

October 2008

Volume 6, Issue 10

# The Herbal Dispatch

## Contents:

WVHA-MSU 2008 Fall Conference: Exploring Herbs	1
Slippery Elm: A Key to Raising Healthy Goats?	2
Virginia Snakeroot Seeds Available	3
Appalachian Plant Profile: Wild Black Cherry	4
Schedule, MSU-WVHA Fall Conference	5
Fall Conference Registration Form	6
Goldenseal for Sale	6
MBP in Pictures: The goat Pearl eating slippery elm	6

## 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.

The views expressed in The Herbal Dispatch are those of the authors and do not necessarily reflect those of MSU or the Medicinal Botanical Program staff.

Authors are solely responsible for their articles.

Mario R. Morales  
Editor/Publisher

**The Medicinal Botanicals Program**  
**Mountain State University (304) 929-1630**

**ISSN 1548-6052 (Print)**  
**ISSN 1548-6044 (Electronic)**

## WVHA-MSU 2008 Fall Conference: Exploring Herbs

The West Virginia Herb Association and the Medicinal Botanicals Program of Mountain State University invites you to attend their annual Fall Conference which will be held from October 31<sup>st</sup> to Nov. 2<sup>nd</sup>, 2008 at the Flatwoods Conference Center, Days Hotel, Flatwoods, Braxton County, West Virginia. Flatwoods is in Central West Virginia, at Interstate 79, Exit 67.

This year's conference theme is 'Exploring Herbs' and will feature keynote speaker David Winston, AHG.

Starting at noon on Friday and ending at noon on Sunday, the conference will feature presentations on topics such as growing herbs for diabetes and cancer; weed walks through the local countryside; herbal cleaning products; eating well the healthy way; growing methods; and hints and helpful ideas (**see schedule on page 5**). Please plan on visiting our herbal marketplace during conference hours.

The conference is offering sessions with up to 4 concurrent presentations on a diversity of topics to satisfy all kinds of interests. We strongly



At the WVHA-MSU 2008 Fall Conference, Melissa Dennison (L) will do a Nature Walk and Dr Hassan Amjad (R) will talk about How to Live a Long and Healthy Life.

encourage you to attend and enjoy the cordial ambience that characterizes the MSU-WVHA conferences. If you attend, it is almost certain that you will have a productive weekend as it will allow you to expand your knowledge of herbs with regard to cultivation, processing, medical applications, crafting, identification, etc.

**Registration:**  
\$90 for 3 days,  
\$30 for either Friday or Sunday, and  
\$50 for Saturday.

Complete the **registration form** on page 6 and mail it with your check to:

Kathryn Hare  
44 Gentle Breeze Lane  
Charles Town, WV 25414

The form also has space for renewal/ new membership for 2009.

**Vendor fee** is \$35 whether for 1, 2 or 3 days. Contact Melissa Dennison, gardentreasures@hotmail.com, to register as a vendor:

**Lodging** is available at the Days Hotel. Call 866-700-7284 to make reservations. Conference rates will be available until October 15th.

ALL MEALS are on your own.

## Slippery Elm: A Key to Raising Healthy Goats?

*The August and September 2008 issues of the Herbal Dispatch had letters from Montgomery Fitzwater in which he briefly explained how he has succeeded at raising healthy goats. He believes that the key to his success is in the diet he provides and the way he presents it. The diet's main ingredient is slippery elm branches, whose leaves and twigs the goats eat by standing on their hind legs.*

\*\*\*\*\*

Necessity and play, combined with a deep fondness for goats, has led to a unique feeding system and very healthy animals with no use of anthelmintics.

The necessity is born of raising eight children and as many as 12 milk goats on less than an acre of land, while striving to thrive well below the poverty line. I needed both an inexpensive and healthy way to raise my animals with these limitations. I had observed that the current practices for both large and small producers in our area were inherently unhealthy—so I started reading, researching asking questions and playing. I believe now the limitations were a blessing.

### My Experience

First, I noticed that the better the browse, the healthier the animal. I had also started looking at tannins, proteins, and mineral content of feed,

hay and browse. I also talked with and observed other producers over a few years. From this information, I determined to focus on, and experiment with browse. I contacted two local tree services and had them dump trimmings in my yard. I began visiting the local burn site and hauled home pickup loads of brush and trees. I segregated by species, offered the goats a wide variety and observed them, including what the animals preferred, how they ate it, what parts of the leaves, stems or bark they removed—and monitored their feces and watched their overall health. As we use the milk, I would monitor the effects of different browse on the taste.

Through those observations and some reading and researching, slippery elm, elm, mulberry and hackberry, in that order, surfaced as the most interesting and beneficial. Given all feed options, the goats select the slippery elm leaves stems and bark before anything else. I estimate that during the spring, summer and fall over the past couple of years, I've fed about 60 percent browse (mostly elm and mulberry), with a little dry hay and I turn them out for grass.

The only concentrate feed (12 percent sweet feed) they get is at milking time. It might be of interest that I do not feed corn, other than the small amount mixed in the sweet



feed at milking time. I actually believe that this may be the most important thing I do not do as corn inhibits the absorption of iron. I would like to follow up on this research as well.

My experience over this period is that the goats are extremely healthy in comparison with other goat producers. I have not used any anthelmintics. I've also been able to tremendously lower my production costs—browse is free and I've had little or no cost for medication.

The kids that have been thrown by these goats have been very healthy-- no problems-- and put on weight very well. They usually weighed 85 to 100 pounds by five months and they are milk breeds (Nubian and Saennan). At harvest, six to seven months, the muscles are good; liver and fat excellent. Taste of meat is good. They were never medicated, other than CDT shots; nothing—no anthelmintics, no antibiotics.

The taste of the milk is excellent. Actually, the best we've tried. This is definitely not the case when feeding browse with higher tannins, like oak or maple. I've only had one case of simple mastitis. I do my own version of the FAMACHA test and monitor their weight, appearance, and feces. I have had a couple to the vet, one for the simple mastitis and one for an accident. They were considered very healthy.

I also have not had any problems with bloat—some of this I attribute to the actual browse, but I think the fact that I hang it so they have to reach up to feed tilts their bodies to a 45 degree angle, and positional bloat is relieved.

I do know that elm is: protein 16 %, DM 30%, ash 6%, Gross energy 4 kcal/g, glucose 21 %. Mulberry is: DM 25 %, crude protein 21 % and NDF 39%. Slippery elm has been used as an anthelmintic for hundreds of years in America, and Black Mulberry has been used in the

## Virginia Snakeroot Seeds Available

**By David C. Carman  
Grower and Collector  
Princeton, West Virginia**

Northeast Sustainable  
Agriculture Research  
Program, Northeast SARE  
FNE07-599

Partial funding for the work  
reported here was provided by  
the USDA Sustainable  
Agriculture Research and  
Education Program.

This year, to date, one of the  
results of this SARE grant has  
been a good Virginia

snakeroot seed crop.  
Therefore, under contract  
terms with Northeast SARE,  
small quantities of seeds, free  
of charge, are now available  
for those growers and  
prospective growers of  
medicinal plants.

To begin growing on a small  
scale and learn “first-hand”  
through experimentation for  
future serious plantings of this  
valuable native medicinal  
plant, a packet of 50 seeds  
and planting and care  
instructions will be sent to

interested individuals on a  
first-come first-serve basis.

Follow-up is required for my  
research, so it will be  
necessary for me to contact  
each grower at a future date  
or dates to record seed  
germination, survival rates,  
etc.

To obtain your free seeds, just  
send a note in the mail to:

David C. Carman  
215 Haw Pond Farm Rd.  
Princeton, WV 24740-6741



giving your name, address,  
and phone number.

## Slippery Elm: A Key to Raising Healthy Goats? (Cont'd)

Mediterranean for much  
longer. I also know that  
slippery elm has been used as  
an aide to digestion. Both  
have been much forgotten in  
the last 80 years.

I do know that too high of  
concentrated tannins (CT)  
depress voluntary feed intake  
and digestive efficiency and

animal productivity. High  
tannins are also associated  
with high lignin, low crude  
protein and low in vitro  
digestible dry matter (McLeod,  
1974).

For milk goats I need to keep  
proteins up for production,  
tannins down for taste,  
maximize parasite resistance

and minimize production  
costs. Elm and mulberry  
seems to do all this.

There is also an incredibly  
overlooked aspect of elms  
and mulberry. It can be grown  
as a hedge—as tall or as wide  
as needed. It is vertical growth  
for small spaces that can be  
taken to the ground and within  
four weeks is back up with  
good foliage. I've harvested  
both elm and mulberry as a  
hedge and am now monitoring  
its come back. Properly  
managed and rotated, it could  
be sustained perpetually. I  
see elm and mulberry as  
extremely important for any  
goat producers, anywhere, as  
a **sustainable, vertical,  
anthelmintic, high protein,  
and medium tannin browse**.

I am not a scientist and my  
bias towards elm and  
mulberry is studied but

subjective so I could not  
conduct any of this “playing”  
with proper controls. We wrote  
to many universities and  
individuals about these  
observations and ideas. Mario  
Morales at Mountain State  
University is the only one who  
listened and has been  
objective and responsive. He  
fully understands the  
importance of identifying  
native plants, as well as the  
integrated control strategies,  
for sustainable small ruminant  
production.

I truly believe that goats are  
the most important meat for  
world food production and the  
problem of parasites and the  
overuse of anthelmintics is a  
grave problem that must be  
addressed immediately. Mario  
has provided us with  
information, guidance, ideas  
and controls for proper  
testing. We are very thankful.



## Appalachian Plant Profile: Wild Black Cherry

By Dean Myles, Coordinator  
Medicinal Botanicals Program  
Mountain State University

*Prunus serotina* Ehrh., is a medium to large deciduous tree native to the Eastern US commonly known as wild black cherry [1]. Wild black cherry achieves an average height of 125 feet with a 48 inch dbh. *P. serotina* has an alternate leaf and twig arrangement. The leaves of *P. serotina* are 2 to 5 inch in length and 1¼ to 2 inch wide. The elliptical to lance-shaped leaves have a fine serrated margin with a rounded base and pointed apex. The underside has reddish hairs bunched along the mid-vein. The slender twigs are reddish-brown with horizontal lenticels. The twigs are bitter to the taste and have a disagreeable aroma. The pointed green to reddish-brown buds have overlapping scale with the terminal bud present. The bark of *P. serotina* saplings is reddish-brown and smooth with gray lenticels. The bark becomes grayish-black and scaly with age. The white flowers are perfect with five petals about 3/8 of an inch wide. The flowers occur in long racemes during leaf flush. The fruit is a reddish-purple drupe that matures in late summer. Seed production occurs when the tree reaches 30 to 100 years of age [2]. Seed is produced almost every year with good crops produced at 1- to 5-year intervals. The largest reported wild black cherry in WV is located in Ritchie County [1]. This tree has dbh of 50 inches and is 112 feet in height. The largest wild black cherry tree reported in the US has a dbh of 69 inches, is 85

feet in height and is located in the Smoky Mountain National Park, TN [3].

The wood of *P. serotina* is very valuable and highly sought after. *P. serotina* has rich reddish-brown wood, which is strong, hard, and close-grained [2]. Wild black cherry is one of the most valued cabinet and furniture woods in North America. Black cherry wood is also used for paneling, interior trim, veneers, handles, crafts, toys, and scientific instruments. High-quality trees for commercial use are restricted to the Allegheny Plateau of Pennsylvania, New York, and West Virginia. The bark of *P. serotina* is also high prized for curative properties. The inner bark and fruit were used by many Native American tribes. The Cherokee, Delaware and Iroquois tribes use the inner bark as a blood tonic, cold remedy, cough medicine, sore throat, fevers, and to treat old sores and cuts [4]. Black cherry bark was also used as an anti-diarrheal, analgesic, anthelmintic, disinfectant, gynecological and dermatological aid by the Chippewa, Mohegan, Rappahannock, Penobscot, and many other eastern woodland tribes. In modern medicine, black cherry bark preparations are used as an expectorant for lung congestion and coughs [5]. The bark is also said to be effective for treating the symptoms of the colds, bronchitis and pneumonia. **Warning:** The bark leaves, and seeds are consider toxic [6]. The glycoside prunasin is converted to hydrocyanic acid when digested. No health hazards or

side effects have been documented with the proper therapeutic dosage [7]. Cyanide poisoning from wild cherry bark is unlikely due to its low content of cyanogenic glycoside.

Wild black cherry occurs on nearly all soil types within its range, but develops best in well drained soil on middle and lower slopes of eastern and northern exposures [2, 8]. Optimum soil pH ranges from 6.8–7.2 [8]. Propagation is from seed or cuttings. Seeds need to be stratified for 3-4 months at 4°C. Hard or softwood cuttings are made in early summer and planted in permanent locations. Wild black cherry is common in WV and can be found growing in old pastures, fence rows, and other places that have had some type of disturbance. Bark is harvested in the fall. To be sustainable, only collect bark from the thick branches of young tree as old trees may be damaged. Wild black cherry is considered to be secure within its natural range [9]. However, wild black cherry is considered to be invasive in the northeast. Remember to contact your local native plant program or the National Plants Database at <http://plants.usda.gov/> for species status.

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Photograph courtesy of: Lady Bird Johnson Wildflower Center Native Plant Information Network at <http://www.wildflower.org/>.

**Schedule, MSU-WVHA Fall Conference: Exploring Herbs, October 31, 2008–November 2, 2008\***

Friday October 31, 2008		Saturday November 1, 2008		Sunday November 2, 2008	
10:00 am 05:00 pm	Registration Vendors' Setup	08:00 am 12:00 noon	Registration	08:00 am 09:00 am	Registration
		09:00 am 10:00 am	Starting Plants from Seeds–Techniques for Good Germination, Carol McCarthy What Not to Eat–Herbal Remedies for Modern Living, Elaine Ferry Packaging, Branding, and Marketing Yourself, Your Product, Teresa Halloran	09:00 am	Starting Plants from Cuttings Carol McCarthy Nature Walk, Melissa Dennison
		10:00 am 12:00 noon	Adaptogens Part 2 David Winston	10:00 am	Can You Really Make Money Growing American Ginseng? Tom Johnson Of Mulling, Spicing, and Brewing–A Short but Heady History Carol Schweiker
				11:00 am	Make It-Take It Workshops, such as sachets, dream pillows, quick herbal wreaths, notecards, etc. Bring your own supplies or use ours for a small fee
12:00 noon 02:00 pm	Nature Walks Herb Craft Demonstrations	12:00noon 01:30 pm	Lunch		
02:00 pm 03:00 pm	Greening your Garden Myra BonHage-Hale Growing and Preserving 10 Common Medicinal Herbs Andrea Lay Nursery Tour	01:30 pm 02:30 pm	Propagation of Woodland Medicinals David Carman Sisters of Mercy–Herbs for Spiritual Healing, Bonnie Buchman Making Herbal Cleaning Products Annette Gall		
03:00 pm 05:00 pm	Adaptogens Part 1 David Winston	02:30 pm 03:30 pm	Organic-What's In It for Me? Benefits and Techniques of Organic Agriculture Elaine Ferry Your Gut Reaction-Probiotics and your Health, David Hawkins Herbal Detox–The Natural Path to Weight Loss, Eve Von Deck DVD presentation of Collaboration 21st Century Appalachia Update and Website for farm2U.org, Annie Seay		
05:00 pm 06:30 pm	Dinner	03:30 pm 04:30 pm	Appalachian Ethnobotany, Dean Myles How to Live a Long and Healthy Life Dr. Hassan Amjad		
		04:30 pm 05:30 pm	Panel: North American Medicinal Plants- Dr. Amjad, David Winston, David Hawkins, Dean Myles, Dot Montgillion		
06:30 pm 07:00 pm	Calendula Contest Tricks-or-Treats	05:30 pm 07:00 pm	Dinner		
07:00 pm 08:30 pm	Keynote Speech: The Worst Weeds are the Best Meals David Winston	07:00 pm	Business Meeting, Election of Board Members, Silent Auction, Music		
08:30 pm 11:00 pm	More Tricks-or-Treats Cordials in Cooking Ann Nye & Kathy Hare				

\* Times of workshops are subject to change so plan to be early in the day, just in case we have to move a speaker you want to hear to an earlier time.

### Mountain State University

Medicinal Botanical Program  
P.O. Box 9003  
Beckley, WV 25801

Mario R. Morales, Director  
Phone: (304) 929-1683  
mmorales@mountainstate.edu

Dean Myles, Coordinator  
Phone: (304) 929-1687  
dmyles@mountainstate.edu

Program's Fax: (304) 929-1640

Webpage:  
www.mountainstate.edu/usda

#### 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 aim at the identification and development of native plants as specialty vegetable/forage crops. Educational offerings include symposia, workshops and farm visits.

### Subscriptions

Would you like to receive this newsletter? Subscriptions are free and subscribing is easy. Just send us your name, address and e-mail (if available). We provide electronic and printed versions of the newsletter; indicate which one you would prefer by sending an electronic message to: mmorales@mountainstate.edu

Or a letter request to:

Mountain State University  
Medicinal Botanicals Program  
P.O. Box 9003  
Beckley, WV 25801-9003

### 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.

### Fall Conference Registration Form West Virginia Herb Association

Oct. 31 – Nov. 2  
Days Inn – Flatwoods, WV.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

Email: \_\_\_\_\_

Business Name: \_\_\_\_\_ Other Phones, FAX, etc. \_\_\_\_\_

Member? Yes \_\_\_\_\_ No \_\_\_\_\_

#### Conference

Conference Paid Member: \$ \_\_\_\_\_ for One Day \_\_\_\_\_ for All \_\_\_\_\_

#### Membership

Renewal for 2009: \$ \_\_\_\_\_ (\$20 Individual, \$30 Family, \$50 Business)

New Member Dues for Conference and 2009: \$ \_\_\_\_\_ (same as above)

TOTAL Paid: \$ \_\_\_\_\_ By: Cash \_\_\_\_\_ Check # \_\_\_\_\_

### Goldenseal for Sale

Goldenseal: Organically grown, 200 seeds (fresh crop) \$10.00  
native southern West Virginia stock. 100 roots (2-3 yr old) \$50.00

Stock shipped bare root, and invoiced separately, plus postage.

100 roots (mature) \$70.00  
100 roots (cuttings) \$80.00

**David C. Carman**  
215 Haw Pond Farm Rd.  
Princeton, WV 24740-6741  
Phone: 304.384.9147

### MBP in Pictures



Pearl, one of Montgomery Fitzwater's goats, feeds eagerly on fresh leaves and twigs of slippery elm while standing up on its hind legs.