

Horticultural Newsletter

UW-Extension Cooperative Extension

Issue 1 , March 2004

In This Issue

Brown Bag Program offers recommendations for fruit crop cultivars

Resources Corner

New All-Americans available in 2004

Protect your garden from aster yellows

Calendar of Events

Cut flowers for home, gifts, and selling

Late winter is a good time to prune

Understanding your garden soil

Local gardening information and resources

Wisconsin Gardener TV

March 7 - 5:30 p.m. - Melting Pot - NEW!

March 7 - 6:15 p.m. - From Distant Shores - NEW!

March 25 - 7:30 p.m. - Melting Pot - NEW!

April 4 - 2:00 p.m. - On the Rocks

April 11 - 2:00 p.m. - Back to Basics

April 18 - 2:00 p.m. - Landscaping for Birds

April 25 - 2:00 p.m. - Organic Gardening

April 29 - 7:30 p.m. - The Goodness of Gardening - NEW!

May 2 - 2:00 p.m. - Personal Spaces, Public Places

May 2 - 5:30 p.m. - The Goodness of Gardening - NEW!

Brown Bag Program offers recommendations for fruit crop cultivars

Tom Syverud

Extension & Outreach Educator

Ashland Ag Research Station

Dick Weidman, Superintendent Peninsular Agricultural Research Station reviewed the 2003 performance of several fruit crops, for a recent Brown Bag Program.

Boyne is an old favorite Raspberry from Canada, it is winter-hardy, however it does break dormancy easily during a warm period in winter. Then it will suffer injury, as it did in 2003.

Lauren and Encore are New York cultivars that produce high yields with little winter damage. Lauren is early mid-season and Encore is late mid-season. Canby, another popular older cultivar produces consistently, although it can have some winter-hardiness problems.

Gooseberries have gained in popularity the last several years. They prefer cool, moist locations and do not do well in hot dry places. Cultivars of note include Invicta (England), which has large sweet greenish-yellow fruit and Hinnonmaki Yellow (Finland), which has small very flavorful fruit. Use renewal pruning in dormant stage, removing all four year old canes to keep productivity high. For more information on these cultivars and others, try the web site berrycrops.net.

Montmorency has been a favorite tart cherry for 200 years or in the north Meteor or North Star. A good alternative cultivar is Balaton, with its high yield, dark juice good for wine and early ripening 7 days before Montmorency. Watch for the common fungus disease of Black Knot in all stone fruits.

Resources Corner

Plants Not Favored by Deer (A3727) If deer have damaged your plantings in the past, you'll find this publication a helpful resource. It lists trees, ornamentals, perennials, annuals, bulbs, and herbs that deer don't seem to bother.

Common & Glossy Buckthorn: A Major Threat to Wisconsin's Woodlands Invasive plants can crowd out native plants and change the composition of natural plant communities. This publication describes how to identify both common and glossy buckthorn and provides various control strategies for getting rid of either species.

Contact your local Extension Office to order your copies.

New All-Americans available in 2004

Tom Syverud

Extension & Outreach Educator

Ashland Ag Research Station

Fresh Look Celosias— Two new cultivars offer season long color with little maintenance. Both the Yellow and Red celosia produce a large central plume of 8 to 9 inches, and an abundance of side shoots, which cover the plant in blooms. Grown in full sun, the plant attains a height and spread of 12 to 18 inches. Flowers can be cut for fresh or dried use. Plant in moist but well-drained, fertile soil in a sheltered position in full sun. Tip: These plants are forgiving; however water well in dry weather.

Gypsy Deep Rose Gypsophila is a small cushion or mounded form plant. This annual has dark rose-colored flowers about 3/8 of an inch. Grown in full sun, the plant reaches a height of 8 to 10 inches, with a spread of 12 inches. Tip: Gypsophilas don't like acid soils.

Queeny Purple Hollyhock is a shorter hollyhock; at only 20 to 30 inches tall it is perfect for smaller gardens. The 3 to 4 inch purple blooms are a "powder puff" type. Queeny Purple is an annual that flowers abundantly. Tip: As a newer cultivar, it is resistant to rust, however, in 2003 flea beetles were a major pest problem for this plant.

Sweet Beauty Watermelon is an "ice box" type melon, at approximately 5 to 7 pounds, it is good for one meal. It is a vigorous plant maturing in 80 days. Sweet Beauty is early, sweet and crisp. Tip: When we didn't harvest this melon on time, the rodent and soft rot damage was severe.

Amy Melon is a "canary" type melon, bright yellow smooth skin without netting. This early melon has a small seed cavity surrounded by sweet white flesh. This vig-

orous plant is ready in 80 days. Tip: Wait until the yellow color is fully developed to harvest.

Sunshine Winter Squash has bright orange flesh that is sweet, nutty and smooth when baked, steamed or microwaved. Use transplants to speed the harvest of this long-season squash. The 3 to 4 pound squash has a flattened orange-red skin. Harvest before frost so damage doesn't occur. Tip: Use clear plastic on heavy clay soils to speed up development of this crop.

Protect your garden from aster yellows

Tom Syverud

Extension & Outreach Educator

Ashland Ag Research Station

Aster yellows is one of the most serious garden diseases of northern Wisconsin. It is caused by a mycoplasma-like organism, a microorganism intermediate between bacteria and viruses. The organism is located in the phloem tissues of infected plant parts and causes a variety of disorders such as distortion, discoloration, stunting and tissue proliferation. Eventually it may kill the plant.

Aster yellows has a broad host range encompassing more than 200 dicot plant species. The disease is transmitted from plant to plant primarily by the aster leafhopper. The highest plant infection rates are thought to be a result of infected aster leafhoppers migrating from southern states. Transmission by native aster leafhoppers, acquiring the mycoplasma-like organism from local perennial or biennial plants, is thought to account for only a small percentage of aster yellows infections. Once an aster leafhopper feeds on and acquires the mycoplasma-like organism from an infected plant, 3 weeks will elapse before that leafhopper can transmit the disease to another plant. Generally, infectivity rates of the leafhopper population are less than one percent. In some years, infectivity rates may be four to five percent.

Aster yellows has a range of characteristic symptoms which vary with the strain of aster yellows organism, timing of infection, plant species, temperature, age and/or size of the plant. Because of these variables, each plant infected with aster yellows may not display the same symptoms. This symptom variability, along with the broad host range and the habits of the insect vector (leafhopper), makes control difficult.

Initial symptoms of aster yellows usually appear as vein clearing, which spreads until the entire leaf becomes chlorotic. As the plant develops, mature leaves generally do not change color, but new growth will be yellowish-green. Infection early in the growing season will almost always cause stunting, shortened internodes, and dwarfed, deformed or lopsided flower heads. With heavy infections, no flower production will occur. One indicative symptom of aster yellows is adventitious shoot proliferation, which appears as a mass of leaves with a bushy or witch's broom effect in place of normal flower production.

Adult aster leafhoppers are slender, wedge-shaped insects with wings held in a roof like manner over their abdomens. They are very skittish and fly away when approached. Aster leafhoppers have piercing, sucking mouthparts (stylets), which they use to suck plant juices from deep phloem tissues. They spread salivary secretions while feeding. It is through this saliva that aster yellows is transmitted. Aster leafhopper development is described as gradual or direct. They begin life in the egg stage. The nymphs, which emerge from the eggs, resemble the adult insects but lack wings. At maturity, nymphs shed their skins one more time, and pass directly to the adult stage. In general, development from egg to adult takes 21 to 35 days at temperatures from 68 – 82° F.

The variable nature of the disease and the sporadic way it spreads make control of aster yellows difficult. Control requires an integrated management approach. Monitor the flower crop. Rogue infected plants

and remove piles of infected plant material from the field. Control weeds in and around the field to prevent infection of an alternate host and over wintering of the disease. Avoid planting annuals near susceptible perennial or biennial plants in the field.

Here are a few of the common plants that Aster Yellows can infect;

Weeds and Crops – chicory, pigweed, milkweed, pineapple weed, mustard, mallow, plantain, purslane, nettles, clovers, oats and strawberry

Vegetables and Herbs – carrots, celery, parsnip, lettuce, salsify, cole crops, spinach, pumpkin, onion, potato, dill and coriander

Annuals – calendula, bachelor's button, cosmos, gaillardia, strawflower, marigolds, zinnias, statice, phlox, larkspur, petunia, salpiglossis, nasturtium and scabiosa

Perennials and Bulbs – painted daisy, coreopsis, rudbeckia, forget-me-not, dianthus, poppy, veronica and glads

Calendar of Events

Garden Recommendations with Tom Syverud, 6 p.m.

April 7 - Ashland Ag Research Station

Garden Flowers with Helen Harrison, 6 p.m.

June 29 - Ashland Ag Research Station

June 30 - Spooner Ag Research Station

Garden Insect and Disease Identification and Control with Phil Pellitteri & Brian Huddelson, 6 p.m.

July 20 - Ashland Ag Research Station

July 21 - Spooner Ag Research Station

Tri-State Master Gardener Conference

July 24-26 - St. Cloud, MN.

Twilight Garden Meeting, 6 p.m.

Aug. 17 - Ashland Ag Research Station

Aug. 18 - Spooner Ag Research Station

Cut flowers for home, gifts, and selling

Kevin Schoessow

Area Ag Development Agent

Burnett, Sawyer, & Washburn Counties

Cut flower gardens can be used to harvest a fresh bouquet of flowers for your home, for making gifts, or for selling.

Some gardeners raise cut flowers in an orderly fashion for the specific purpose of cutting. These plants are often grown in rows or beds similar to vegetables and sometimes grown in the vegetable garden itself. Since these flowers are grown to be cut, don't expect a picture perfect garden. A cutting garden often grows flowers which are more attractive in a bouquet than as a garden accent.

Consider the following tips in preparing a site for your cutting garden:

1. The site should receive at least 4-6 hours of full sun per day.
2. The site should be sheltered from winds. Good windbreaks include evergreen trees, fences, or buildings. This protection from the wind will prevent the long flower stems from breaking and will reduce water stress to the plants and flowers.
3. Plant your flowers so that the taller plants do not shade the shorter plants.
4. Choose a variety of plants to insure that flowers are available for cutting throughout the season. And,
5. Choose longer-stemmed varieties and ones that last a long time in water.

Both annuals and perennials are commonly planted in cut flower gardens. Some recommended annuals include aster, cornflower, cosmos, dianthus, gomphrena, marigold, scabiosa, and zinnia.

Recommended perennials include allium, Asiatic lily, baby's breath, dahlia, gayfeather, gladiolus, globe thistle, Shasta daisy, statice, and yarrow.

An overlooked but common addition to florist arrangements are flowers and branches from trees and shrubs. Good choices include bittersweet, crabapple, forsythia, lilac, red-bud, redbud, dogwood, spirea, and willow.

Finally, some cut flowers can be easily dried. These flowers, called everlastings, can be used in making flowers arrangements that can last for months. Cut the flower stems before the blooms have fully opened, after the dew of the morning has dried. Strip off the leaves and tie 3-5 stems together in bunches. Hang them upside down in a dry, ventilated area away from direct sunlight. Good flowers for drying include baby's breath, bells of Ireland, celosia, chinese lantern, gomphrena, lunaria, salvia, starflower, statice, strawflower, and xeranthemum.

Late winter is a good time to prune

Kevin Schoessow

Area Ag Development Agent

Burnett, Sawyer, & Washburn Counties

Late winter and early spring is the ideal time to prune most trees and shrubs. Pruning during March and April has several advantages. First, this time of year is the least stressful for the plants. They are dormant and have plenty of stored energy. There are no other competing stresses on the plant such as insects or disease, and the pruning wound will only be exposed for a short time before new growth begins the wound sealing process. This time of year is also less stressful for people as well. It is easier to make pruning decisions without leaves obscuring plant branch structure. The temperatures are cooler making it more enjoyable to be outside working, and it is often a more relaxed time of year before the hustle and bustle of the growing season.

There are several reasons why we should prune. One reason is to promote plant health by removing dead, or dying branches injured by disease, insects, animals, storms or other

adverse mechanical damage. Remove all branches that rub together. We also prune to maintain plants intended purpose in the landscape by encouraging flowering and fruit development, maintaining a dense hedge or desired tree form. Pruning also keeps a plant looking attractive by removing unwanted branches, waterspouts and suckers. Finally we may prune to protect people and property by pruning out weak or narrowed-angled tree branches that could fall, we prune branches that obscure vision at intersections, and interfere with workspace.

Trees and shrubs that bloom early in the growing season on last year's growth should be pruned immediately after they finish blooming. These would include such plants as azalea, lilac, chokeberry, forsythia or juneberry. Shrubs grown primarily for their foliage should be pruned in spring before growth begins such as, barberry, burning bush, dogwood, honeysuckle, ninebark and sumac.

To avoid tearing the bark and causing a large injury it is also important to use the three cut system especially on larger diameter branches. Make the first cut on the underside of the branch about 18 inches from the trunk. Make the second cut an inch further out on the branch; cut until the branch breaks free. The third and final cut is made just beyond the branch collar (the swollen area where the branch meets the trunk). Try not to leave a stub and yet don't cut too close to the trunk.

Understanding your garden soil

Tom Syverud

Extension & Outreach Educator

Ashland Ag Research Station

To achieve the best plant growth possible in your flower, fruit and vegetable garden, it all starts with the garden soil. Soils are made up of four components: mineral materials, organic materials, soil water and

soil air. The mineral portion is composed of silicate clays, iron oxides and other distinct minerals, however more important is the particle sizes the mineral portion represents. Those are the coarse or sand size, fine or silt size, and the very fine or clay size. Soil texture is described as the relative amounts of the sand, silt and clay size particles in a soil. Loam, often considered the "best" soil, is not equal parts of sand, silt and clay size particles, it is rather where the three particle sizes have the same amount of influence on growing plants, and the soil air and water. Loam is 20% clay, 40% sand and 40% silt. The reason it is less clay particles is because they are much more reactive. For example, clay size particles hold nutrients, water and organic matter better than sand or even silt particles.

You can estimate your garden soil texture with a simple bottle test at home. Take a representative sample of your soil, let it dry a few days, break it up and remove any sticks or stones. Fill a clear jar 1/3 full with soil, mark the level, then fill with water and shake one minute. After one minute the sand will have settled, mark the level, after two hours the silt will have settled out, mark the level. Then after one or two days, mark the clay level, and the remaining floating material is your organic matter level. Now measure and estimate the % sand, silt and clay of your soil.

Soil organic matter represents an accumulation of plant material, manure, decomposing animal and insect parts and living organisms. Another part of soil organic matter is humus. Humus is very resistant to breakdown, is dark in color and binds soil mineral particles together, provides nutrients and holds water as well. Although organic matter is usually only 3 to 6% in Wisconsin soils, its influence on soil properties and plant growth is much greater than its percent. Soil structure is how the different mineral and organic parts of the soil are grouped together. Ideally the soil is loose, soft and crumbly and well drained. Most of

the soil's structure is determined by nature, but we can improve our soils structure by organic matter additions and not working the soil when it is too wet.

Soil pH

The pH is a measurement of acidity or alkalinity in the soil. Your soil pH influences whether or not your plants can make the best use of the nutrients that are available in the soil. A pH of 6.5 – 7.5 is considered neutral, on the pH scale of 0 to 14. Readings with number value lower than 6.5 are considered acid, 6.0 – 6.5 is slightly acid and 5.0 to 6.0 is moderately acid. While soil pH doesn't change very quickly, several factors can change the pH in your soil over a season. For instance, city water can have a pH of 8.0 – 8.5, gradually making your soil more alkaline. On the other hand, many soil amendments will acidify your soil as they break down. Since a soil with high pH can make nutrients in the soil unavailable, plants will look like they need fertilizing, the leaves will yellow in mid-season and then not respond to a fertilizer or manure tea addition. The vast majority of plants grow well with a pH from 6.0 to 7.0. When you find out a specific plant prefers a pH of 6.5, keep in mind that most plants are tolerant of a fairly wide range and the value of 6.5 represents the middle of the range. Only a few require a specific pH. Almost all garden plants prefer a slightly acid pH. If your pH is more acid, try growing azaleas, rhododendrons, foxglove, trillium, bleeding heart, bluebells and blueberries, potatoes, corn, raspberries and strawberries.

To change the soil pH, you need to take into consideration the type of soil and what you want to use to change the pH. Sandy soils are easier to acidify than clay soils. To make soil less acid, you must add an alkaline material such as lime. To make soil more acid, add materials such as peat moss, sulfur, iron sulfate or ammonium sulfate. Be careful though, overuse of aluminum sulfate is associated with damaged plant roots and heavy metal contamination of the soil.