNews.com)

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## Contributions

Dear reader:

Would you like to share your knowledge, skills and experience with us? Do you know how to produce, process, market and/or use herbs and medicinal plants?

Would you like to share this knowledge with our readers? It is quite simple. Just write your ideas on a piece of paper and mail it to us. We will type it and make sure that it gets published in our newsletter.

Please send contributions to the addresses indicated above.

## MBP in Pictures



**Betony [*Stachys officinalis* (L.) Trev.] growing at the MBP Medicinal Plants Garden.**

Betony is used to treat diarrhea, chronic headache and anxiety. It may also help combat lung ailments, such as asthma and bronchitis.

Betony contains relatively high amounts of tannin (which explains its astringent activity), choline, alkaloids and glycosides. One glycoside has been shown to lower blood pressure, which supports its use to treat anxiety and headaches. Betony is nontoxic, though excess consumption may lead to mild stomach upset.

[www.viable-herbal.com](http://www.viable-herbal.com)