

North Country Gardeners

Burnett, Sawyer, & Washburn Co.

UW-Extension Cooperative Extension

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In This Issue

Rain garden workshops at Hunt Hill

Friendly pesticides for home gardens

Fruit and Vegetable Production Workshop to be held in Rusk Co.

Container gardening is a good alternative

Volunteer opportunities

Watering tips to maximize survival of new plantings

Calendar of events

Purple Loosestrife workshops

Pre-publication discount on invasive plants publication

Website for those interested in trees

Area Plant Sales

May 21 - North Country MG

May 28 & 29 - Fort Folle Avoine

May 30 - Hayward Garden Club

June 4 - Burnett Garden Club

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Spooner Ag Research Station
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Spooner, Wisconsin 54801
(715) 635-3506 or
Toll Free 800-528-1914**

Greetings!

I'm sure everyone is getting anxious for better gardening weather to arrive. While the rain is welcome some warmer temperatures should tell us once and for all just what made it through the winter. Perennials have been real slow to come to life and we have already confirmed substantial winter kill on alfalfa hay fields. We will be doing our final winter survival evaluations on the perennial display garden plants at the Spooner Station next week.

For those interested in volunteer projects either for Master Gardener certification requirements or for your own personal satisfaction, I encourage you to take a look at the volunteer list. I'm amazed at the number of projects going on and the dedicated people who are coordinating them. Get involved you'll be glad you did.

As always thank you for your continued interest and support of the UW-Extension and the Master Gardener Program.

Kevin Schoessow
Area Ag Development Agent

Rain Garden Workshops at Hunt Hill

Hunt Hill Audubon Society, the Long Lake Preservation Association and UW-Extension are sponsoring a three part series on Rain Gardens. Participants will take an active hands-on role in the design, construction and planting of Rains Gardens located on-site at Hunt Hill. All workshops will be held at Hunt Hill starting at 10:00 am and there is no cost to attend. The same series will be repeated July 30, Aug 6 and Aug 13.

Rain Gardens - #1-A Design (Saturday, June 4). Whether you're planning a rain garden right now, or just planning ahead - come and learn the basics from those "in-the-know." There are many different types, sizes and shapes.

Rain Gardens #1-B Construction (Saturday, June 18). Now that you have a design figured out - what goes into the actual construction? Before you order that soil and mulch, what about drainage, slope, orientation, tools needed, hours needed, and much more. You're closer to getting your hands dirty.

Rain Gardens - #1-C Planting (Saturday, June 25). Visiting experts from the UW-Extension and area greenhouses will share their knowledge on the best native plants for rain gardens and how to properly plant them. Actual planting in the new demo rain garden at Hunt Hill will take place - lend a hand if you would, please? Fun for young & old alike. Come early for Cakes at the Lakes enjoy a breakfast of pancakes, sausages, fruit, juice, and coffee - all you can eat. Serving starts at 8:00 a.m. Adults/\$6; children 5-12/ \$3; younger/free. For more information contact Hunt Hill at (715) 635-6543 or visit their website at <http://www.audubon.org/local/sanctuary/hunthill/>

Friendly pesticides for home gardens

Kevin Schoessow

Area Ag Development Agent

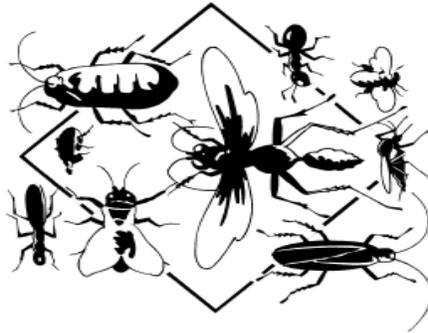
Burnett, Washburn, & Sawyer Counties

As the gardening season approaches so comes the battle against unwanted pests. Unfortunately, no matter how much we try to tolerate their presence, there often comes a time when we have to apply a pest control product. There are many types of products gardeners can apply; just look at the shelves in a garden center and you will be amazed at the choices. There are conventional synthetic pest control products and any number of natural or organic pest control products. As with any pest control product it is important to understand how these products work and just how “safe” they are. Below is a summary of some of the common products used for pest control in home gardens. This information was adapted from L.P. Pottorff, Colorado State University Cooperative Extension Plant Pathologist, Integrated Pest Management Program.

Quick Facts...

- ✓ Pesticides are substances or organisms that prevent, destroy, repel or mitigate a pest.
- ✓ Sabadilla is considered among the least toxic of botanical insecticides. It can irritate eyes and produce sneezing if inhaled.
- ✓ Pyrethrum is the most widely used botanical insecticide in the United States.
- ✓ Pyrethroids are synthetic materials designed to imitate natural pyrethrum. They have the same basic chemistry, and are modified to improve persistence, insecticidal activity.
- ✓ Sulfur is probably the oldest known pesticide in current use.

Normally when we think of pesticides, we think of synthetically produced pesticides (e.g., carbaryl/Sevin, Malathion and 2,4-D).



Types of non synthetic pesticides include microorganisms, microbial products, and materials derived or extracted from plants, animals or mineral-bearing rocks. Exceptions also exist for certain synthetic pesticides such as soap, oil and lime sulfur. Many of these alternative control options are associated with organic production

As a general rule, pesticides approved for organic production break down rapidly and often are less destructive to natural enemies and other organisms. However, just because the materials are natural, it does not mean that they are always less toxic than the synthetic pesticides.

Botanical Pesticides

Sabadilla

Sabadilla is derived from the seeds of the sabadilla lily (*Schoenocaulon officinale*). The active ingredient is an alkaloid known as veratrine and most commonly sold under the trade names “Red Devil” or “Natural Guard.” Sabadilla is considered among the least toxic of botanical insecticides, with an oral LD50 of 4,000 to 5,000 mg/kg. (LD50 is the dosage lethal to 50 percent of the test population. The larger the LD50, the safer the chemical.)

Sabadilla dust can be highly irritating to eyes and can produce sneezing if inhaled. No residue is left after application of sabadilla because it breaks down rapidly in sunlight. Sabadilla acts as a contact and stomach poison and has been effective against caterpillars, leaf hoppers, thrips, stink bugs and squash bugs. The insecticide is labeled for use on many vegetables.

Pyrethrum

Pyrethrum is the most widely used botanical insecticide in the United States. The active ingredient, pyrethrin, is extracted from the chrysanthemum plant, *Dendranthemum (Chrysanthemum) cinerariaefolium*, which is grown primarily in Kenya, Rwanda, Tanzania and Ecuador.

Most insects are highly susceptible to pyrethrum at low concentrations. The compound acts rapidly on insects, causing immediate “knockdown.” Flying insects drop almost immediately upon exposure. Pyrethrums also are highly irritating to insects, so they may be used as a “flushing agent” or irritant to make them come out of hiding.

Fast knockdown and actual insect death don’t always go hand in hand, as many insects recover after the initial knockdown. For this reason, pyrethrums are mixed with a synergist such as piperonyl butoxide (PBO) to increase insect mortality. Pyrethrums are primarily effective as a contact poison. They affect the central nervous system of insects.

Pyrethrum is nontoxic to most mammals, making it among the safest insecticides in use. In fact, it has more approved EPA (Environmental Protection Agency) uses than any other insecticide. Trade names include Pyrenone and Pyrellin. Caution: Allergic skin reactions can be common when using these products. Do not use products containing PBO when temperatures exceed 90°F.

Pyrethroids

Pyrethroids are synthetic materials designed to imitate natural pyrethrum. Pyrethroids are not accepted by organic producer regulations. These synthetic materials have the basic chemistry of pyrethrins but are modified to improve persistence and insecticidal activity. Pyrethroids are widely used in U.S. agriculture under trade names such as Asana, Capture, Astro, Mavrik, Pounce, resmethrin and sumithrin. Use caution when applying these products around water because they are toxic to fish.

Some synthetic pyrethroids are safer than the natural pyrethrins. The oral LD50 of Pounce (pyrethroid) is 4,000 mg/kg, while the oral LD50 of pyrethrin is 1,500 mg/kg.

Neem

Neem is a botanical pesticide derived from the seeds of the neem tree, a native of India. The neem tree supplies at least two compounds, azadirachtin and salannin, that have insecticidal activity, and other unknown compounds with fungicidal activity. Neem has been used for more than 4,000 years in India and Africa for medicinal as well as pest control purposes. It has low mammalian toxicity with an LD50 of 5,000 mg/kg.

Neem-based pesticides are sold under trade names such as Margosan-O, Azatin Rose Defense, Shield-All, Triact and Bio-neem. They have been shown to control gypsy moths, leafminers, sweet potato whiteflies, western flower thrips, loopers, caterpillars and mealybugs. The products are labeled for use on ornamentals, foliage plants, trees, shrubs and food crops. Neem works as an insect growth regulator. The treated insect usually cannot molt to its next life stage and dies. It also may deter egg laying. Do not expect a quick kill.

Research continues to look at the full activity of neem extracts against a wide range of pests and pathogens. Neem oil, sold under such trade names as Green Light Rose Defense, Shield-All and Triact, has been shown to give control against powdery mildew.

Mineral-Based Pesticides

Sulfur

Sulfur is probably the oldest known pesticide in current use. Homer described the benefits of “pest-averting sulfur” 3,000 years ago.

Sulfur can be used as a dust, wettable powder, paste or liquid. It primarily is used for disease control because it is effective against powdery mildews, certain rusts, leaf blights and fruit rots. However, spider mites,

psyllids and thrips also are susceptible to sulfur. Most pesticidal sulfur is labeled for vegetables such as beans, potatoes, tomatoes and peas, and for fruit crops such as grapes, apples, pears, cherries, peaches, plums and prunes.

One of the drawbacks of sulfur is its potential to cause plant injury in hot (90 degrees and above), dry weather. It also is incompatible with other pesticides. Do not use sulfur within 20 to 30 days on plants where spray oils are applied; it reacts with the oils to make a more phytotoxic combination.

Sulfur is nontoxic to mammals but may be irritating to the skin and especially eyes. It has an LD50 of 5,000 mg/kg.

Lime Sulfur

Lime sulfur is made by boiling lime and sulfur together. This mixture is used as a dormant spray for fruit trees to control such diseases as blight, anthracnose and powdery mildew, and certain insects such as scales, eriophyid mites and spider mites.

Lime sulfur's drawbacks include smelling like rotten eggs, burning exposed skin and eyes, and causing plant injury if applied when temperatures exceed 80 degrees. Lime sulfur has an LD50 of 400 to 500 mg/kg.

Bordeaux Mixture

Bordeaux mixture is a product of the reaction between copper sulfate and calcium hydroxide (lime). It is not approved for use by organic growers. First used in Bordeaux, France as a control for downy mildew, this mixture is primarily used as a fungicide to control bacterial leaf spots, blights, anthracnose, downy mildews and cankers. It also acts as a repellent to many insects and is labeled for use on many vegetable, tree fruit and nut crops.

Bordeaux mixture, like sulfur and lime sulfur, also can be phytotoxic to plants. It may cause burning of leaves or russetting (reddening) of fruit when applied in cool, wet weather. The LD50 is 472 mg/kg.

Other Alternatives

Horticultural Oils

Horticultural oils are highly refined so that compounds toxic to plants are removed. Considered effective and safe, they can be used to control insects as well as diseases. The types of oils available for pest control include dormant oils and summer oils.

Dormant oils are used during the winter season when plants are dormant to control overwintering stages of insects such as aphids, spider mites and scales. An oil applied during the dormant period suffocates the overwintering eggs of aphids and spider mites or suffocates the adult in the case of scales.

Summer oils are a lighter version of dormant oil and can be applied to actively growing plants. Use summer oils to control aphids, mites, thrips, scales, mealybugs, and their eggs.

The use of oils to control fungal diseases is on the rise. Research is underway on the use of oils to control powdery mildew and rust diseases on a variety of ornamentals, including roses.

Oil phytotoxicity can occur if the product is not used properly. Plant damage can occur when: 1) too much is used; 2) plants are under water stress; 3) temperatures are over 90 degrees; and 4) when dormancy is mistaken (i.e., spraying too early in the fall). Apply dormant oils from December to February. Temperatures must be above 45 degrees. The LD50 of oil is 5,000 mg/kg.

Soaps

Soaps have been used for 200 years or more and are effective against soft-bodied insects such as aphids, some scales, psyllids, is poorly understood. It is thought that they remove the protective oils and waxy covering of the insect. They are strictly contact insecticides and must be applied directly to the insect to be effective.

Certain plants may be sensitive to soaps, resulting in leaf burn. To avoid phytotoxicity, always test a soap spray on a small area of the plant. Soaps can be purchased commercially or you can make your own by mixing 3 to 6 tablespoons of dishwashing liquid with 1 gallon of water. Commercially produced insecticidal soaps have an LD50 of 16,900 mg/kg.

Bicarbonates

Baking soda, or sodium bicarbonate, is a natural substance and effective non-toxic control for certain fungi. It has been used for control of harmful fungi since at least early in the 20th century. Potassium bicarbonate is a synthesized byproduct of potassium hydroxide. Together these two substances are referred to as bicarbonates.

Sodium bicarbonate has the advantage that it is non-toxic, effective, readily available and very inexpensive. It has the disadvantage that it must be applied weekly to control powdery mildew, and a surfactant or liquid detergent mist be added to the spray solution so that the sodium bicarbonate is spread evenly, preventing crystallization on rosebushes and other treated plants. Research at Cornell determined that a combination of baking soda and Sunspray horticultural oil applied to rose leaves infected with powdery mildew or black spot will significantly reduce the incidence of disease.

Timing and rates of baking soda application are important because leaf burning can occur if the level of sodium bicarbonate is too high. No phytotoxicity occurs on roses with rates as low as one percent sodium bicarbonate (one tablespoon baking soda plus 2.5 tablespoons Sunspray horticulture oil in one gallon of water). The chemicals were eradicated (i.e. disease incidence decreased upon application), whereas most fungicides on the market are protective in activity (they prevent further spread of the disease, do not erase, or eradicate what damage has already been done).

Although you can buy baking soda in the grocery store, the chemical is not legally registered for use as a fungicide. Until it is, Colorado State University cannot legally recommend the use of this chemical for disease control purposes. Applications must be treated as experimental on the part of the user.

Potassium bicarbonate also controls powdery mildew on various plants and early blight on tomato. In fact, disease control results with this type of bicarbonate have exceeded those of sodium bicarbonate. While sodium bicarbonate has some effect on these diseases, it does not have enough control by itself to inspire product development. As a result, potassium bicarbonate is legally labeled for disease control purposes and can be used for powdery mildew control on cucurbits, roses and grapes, and early blight control on cucumber and tomato. Trade names include Kaligreen, Amicarb First Step and Remedy.

Diatomaceous Earth

Diatomaceous earth (DE) is a nontoxic insecticide mined from the fossilized silica shell remains of diatoms. Diatoms are single-celled or colonial algae in the class Bacillariophyceae.

DE absorbs the waxy layer on the surface of insect skins, causing the insect to dry out.

It also can work as an abrasive, causing cuticle cells to rupture. The product is labeled to control slugs, grasshoppers, millipedes and sow bugs, as well as soft-bodied insects like aphids.

DE is formulated as a dust, either alone or in combination with pyrethrin. With a low mammalian toxicity, the LD50 ranges from 3,160 to 8,000 mg/kg, depending on the formulation.

Another grade of DE is used as a filtering agent in swimming pools. Both swimming-pool grade and natural types of DE come from the same source but are processed differently. It is imperative that only the "natural" grades be used for insect control.

ALWAYS CAREFULLY READ AND FOLLOW LABEL INSTRUCTIONS!

Integrated Pest Management

The concept behind an integrated pest management program (IPM) is to incorporate many different tools to control pests, not to rely on just one product or method. All the pesticides described here, whether old or new, should be included in integrated control programs whenever possible.

Remember, these products are still pesticides, even though they are natural. Do not use them indiscriminately, but rather with care and certain precautions.

Fruit and Vegetable Production Workshop will be held in Rusk County

- ✓ **Organic Certification**
- ✓ **Organic Fruit & Vegetable Production**
- ✓ **Integrated Pest Management**

This workshop is designed for the home gardener and the market gardener. Beginning at 5 p.m., we will look at the requirements for organic certification for fruit and vegetable production followed by a discussion of organic management practices. At 6 p.m., Karen Delahaut, UWEX Fresh Market Vegetable Specialist, will discuss integrated pest management principles including scouting for pests, organic methods of pest management, alternatives to pesticides, and more. The workshop will end at approximately 8 p.m. There is no fee to attend, but pre-registration is appreciated. Call 715-532-2151 to pre-register.

Container gardening is a good alternative to the full-sized garden

Bob Dreis
Master Gardener

We are all gardeners because we love plants, wild places with their growing things, and the contentment that comes with a well tended garden. It can be big or little but it is a fact that, as gardeners, we have assisted nature in all its beauty by growing our own food or just in relaxing in the shade of a tree we planted so many years ago! Our garden plot, big or little, is our retreat from a busy mechanical world.

As time goes by, many of us may, due to circumstances beyond our control, be forced to "downsize" or "cut back." So, some of us say good-bye to the old garden plot, to the "back 40" or to the greenhouse. What can we do if our only spot to grow something is rather small, such as only having a balcony or a ten foot by ten foot lawn?

There is an alternative to giving up and just reminiscing about the past and that

alternative is "container gardening." What is it? What is it all about and what exactly do I mean by a "container?" Probably everyone reading this has already done some container gardening only you haven't called it that. So let's start with a definition: a container is anything that will hold dirt - the growing medium for plants. It can be made of anything; plastic, wood, metal, or ceramics (like in flower pots). I know you all have had plants in pots, so all of you already have experienced container gardening. So look around and pick what part of your domain will be your container garden - what corner of your little lot, your porch or your balcony.

The size and shape of the containers are up to you and depend largely on what you want to grow. (As I write this I have three dwarf citrus trees in gallon pots in my living room.) I do not recommend any container larger than five gallons, which is the size you want if you plan on raising tomatoes.

Place these where there will be plenty of sun - you do not want to be in a position where you have to move a five-gallon container full of dirt and a couple of thriving tomato plants. With a little imagination,

you can place all your pots and then fill them with dirt. The dirt you will use should be potting soil. It comes in 20 pound bags and has been sterilized. This is a good way to go - you can be assured that it is disease free and properly fertilized.

Last year, I had my best year ever growing six tomato plants. My tomatoes were great! I am getting ahead of myself but I get all enthused just thinking of them.

Back to the containers. It is essential that you drill several drainage holes in the bottom or a good hard rain will drown out your plants. The opposite can also happen. Don't let the soil in your container dry out.

Water them copiously every day that it doesn't rain. With the proper drain holes, you do not have to worry about overwatering.

And so, we are ready to garden. Our plants will start out in a disease-free, properly watered environment that is easy to weed and with soil that is easily fertilized. Container gardening is great for us older (or lazy) folks. We can create our own little wilderness even if we have a very small backyard - or no backyard.

Ongoing Volunteer Opportunities

Location:	Project	Contact	Phone
Spooner Fish Hatchery	Shoreland Restoration	Sheri Snowbank	635-2101
Burnett Med. Center/Continuing Care	Patient Gardens	Linnea Seume	463-5452
Spooner Ag Research Station	Demo Garden	Kevin Schoessow	635-3506
Webster	Fort Folle Avoine Garden	Helen Steffen	866-4430
Sawyer County Fairgrounds	Fairgrounds Landscaping	Liz Metcalf	462-4662
Siren	Capeside Cove Beautification	Diane Medaglia	866-4665
Winter Cemetery	Beautification	Zita Simono	266-4705
Winter	Community Garden	Peggy Flaws	266-6031
Hayward	Farmers Market	Jim Spinner	945-3028
Siren	Farmers Market	Chuck Awe	349-5226
Draper/Loretta	Park Beautification	Brenda Adler	266-5779

Don't forget about helping young and old with gardening projects. Consider working with 4-H, boys & girls clubs, church groups, or senior citizens. Share the bounty by planting an extra row of vegetables and donating it to a local food shelf or senior center. Once you've been certified, you need 24 hours of volunteer time per year plus 10 hours of continued education. You need not be a Master Gardener to volunteer!

Watering tips to maximize survival of new plantings

Lee Daniels

UWEX Summer Horticulture Assistant

Improper watering practices is probably the number one reason why young trees and shrubs fail. In general, newly planted trees and shrubs need one inch of water per week during the growing season for the first two years.

Avoid overwatering or leaving the soil saturated for a long time, especially on compacted or poorly drained clay soils. Overwatering forces oxygen out of the soil and results in oxygen starvation of roots. This causes root death and leads to the decline of the tree or shrub. The yellowing of foliage, first developing low and on the inside of the tree or shrub and progressing to the outer foliage, is an indication of oxygen starvation.

Also, avoid frequent light watering. This promotes the development of shallow root systems that are susceptible to winter injury and summer heat stress. Shallow watering does more harm than good for both new and established trees and shrubs.

Water infrequently but deeply (at least 6 to 8 inches) and allow the soil to dry out some between applications. Water the entire area beneath the dripline (the farthest spread of the branches) and beyond to encourage roots to spread out on newly planted trees and shrubs.

Important Website Resources

Wisconsin Master Gardener Program
<http://www.hort.wisc.edu/mastergardener/>

Wisconsin Urban Horticulture
<http://www.uwex.edu/ces/wihort/>

Wisconsin Gardener Public TV

June 12 - 2 p.m., The Heirloom Garden
June 19 - 2 p.m., The Heirloom Garden II
June 26 - 2 p.m., The Root of the Problem
June 30 - 7:30 p.m., "Lettuce Grow!" NEW
July 3 - 2 p.m., "Lettuce Grow!" NEW
July 10 - 2 p.m., Gardening and Cooking with Herbs
July 17 - 2 p.m., Melting Pot
July 24 - 2 p.m., Uncommon Gardens

To determine if you are meeting the one inch per week water needs, I recommend maintaining a rain gauge during the growing season since rainfall can be very spotty at times. It can also be deceiving. You may have a number of rainy days in a row, but then when you check the gauge, there is only a few tenths of an inch or less of total precipitation.

For determining soil moisture, stick your fingers a few inches into the soil. Do not just feel the soil surface—it may feel dry when there's plenty of moisture just an inch or two down. Move mulch aside when checking soil moisture.

Mulching around the tree or shrub's base reduces soil loss, improves water and air penetration, and keeps soil temperatures more stable. These conditions are helpful for root growth and therefore improve tree vigor. Wood chips, shredded bark, dried grass clippings or pine needles all can be use for mulch. Cover the area with mulch about two to four inches deep. Avoid mounding mulch next to tree trunks.

Once trees and shrubs are established, they do not need regular watering. However, during drought conditions, those vulnerable to drought injury, such as birches, spruce, or arborvitae can use a drink.

For more information, see InfoSource #841 at <http://infosource.uwex.edu>. You can also hear this information at the UW-Extension InfoSource telephone number: 1-822-441-4636.

Calendar of Events

May 21, 2005 North Country Master Gardener Plant Sale 8:30 a.m., Spooner Ag Research Station.

May 28 & 29, 2005 Fort Folle Avoine Plant Sale.

May 30, 2005 Hayward Area Garden Club plant sale, 7 am. - 2 p.m., Hayward Sports Center.

June 4, 18, & 25 Rain Garden Workshops, 10 a.m, Hunt Hill.

June 4, 2005 Burnett Garden Club Plant Sale, 8 a.m. until sold out, Lions Club Building, Grantsburg.

July 23, 2005 Burnett Garden Club motorcoach tour to Busse Gardens in Big Lake, MN and Prairie Restorations Native Plant Nursery in Princeton, MN. Contact: Mary Charmoli, 715-349-8388.

July 24-27, 2005 2005 International Master Gardener Conference, Saskatoon, Saskatchewan, Canada
<http://www.hort.wisc.edu/mastergardener>.

August 23, 2005 Twilight Garden Tour, 5 p.m. - dusk, Spooner Ag Research Station.

Spooner Garden Club meets 4th Thursday of every month. Merle Klug (715) 635-6239.

Hayward Garden Club meets 3rd Tuesday of each month. Carol Alcoe (715) 462-3213.

Burnett Garden Club meets 2nd Thursday of each month. Tamra White (715) 463-2794.

North Country Master Gardeners meets 4th Thursday of each month. Spooner DNR Fish Hatchery. Tony Webber (715) 469-3411.

Purple Loosestrife workshops will be held soon

Kevin Schoessow

Area Ag Development Agent

Burnett, Sawyer, & Washburn Counties

The Wisconsin Department of Natural Resources (WDNR) and UW-Extension will offer eight free public field trips in May and June, to encourage everyone to visit a local wetland infested with invasive purple loosestrife, and see how it is improving due to recently released biological control beetles. New Biocontrol Program Cooperators are especially encouraged to attend, Woods says. Cooperators have been propagating and releasing these tested and safe control insects in Wisconsin since 1997 and all citizens are encouraged to join in to help protect their local wetlands from purple loosestrife.

Participants will see a variety of recovering native wetland plants, learning to distinguish them from purple loosestrife (PL). They should also see biocontrol beetles and their damage to PL, as well as get answers to questions about the biocontrol program. They may also be able to collect beetles for propagation work. Woods urges all Cooperators who want to collect propagation stock to attend a trip once their plants are about two feet tall.

To register for the field trips, email Brock Woods at brock.woods@dnr.state.wi.us or call

608-221-6349 and leave name, trip date and place and your email address or phone number. Any trip may be canceled or postponed due to severe weather, so participants should call ahead if in doubt. Clothing and boots suitable for spring weather in wet habitats are recommended. Saturday trips are from 1 to 4 p.m. and weekday trips are from 3 to 6 p.m.

Field Trip Schedule:

Saturday, May 28: Holcombe Flowage: Meet at corner of North Shore Dr. and State Highway 27, 4 miles north of Holcombe.

Thursday, June 2: Minocqua: "Save More Grocery" parking lot on US Highway 51.

Pre-publication discount on invasive plants publication until June 30

The University of Wisconsin Press is pleased to announce the publication in July 2005 of the long-awaited *Invasive Plants of the Upper Midwest: An Illustrated Guide to Their Identification and Control* by Elizabeth J. Czarapata. This book will be an essential resource for all concerned about the growing threat of invasive plants to native ecosystems. You are eligible for a special 30% pre-publication discount offer:

Visit <http://www.wisc.edu/wisconsinpress/InvasivePlants.html>

Just enter the code "AU434" into the "comments or special instructions" box on the website order form, which you will reach

by clicking on either "Add this book to cart" or "Buy this book now." You may also refer to this code to obtain the discount on orders phoned to (800) 621-2736 or faxed to (800) 621-8476 **before June 30, 2005.**

Invasive Plants of the Upper Midwest includes more than 250 color photos that will help anyone identify problem trees, shrubs, vines, grasses, sedges, and herbaceous plants (including aquatic invaders). The text offers further details of plant identification; manual, mechanical, biological, and chemical control techniques; information and advice about herbicides; and suggestions for related ecological restoration and community education efforts. Also included are literature references, a glossary, a matrix of existing and potential invasive species in the Upper Midwest, an index with both scientific and common plant names, advice on state agencies to contact with invasive plant questions, and other helpful resources. The information in this book has been carefully reviewed by the Wisconsin Department of Natural Resources Bureau of Endangered Resources and the University of Wisconsin-Madison Arboretum and other invasive plant experts.

Betty Czarapata (1950-2003) was director of the Weed-Out Program of the Park People of Milwaukee County, a member of the Wild Ones Natural Landscapers and the Invasive Plants Association of Wisconsin, and the founder of the Wind Lake Environmental Club. A schoolteacher by profession, she created a curriculum on invasive plants for environmental educators.



For tree managers and others interested in Wisconsin's urban & community trees:

Here's a new website geared primarily for the homeowner and supported by various forestry organizations/agencies in Minnesota: <http://www.mntrees.org>. The concept appears to be one-stop shopping for basic tree identification, selection, planting and care advice from credible sources. A very nice feature is MN DOT's on-line plant selector system — click on "What Trees Will Grow Well in My Yard?" You can either navigate through various plant/site selection menus or download fact sheets. It is very well done.

North Country Gardeners Newsletter

A publication for gardening enthusiasts from the
Tri-County area of Burnett, Sawyer, & Washburn



Spooner Area Ag Agents Office
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EQUAL OPPORTUNITY EMPLOYER

Visit us on the web! You may find this newsletter and other useful information by visiting the website of the Spooner Ag Research Station.
<http://www.uwex.edu/ces/sars/index.htm>
