University of Nebraska Lincoln

Dodge County Area Master Gardeners

Going & Growing Newsletter

UNL Extension In Dodge County • 1206 W. 23rd Street • Fremont, NE • (402) 727-2775 September 2007

Hello Master Gardeners!

It seems that this summer's worst heat and humidity may finally be coming to an end, and I am sure everyone is looking forward to the cooler, colorful days of fall. Fall is a welcome relief for most gardeners and a great time to work on their landscapes, so the theme of this newsletter is "taking inventory before winter."

There are still several chores that I have put off this summer because of the heat and humidity, like redoing flower beds and dividing perennials. Fall is also a great time to renovate the lawn and is the best time of year to control perennial weeds. I would also like to plant some spring bulbs.

This is a great time of year to visit Farmers Markets and garden centers to view the colorful fall flowers and produce. Have a colorful, and cooler, fall!

-Betty Hamata

Inside this issue:

Need More Education Hours?

Acreage Insights– Rural Living Clinics

- Fire On The Acreage– October 6, 9 & 10
- Organic Production On The Acreage– November 8, 10 & 15

Program cost- $5.00 for Master Gardeners. Program descriptions and additional information available at http://acreage.unl.edu/classes/clinics.htm

Please Join Us!

Newsletter Committee Meeting

October 23rd

All meetings are held from 7-8 pm at the UNL Extension Office, 1206 W. 23rd Street Fremont, NE

We have fun brainstorming newsletter article ideas for our January issue of the Going & Growing Newsletter.

From The Garden To The Table

Persimmons

By Kristina Jensen
Nebraska Statewide Arboretum

There is a rare and fascinating tree whose native range is just outside of Nebraska. Persimmon, *Diospyros virginiana,* is a deciduous tree that can be found growing in dry woodlands, limestone glades, prairies, thickets, abandoned fields and along roadsides.

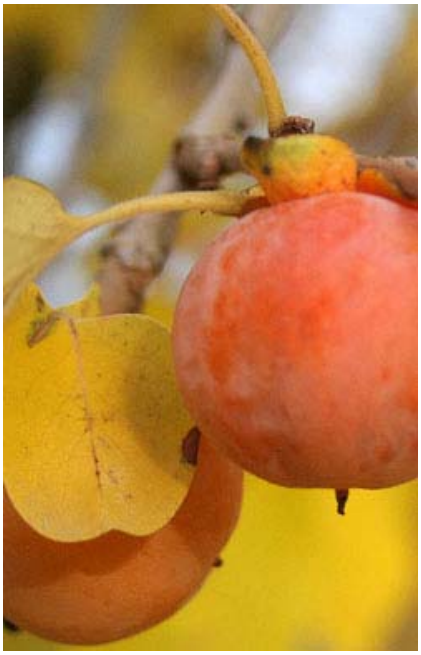
In spring, tiny yellow bell-shaped flowers adorn newly leafed-out branches. The foliage is dark green and glossy above, paler below. It turns buttery-yellow in autumn, infrequently reddish-purple. Dark, alligator back-like bark maintains interest through the winter.

Spring's flowers are followed by one to two-inch berries that change from green to yellow, and finally become dark orange in color before maturing in late September and October. The fruit is edible, but can be rather astringent before a flavor-taming frost.

The persimmon has a variety of uses outside of the ornamental landscape.

- Its suckering growth habit can be utilized for naturalized areas and erosion control.
- Its fruit makes it a perfect choice for wildlife plantings and for human consumption.
- The pulp can be used in a variety of baked goods, syrups, jellies and ice cream.
- The seeds have been used as a coffee substitute; the leaves can be brewed for a tea; the flowers are useful in honey-making.
- A relative of ebony, persimmon wood has also been valued in the production of textile shuttles, golf club heads and parquet flooring.

Persimmon is hardy in Zones 4-9 and prefers moist, well-drained, sandy soils but will do well on low fertility, dry soils, too. It prefers full sun and is adaptable to varying soil pH levels. It can be somewhat difficult to transplant, so establish your plant from container or B&B in spring. Trees will sucker and form colonies, reaching 35-40 feet in height.



Persimmon fruit is a hit with both humans and wildlife.

Persimmon Salsa

Spoon this sprightly condiment over grilled fish, alongside roasted ham, or, for an appetizer, atop slices of smoked salmon on buttered pumpernickel.

4 small or 3 medium-size firm but ripe persimmons, peeled, cut into 1/2-inch cubes (about 1 2/3 cups)
2 T. minced white onion, rinsed, drained
1 T. plus 1 t. fresh lime juice
1 T. minced fresh basil
2 t. minced seeded serrano chile
2 t. minced fresh mint
1 t. minced peeled fresh ginger

Mix persimmons, onion, lime juice, basil, serrano chile, mint, and ginger in small bowl. Season salsa to taste with salt and pepper..

Salsa can be made 4 hours ahead. Cover and refrigerate. Bring to room temperature before serving.

Makes about 1 3/4 cups.

From the Epicurious web site, at www.epicurious.com.

Going & Growing Newsletter Contributors:

Lorraine Urban
Betty Hamata
Sarah Browning

Gardening For The Birds– Food

By Lorraine Urban

Is your yard bird friendly? Birds add interest to a yard. Their songs, their nesting habits, their interactions with other birds and wildlife can be almost as intriguing as the plants that grow there. You can always put up a bird feeder (or 2) but choosing bird-friendly plants will stimulate bird activity whether you remember to fill the feeder or not.

'Purple Majesty' Ornamental Millet

But remember that birds need both food and cover, so a single shrub with fruit or a feeder standing alone in the middle of the lawn is unlikely to have many visitors. Plants produce foods such as fruits, acorns, and seeds, and provide foraging sites where birds can search for insects and larvae. Many attractive plants provide both food and cover.

Birds who are "seed eaters" and are native to our area year-round, such the chipping sparrow, the hairy woodpecker, and the rose-breasted grosbeak would be more likely to visit your yard if you grow plants that have seeds big enough for them to see and get their beaks around, such as:

- Aster
- Cosmos
- Coneflower
- Ornamental millet
- Marigold
- Native prairie grasses
- Sunflower
- Zinnia
- Conifer seeds

Letting your lettuce and radishes and other vegetables go to seed will also attract seed lovers such as gray catbirds and spotted towhees. You'll want to keep your bird book and binoculars handy.

If space is available, allow for a plot of weeds to remain in your landscape. Many birds feed on weed seed, such as ragweed, goldenrod and thistles. Weeds also provide a home for many of the insects that songbirds eat, like caterpillars, aphids, katydids, spider and beetles.

Planting trees and shrubs can provide additional food sources for birds. When planting choose varieties that will provide food and cover throughout the year.

Berry plants will attract "berry lovers" ... robins, catbirds, eastern bluebirds, thrush, orioles, and migrating cedar wax wings (which will come in groups of 25 or more and perch on high branches of trees). Try adding some of the plants in to the following table your landscape.

The cardinals and the goldfinches will eat both the seeds and the berries. The juncos and the nuthatches will be sure to charm you when they come in the winter to get their share of what's left.

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Upcoming Events

2006 Wild Fruit & Nut Jam

Saturday October 6

10 a.m.-4 p.m.

Grab your lawn chairs and friends for a relaxing day at Kimmel Orchard in Nebraska City! Enjoy original and classic bluegrass, jazz, blues and folk music. And much more!

- Wine tasting from Nebraska vineyards
- Learn about fruit and nut species that can be grown in Nebraska
- Try delicious recipes with Nebraska grown fruits & nuts
- Watch a variety of Nebraska vendors create unique wood handicrafts
- Buy gourmet fruit and nut products and fine handicrafts

For more information, contact: Kimmel Education & Research Center (402) 873-3166
http://kimmelorchard.com/

Is A Faster Growing Tree A Healthier Tree?

By Gregg Schmadeke, Master Gardener with UNL Extension in Douglas/Sarpy Counties

Our soils contain more than adequate amounts of phosphorus and potassium for our trees. Unless you have a special situation, there is little, if anything, to be gained by providing more phosphorus or potassium.

Nitrogen, however, is often in short supply for optimum tree growth. There seems to be agreement that, up to a point, the more nitrogen you provide your tree the faster it is likely to grow.

But is maximizing the growth rate of your trees a good idea? Is this faster growth good for the tree? Is a faster growing tree a healthier tree? These are simple questions without simple answers or consensus.

Let's review some of the conflicting advice. The following quotes are from Jeff Meyer's *The Tree Book*: *A Practical Guide to Selecting and Maintaining the Best Trees for Your Yard and Garden.* (Meyer is the host of Public Television's "Tree Stories".)

Meyer writes: "I prefer to fertilize regularly from 3 to 6 times a year. This fertilizing method provides the tree with a steady diet instead of an all-at-once feeding that may not last the entire season. Trees are like people—they need a vitamin a day, not the whole bottle at one time....Finally, don't think that just because your old tree looks great that it's not hungry. Even the most mature tree welcomes the boost from an annual feeding."

No, trees are not like people

It is easy to dismiss the recommendations of this "celebrity book" as not being serious advice. Sorry, Jeff, but no, trees are not like people and fertilizer is not "food". I have included the recommendations because they are not that uncommon. The message, "if you really care about your trees, you will regularly fertilize them", is out there everywhere.

In Meyer's defense, he is advocating supplying relatively small amounts of fertilizer with each "feeding". But it is disturbing to me that he makes no mention at all as to whether he is talking about trees surrounded by high maintenance turfgrass that is already receiving fertilizer applications or trees in a more natural environment. And I can find no support at all for the notion that a large mature tree that is doing just fine without it should start receiving extra nitrogen. After all, if trees are like people, would you tell your trim, fit, healthy and happy grandparents that you think they must be hungry and need to start eating more, or would you tell them, "Whatever you are doing, keep doing it."

The next set of quotes is from the 7th edition of *Pirone's Tree Maintenance* by Hartman, Pirone and Sall: "With fertilizer stimulating top growth more than root growth, water demand is increased and unirrigated trees suffer drought stress sooner. Compared to trees growing moderately well, abundantly fertilized trees do not necessarily undertake more photosynthesis. Less carbohydrate manufacture coupled with increased drought stress could make trees even more vulnerable to pests....Trees slightly under fertilized, but not obviously nutrient deficient will develop more extensive root systems to maintain their health. ...Moderately nutrient stressed trees may develop better use of water, de-

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Iron deficiency in silver maple. William M. Ciesla, Forest Health Management International, Bugwood.org

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velop larger root systems and contain more carbohydrates and defensive chemicals."

Pirone's answer to my question about whether it is a good idea to maximize the growth rate of your trees is clearly no. But others do not necessarily agree.

Another point of view

In the third edition of *Arboriculture*: *Integrated Management of Landscape Trees, Shrubs and Vines* by Harris, Clark and Matheny, the authors take exception to Pirone's ideas.

They write: "The most visible response when nitrogen is added is increased shoot growth. A common belief is that an increase in top growth without a similar increase in root growth places a plant in jeopardy. Pirone and others recommend or imply that injured trees should not be fertilized with nitrogen until the trees have recovered, assuming that the trees will not be able to adequately supply an enlarged top. We have been unable to find convincing evidence to support these statements."

This book goes on to also recommend the fertilizing of newly planted trees: "Modest fertilizing soon after planting is good insurance." Even Jeff Meyer, who prefers to fertilize six times a year, does not recommend fertilizing trees for the first year after planting.

So what is a person to believe? In one way or the other they are probably all right. Harris, Clark and Matheny's position, that you don't need to worry about over-stimulating your trees, is partially explained in the following quotes from their book: "Excessive shoot growth is usually kept in balance with the roots by increasingly temporary afternoon water deficits as the leaf area begins to out grow the ability of the roots to supply enough water....Plants have evolved with this root-shoot growth response to fertility, moisture and other environmental variations: it must be in the interest of most plants to do so or they would not have survived as well as they have."

So in other words, when your over-fertilized tree ends up with scorched leaves or it starts dropping them, it's just the tree "balancing things" and there is no real harm. They are probably right, but Pirone's idea that it's better not to stimulate the need for this balancing act in the first place. That makes a lot more sense to me. I am also swayed by the fact that trees in the wild grow bigger and live longer than trees in our yards. I can't help thinking that, in the long run, the slow and steady approach found in the wild is a healthier way to grow a tree. And think about it. How many fast-growing trees can you name that are also long-lived?

How to determine nitrogen deficiency

So if you buy into the idea that a tree should only be supplied with extra nitrogen if it shows a need, how can you tell if a tree is nitrogen deficient? The tree will either have off-color foliage and/or the tree will not be growing at a minimally acceptable rate. Unlike the yellow foliage accompanied by green veins that is common with iron or manganese deficiency, with nitrogen deficiency the entire leaf will be yellow. The leaves will also commonly be undersized. The leaves may also fall from the tree prematurely.

Subnormal growth for a young tree would be anything less than 9-12 inches per year and for a mature tree anything less than 6-8 inches. Let's be clear that we are talking about trees that are established in the landscape, not recently planted. Depending on the size and species, a transplanted tree can take several years before resuming "normal" growth rates.

Every year I start 15-25 oak trees from acorns in pots and root a number of cuttings from my shrubs. I have always made my own potting media. In recent years I have used a mixture of two parts pine bark, one part peat moss and one part the cheapest potting soil I can find. The result is a very good, inexpensive potting media for woody plants, but the mixture is very low in fertility. By early June, almost every tree and shrub growing in this mixture is off- color and nitrogen deficient. I then start adding some nitrogen to my watering can and within a couple weeks the plants look normal.

Nitrogen deficiency is common in potted plants but much less common in woody plants in the landscape. I have an estimated 350 trees growing on my acreage representing about 85 species/cultivars. About 75 of these trees, to some extent, receive nitrogen from the fertilizer applications to my turfgrass. Another 75, mostly small spruce trees that I am trying to stimulate, receive a light dosage of fertilizer broadcast around them in the fall from me. The other 200 are not only "on-their-own" to acquire nitrogen, they are to one degree or

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Nebraska Rain Gardens

A rain garden can provide many benefits. Rain gardens collect runoff water, primarily from home roofs and other impervious surfaces, reduce downstream flooding, and prevent water pollution from degrading water quality. They provide an aesthetically pleasing feature to your landscape, and they can provide you with the satisfaction of a do-it-yourself project that enhances your property value.

A rain garden is a small area in a residential yard or neighborhood planted with native and adapted vegetation. It is designed to temporarily hold rain water from a roof, driveway or other open area to allow it to soak in rather than run off. Water collected in the rain garden slowly infiltrates the soil within 48 hours and can reduce pollutants in runoff water.

Three new publications from the University of Nebraska– Lincoln are now available to help you design a rain garden and choose suitable plants.

- Stormwater Management: Installing Rain Gardens in Your Yard
- Stormwater Management: Plant Selection For Rain Gardens In Nebraska
- Stormwater Management: Rain Garden Design For Homeowners

Visit you local UNL Extension office for a copy of these publications, or access them on-line at http://www.ianrpubs.unl.edu. Under the "Browse Publications" section, click on "Water Management". The publications are listed at the bottom of the page under "Water Quality."

Is A Faster Growing Tree A Healthier Tree?, continued

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another competing with brome grass, a fierce competitor.

A few years ago, two of these trees (both hackberries that I had planted in the early eighties) looked a little off-color. I was surprised to see these tough native trees looking this way, but did nothing about it. The following year, when they were still off-color and started to prematurely lose their leaves in late summer, I decided it was time to do something. I broadcasted some fertilizer under both trees.

The next year the trees normal green color returned. A couple years later another hackberry displayed the same off-color leaves. I again fertilized and again the color improved the following year. I now give these trees an annual fall application of fertilizer. None of the symptoms have returned.

I have not seen symptoms of nitrogen deficiency (other than slow growth in some of my spruce trees) in any of my other trees. I find it impossible not to conclude that trees are very efficient at finding the nitrogen they need.

I like the idea of my trees being around a long time after I am not. I am not concerned with maximizing their rate of growth as much as I'm concerned with keeping them healthy.

Pirone's idea, that a slightly underfertilized tree that is not obviously nitrogen deficient will likely be a healthier tree, makes more sense to me than the alternative theories. Sometimes the best approach to growing things is to just leave them alone.

How and when to fertilize

Following are a few final thoughts about fertilizing trees:

¨ If needed, one annual application is usually sufficient.

¨ Early spring, after the tree has fully leafed out, is the best time to fertilize trees.

¨ Fall applications, after leaf drop has begun but before the soil freezes can also be done, but are less desirable than spring applications. Considerable amounts of nitrogen may be lost to leaching during the winter months

¨ Surface application of nitrogen is the easiest and most effective method. There is nothing to be gained by "injecting" nitrogen into the ground or the tree.

¨ In Eastern Nebraska, one pound of nitrogen per thousand square feet of root zone should be plenty.

¨ No additional fertilization is necessary in fertilized turf areas.

International Master Gardener's Conference

By Lorraine Urban

When Merry Fenton, Master Gardener in Saunders County, and I read about the 2007 International Master Gardener Conference in our April newsletter, since neither of us had been to an MG conference before, we decided to go. The conference was to be held in Little Rock, AK on May 2 – 5, 2007 in one of the large hotel convention centers downtown.

Registering for the conference was easy. We registered "on line" for the tours and presentations we wanted to attend. We received periodic e-mail up-dates from Janet Carson, one of the conference co-ordinators.

"Check in" was a breeze because the Arkansas MGs were out in full force and easily identified by their blue T-shirts. All of them were needed because there were 1,315 conference attendees from 45 states and 3 provinces in Canada.

Merry and I heard a keynote speaker each day, including P. Allen Smith on Thursday. We took a tour of three private and one public garden in Little Rock, sat in on a variety of presentations, and had remarkably good food for a convention.

There were also vendors to visit during the times between speakers and presentations, and before & after meals. A "Taste of Little Rock" was a special event on Friday evening. Yum!

To view Power Point presentations from this conference go to http://www.mg2007.uaex.edu

The International Master Gardener Confernece is every two years, with the next one scheduled for March 22-26, 2009 in Las Vegas. There are Regional Conferences in the alternating years. If you are interested in attending one of these conferences, watch for further information in upcoming garden newsletters.

Merry and I may see you there!

Drying & Preserving Gourds

Gourds are easily grown in the home garden and can be used to make attractive ornaments or bird houses.

Archeological records show gourds have been used by man for over 4,000 years. They were among the many interesting things found in early Egyptian tombs.

Bicolor pear gourds may take only 4-6 weeks to dry.

Gourds can be come in a variety of shapes and sizes, and all can be easily preserved by following a few simple steps.

First, gourds do not cure well until fully mature so don't try to harvest too early. Usually seed packets state the number of days from seeding to harvest to give you an idea when the fruits are mature. At maturity, gourds should be completely colored and hard when pressed with a thumbnail.

Large gourds are ready to harvest when the skin is hard and the stem is

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2009 International Master Gardener Conference

March 22-26, 2009
Las Vegas, Nevada

The Master Gardeners of Southern Nevada invite you to enjoy the grandeur of our desert city. Our area features spectacular natural attractions which can't be found anywhere else, including:

Red Rock Canyon
Valley of Fire State Park
Hoover Dam and
the Grand Canyon.

And don't forget the fabulous Las Vegas strip. You won't find that anywhere else either!

For more information contact:
Ann Edmunds
Program Coordinator
edmundsa@unce.unr.edu
(702) 257-5587

Diseases of Annual and Perennial Plants

By Betty Hamata

Usually plant diseases are "host specific", meaning that they have a limited range of host plants that they can infect. However, some diseases have a much wider host range and can infect a great variety of plants, in some cases both woody and herbaceous. Below are several diseases commonly found in home gardens that have a very wide host range.

Just imagine-it is June and the marigolds are blooming beautifully. Then suddenly their leaves wilt, and the lower stems have a dark, water-soaked appearance. They eventually shrivel and turn brown near the soil line. The plant pulls up easily and reveals rotted roots. Then the plant dies. At first it may seen that this is an isolated incident, then more plants begin showing these symptoms.

Phytophthora Root Rot

Marigolds can be infected by a widespread fungus called *Phytophthora cryptogea* that persists indefinitely in the soil. This fungus attacks the roots, then spread up into the stems. As the roots and stems decay, the leaves wilt and turn yellow and the plant dies.

The fungi thrive in cool, waterlogged soils and are spread by contaminated soil, on transplants, equipment and by moving water. African marigolds, *Tagetes erects*, are quite susceptible, but French marigolds, *T. patula*, and other dwarf varieties are less susceptible.

Infected plants should be removed and discarded, along with the soil immediately surround them. Make sure the soil drains well and allow the soil to dry between waterings.

Purchase only disease free plants. If plants show signs of disease at the nursery in spring, chances are they will continue to decline and eventually die, and will bring the disease organism into your garden. Plant healthy marigolds of the less susceptible French or dwarf varieties.

The most readily available compound for homeowner use is Captan. Drench soil thoroughly with 2 tablespoons/1 gallon water (this complies with label directions of 2 lbs captan/100 gallons of water) at planting. Repeat twice at 30-day intervals. It is best to apply the drench when the soil is reasonably dry so that the chemical penetrates the soil well.

Many other species of *Phytophthora* fungi effect other annual and perennial plants.

Aster Yellows

This is another disease that effects many varieties of ornamental plants. It causes stiff, stunted and distorted plants, along with pale, spindly or yellow leaves. Infected flowers are also dwarfed or deformed, open un-

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Aster Yellows Susceptible Plants

- Aster, *Aster spp.*
- Cockscomb, *Celosia spp.*
- Chrysanthemum, *Dendranthemum spp.*
- Tickseed, *Coreopsis spp.*
- *Cosmos*
- Coneflower, *Echinacea spp.*
- Pinks, *Dianthus spp.*
- *Gladiolus*
- Marigolds, *Tagetes spp.*
- *Petunia*

Reminder: Master Gardener Volunteer Log Sheets Due October 15

To remain active in the Master Gardener program, you must turn in your volunteer and education hours each year. Please give Sarah a call at (402) 727-2775 if you have questions.

Return Of The Elm

By Justin Evertson, Nebraska Statewide Arboretum

Until the 1970s, elm trees were perhaps the most common trees planted in communities across Nebraska. American elm, *Ulmus americana*, was especially popular as its tall, arching habit made it an ideal shade tree for planting along streets, in parks and in back yards.

In many communities the American elm comprised more than half the total species planted in public spaces.

Unfortunately, Dutch elm disease spread rapidly across the state in the 1960s and 70s killing most American elms along the way and laying bare (almost overnight) the leafy canopies that once graced so many of our streets.

As a result, elms fell out of favor and are rarely planted in communities today. Fortunately, new disease-resistant varieties have been developed that can tolerate the poor soils and extreme climate of the Great Plains.

Some of the most promising elms worth trying in Nebraska include the following cultivars.

'Valley Forge' American Elm
Ulmus americana 'Valley Forge'
One of the most disease-resistant elms, it also tolerates deicing salts, air pollution, drought, and a range of soil pH. Upright, arching habit making it an ideal street tree. 50'-70' height and spread

Japanese Elm
Ulmus davidiana var. *japonica*
Glossy green leaves, relatively tight-branching and a rounded habit. 40-50' tall by 30-40' wide

'Accolade' Elm
Ulmus japonica × *U. wilsoniana*
One of the most promising and popular elm cultivars. 50-70' tall and 40-60' wide

'Cathedral' Elm
Ulmus davidiana var. japonica × U. pumila
A fast grower that is tolerant of clay soils, and has yellow to orange fall color. 40-50' tall by 40-50' wide

Lacebark Elm, Ulmus parvifolia
Attractive mottled, lacy bark develops on older stems. Leaves are smaller than most elms and deep green and very glossy. Flowering occurs in late summer with seed development in early fall. The yellowish seeds are quite attractive against the shiny green leaves. Many trees also develop a nice reddish fall color. Best adapted to the southern half of Nebraska.

'Emerald Prairie' is an exciting new lacebark elm cultivar developed in Kansas that may have better cold hardiness. 25-40' tall by 20-35' wide

'Frontier' Elm
Ulmus parvifolia × *U. carpinifolia*
Similar to lacebark elm, with small, glossy leaves that turn a dusty purple in the fall, and mottled bark on maturing trunks. Although some reports indicate winter dieback in the Great Plains, it has performed well in southeast Nebraska for several years. 30-40' tall by 25-30' wide

'Pioneer' Elm
Ulmus glabra × *U. carpinifolia*
Pioneer elm has been planted in several locations in Nebraska and has performed well in Creighton, Pierce, Waverly and Alliance, among other communities. A fast grower with dark green leaves and an upright, pyramidal habit when young. 40-50' tall by 40-50' wide

'Triumph' Elm
Ulmus 'Morton Glossy'
Vigorous upright habit with strong branches bearing glossy, deep-green foliage. The tree appears to be very adaptable to a wide range of growing conditions. 50-60'tall by 30-40' wide

'Vanguard' Elm
Ulmus davidiana var. *japonica* × *U. pumila*
Siberian elm/Japanese elm hybrid developed at the Morton Arboretum. Very tolerant of high heat and drought, making it a promising selection for the western Great Plains. 40-50' tall by 40-50' wide

Rock Elm, *Ulmus thomasii*
Native to eastern Nebraska. Its relatively narrow and upright habit is reminiscent of pin oak. A distinctive feature of this tree is the corky ridges found on stems and young branches that eventually develop into a deeply fissured bark. 50-60'high by 30-40' wide.

Gardening For The Birds– Food

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If you're going to buy plants for fall planting, you might want to consider buying some that are "for the birds."

The table below shows selected plants that benefit songbirds and other wildlife in Nebraska, and their wildlife benefits during summer (S) , fall (F) and winter (W). Bold italic letters indicate greater documented value to wildlife, especially songbirds.

Landscape value indicates ornamental plant value only, not wildlife benefit. More stars (1-3) indicate greater landscape value for planting in backyards and near living spaces. Plants with fewer stars are usually better suited for larger backyards, acreages or farms.

In the next newsletter I'll write about choosing plants to offer shelter to birds.

Evergreen Trees	**Landscape Value**	**Season**
White fir, *Abies concolor*	***	FW
Eastern redcedar, *Juniperus viginiana*	*	FW
Colorado & white spruce, *Picea sp.*	***	F
Jack pine, *Pinus banksiana*	**	F
Lacebark pine, *Pinus banksiana*	***	F
Pinyon pine, *Pinus edulis*	***	F
Limber pine, *Pinus flexilis*	***	F
Ponderosa pine, *Pinus ponderosa*	***	F
Eastern white pine, *Pinus strobus*	***	F
Douglas fir, *Pseudotsuga menziesii*	***	F
Deciduous Trees		
Rocky Mountain maple, *Acer glabrum*	***	S
Sugar maple, *Acer saccharum*	***	S
Saskatoon serviceberry, *Amelanchier alnifolia*	**	**S**
Shadblow serviceberry, *Amelancheir canadensis*	***	**S**
Hackberry, *Celtis occidentalis*	**	F***W***
Hawthorn, *Crataegus spp.*	**	FW
Persimmon, *Diospyros virginiana*	**	FW
Crabapple, *Malus spp.*	***	F***W***
Black cherry, *Prunus serotina*	**	***S***
White oak, *Quercus alba*	***	***FW***
Swamp white oak, *Quercus bicolor*	***	***FW***
Red oak, *Quercus rubra*	***	***FW***
Chinkapin oak, *Quercus muehlenbergii*	***	***FW***

Deciduous Shrubs	**Landscape Value**	**Season**
Black chokeberry, *Aronia melanocarpa*	**	FW
Red chokeberry, *Aronia arbutifolia*	**	FW
Pagoda dogwood, *Cornus alternifolia*	**	SF
Gray dogwood, *Cornus racemosa*	**	***F***W
Redosier dogwood, *Cornus sericea*	***	***SF***
Hazelnut, *Corylus spp.*	**	***F***W
American plum, *Prunus americana*	**	SF
Nanking cherry, *Prunus tomentosa*	***	***S***
Chokecherry, *Prunus virginiana*	**	***S***F
Smooth sumac, Rhus glabra	**	***W***
Staghorn sumac, Rhus typhina	**	***W***
American elder, Sambucus canadensis	**	***S***
Snowberry, *Symphoricarpos albus*	***	F***W***
Coralberry, *Symphoricarpos arbiculatus*	**	F***W***
Arrowwood viburnum, *V. dentatum*	***	***F***
Nannyberry viburnum, *V. lentago*	***	F***W***
Blackhaw viburnum, *V. prunifolium*	***	F
American cranberrybush, *V. trilobum*	**	F***W***
Vines & Vine-like Plants		
American bittersweet, *Celastrus scandens*	**	F***W***
Virginia creeper, *Parthenocissus quinquefolia*	***	***FW***
Brambles, Rubus spp.	**	***S***
Wild grape, Vitis spp.	*	***S***F

Diseases of Annuals and Perennials Plants, continued

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evenly, and remain greenish instead of developing proper coloration.

Aster yellows is caused by a mycoplasma, a microscopic organism similar to a virus. It is transmitted between plants by the aster leafhopper, and is commonly found infecting many ornamental plants, vegetables and even weeds. Neither the aster leafhopper or the Aster yellows mycoplasma survive the winter in Nebraska. The leafhoppers migrate north each spring.

Once plants are infected, Aster yellows cannot be eliminated entirely, but it can be kept under control. Remove and destroy infected plants as soon as they are identified, eradicate nearby weeds that may harbor the aster yellows mycoplasma and leafhopper eggs. Leafhopper-infested plants can be sprayed with an insecticide containing acephate (Orthene), carbaryl (Sevin), permethrin (Eight) or bifenthrin (several).

If heavy infestations of Aster yellows are a problem in your landscape consider using plants that are resistant to the disease.

Botrytis Blight

Another disease that has been very prevalent this year is Botrytis blight, due primarily to this summer's prolonged periods of high humidity. All plant parts can be infected. Leaf symptoms include irregular tan or brown areas, especially along the major veins. Infection usually begins in the lower leaves, and heavily infected leaves may become twisted or deformed.

Flowers can also be infected, and this summer the disease was seen very commonly in the centers of coneflowers. Infection killed clusters of the fertile flowers that make up the central cone, resulting in black or brown irregular sections of dead flower cones.

Botrytis blight effects a wide range of annual & perennials plants, along with many vegetables and woody plants.

Control includes removing and discarding badly blighted plant parts, including old or infected flowers. Improving air circulation around plants may help to reduce future infections.

Verticillium Wilt

Symptoms of Verticillium wilt are usually seen first as leaf yellowing that starts in the lower leaves and progresses up the plant. Sometimes only a portion of the plant is affected initially, then the disease spreads to infect the entire plant. Plants are stunted and yellowed leaves fall. Eventually infected plants completely wilt and die.

This disease is caused by a fungus that often enters plants through wounds, but can also be spread by contaminated seeds, plants, soil and equipment. Fungi enter the plant through the roots and spread up into the stems and leaves through the water-conducting vessels in the stems. The vessels become plugged and discolored, and are often marked by brownish streaks. This plugging cuts off the flow of water to the leaves, causing then to yellow and wilt.

No chemical control is available. Infected plants should be removed and discarded. Since the fungi can persist in the soil for several years, use resistant plants in areas with a history of Verticillium infection.

Verticillium Wilt Susceptible Plants

- Aster, *Aster spp.*
- Bellflower, *Campanula spp.*
- China aster, *Callistephus spp.*
- *Chrysanthemum spp.*
- Cockscomb, *Celosia spp.*
- *Dahlia spp.*
- *Geranium spp.*
- Marigold, *Tagetes spp.*
- Peony, *Paeonia spp.*
- *Pelargonium spp.*
- *Petunia spp.*
- *Phlox spp.*
- Poppy mallow, *Callirhoe papaver*
- Rose, *Rosa spp.*
- Black-eyed Susan, *Rubeckia spp.*
- Salvia spp.
- Snapdragon, *Antirrhinum majus*
- Statice, *Limonium spp.*
- Stock, *Matthiola spp.*
- Strawflower, *Helichrysum spp.*
- Tickseed, *Coreopsis spp.*

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Drying & Preserving Gourds, continued

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dry and brown, this usually requires approximately 130 days from seed to harvest.

Harvest before the first frost by cutting the gourd's stem away from the plant, leaving 2-3 inches of stem attached. Handle the gourds carefully at this point to avoid scratching or bruising of the skin that could lead to rot during the drying process.

Wash the gourds with a mild borax solution and dry them with a soft cloth. This will help prevent diseases that cause spots on the skin. The first stage of drying will take about a week, during which the outer skin hardens and the color sets.

Hang the gourds or place them in a single layer on a table or screen, not touching, in a warm, dry, well-ventilated place. If the gourds are place on newspaper, the papers should be changed daily. Any fruits developing soft spots or shriveling should be discarded.

Internal drying is the second stage and will take at least 3 to 4 weeks for small gourds. Large gourds, like bird-house gourds, will take much longer. Keep the gourds in a warm, dry, well-ventilated place and periodically turn them to discourage shriveling and promote even curing. Providing warmth during the internal curing process will accelerate drying and discourage decay.

Speckled swan gourds may take up to a year to fully dry.

Gourds may become covered with a mold or crust at this time. This is normal, so those that develop crusting should be kept. When adequately cured, the gourds will be light in weight and the seeds will rattle inside the gourd.

Finally, the gourds should be washed in warm water, and steel wool used to remove any mold or crust. Allow the outer skin to dry completely, then the gourds can be sanded and polished or waxed.