

The background of the cover is a photograph of a field of Echinacea flowers. The flowers are in various colors, including orange, yellow, and pink, with dark brown centers. They are growing in a field with green foliage. The sky is blue with some light clouds.

THE IOWA **Horticulturist**

{THE NEWS MAGAZINE FOR GARDENERS}

Summer 2005
\$5⁰⁰

Ecstatic for Echinaceas
The Coneflower Craze

Monarch & Mexican Sunflower
Made for Each Other

Drip Irrigation
For the Home Garden

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Coneflowers blooming in the trial garden at the Chicago Botanic Garden. The tall orange flowered *Echinacea* in the center of the photo is the original plant from which Orange Meadowbrite, was selected. The news of this novel plant has traveled around the world faster than any new horticultural introduction in the last 10 years. Cover photo by Linda Bryant.



THE IOWA Horticulturist

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State Horticulturist's Corner

Trained enumerators representing the Iowa Agricultural Statistics Service interviewed over 4,500 consumers, who represented 161 different markets. Because consumers may spend different amounts of money at different times during the season, the interviews were done early, mid, and late season to ensure greater accuracy. Consumers reported spending a total of approximately \$20 million. Overall, however, \$31.5 million of gross sales and \$12.2 million of personal income were directly or indirectly related to farmers' market activity. In addition, over 140 full-time employment positions within the general economy were indirectly attributed to farmers' market activity.

Consumers

According to the study, more than 55,000 consumers and 1,600 vendors got together at weekly market sessions, with over 135,000 consumers visiting the market at some point during the season. Consumers, who averaged 51 to 65 years of age, purchased \$11 to \$20 per market visit. Eighty-six percent reported buying fruits and vegetables, and 42 percent purchased baked goods. Customer loyalty was very high as the average customer made approximately 13 market visits per season, which also indicates that consumers are satisfied with the shopping experience. Surprisingly, 72 percent of all market sales were generated by the five urban areas of Waterloo, Sioux City, Davenport/Bettendorf, Cedar Rapids, and Des Moines.

Vendors

Market managers distributed a paper survey to regular market vendors at the end of the season to obtain accurate income and expense information. Surveys were returned by 780 vendors, or approximately 57 percent, representing 116 different markets. Notably, vendors fell within the same average range as consumers, 51 to 65 years of age. Vendors reported averaging 2 markets per week, attending markets between 25 and 49 days per season, and participating for an average of 8 years. As mentioned above, vendors reported that 49 percent of their income was derived from produce and 21 percent from baked goods.

Summary

Since information from the study revealed that the average age of both consumers and vendors is 51 to 65, future marketing opportunities and challenges are obvious. Proponents of farmers' markets should target younger Iowans and their families to shop at the markets and should increase their efforts to train and recruit younger growers. Also, since produce and baked goods dominate the sales at markets, there appears to be ample opportunity to increase the product mix offered.

Clearly, farmers' markets have become "the place" for rural producers and urban consumers to come together to exchange goods and information.

By Mike Bevins, State Horticulturist
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From the Editor's Desk

You can un-mark your calendar now! I'm back. I can't let my wife Pam write this column twice in a row. You might start liking her writing better than mine. This time, I too have some important words of wisdom to share.

Summer, the word alone brings back fond childhood memories. Long, hot days to let my imagination and my legs run wild, exploring the woods behind our house, listening to cicadas, hunting bullfrogs, and discovering the magic of nature.

As an adult, I need to remind myself to take time out from my busy schedule to enjoy things like nature, gardening, and family. It's too easy to become sedentary and reliant on high-tech conveniences.

These days, many children have the convenience of video games to play indoors or while traveling, prescription drugs to ease behavioral problems, and fast food to eat on the run. Obesity and Attention Deficit Disorder are epidemics!

Our society is paying a price for all this convenience. It all seems to be going to Hades in a handbag! What can we do?

If there is a solution, gardening is part of it. Adult gardeners must take active rolls to get children hooked on gardening at an early age. That should be easy because kids just naturally like to play in the dirt. It's fun! Fun things make us laugh and laughter makes us healthy.

Eating fresh fruits and vegetables from our gardens will also make adults and children healthy, happy, and wise. It worked for my wife.



Dr. Eldon Everhart, Editor

A letter from Gary Twedt **President of the Iowa State Horticultural Society**



In this issue of *The Iowa Horticulturist* you will see a new section listing the 23 horticulture affiliates that help make up the Iowa State Horticultural Society (ISHS). You will also find the complete listing of the Executive Board of the Iowa State Horticultural Society. Some of the ISHS board members actually help produce *The Iowa Horticulturist* magazine with countless volunteer hours. Dr. Eldon Everhart has been editor for this magazine for many years, and solicits the articles and gathers the information for the popular horticulture calendar events section. *The Iowa Horticulturist* is one tool that the ISHS uses to strengthen our mission to keep you abreast of current events, educate, and promote communication to all horticulture enthusiasts that represent the vast diversity of horticulture within our state's borders. The ISHS is committed more than ever to promote your specific interests in horticulture, the horticulture associations that fall within the umbrella of the Iowa State Horticultural Society, and the horticulture industry in general. Whether it is lauding your efforts on capital hill or providing information or education to the hobbyist gardener, the ISHS strives to communicate the importance of horticulture to all Iowans. In the fall, our annual awards luncheon is devoted to recognizing the horticulturists making a difference in their community, school/college, or organization. In the winter, the ISHS coordinates the All Iowa Store at the Des Moines Home and Garden Show to promote the different horticulture vendors that produce goods throughout our state. The quality of these items is unsurpassed anywhere in the United

States, and they can be found across our state, sometimes right in your own neighborhoods. We are truly blessed with some of the finest horticultural products nurtured from the richest soil in the world.

This past winter, our new web site was launched. You may find it by going to www.iowahort.org. At this site, you will find information on what the Iowa State Horticultural Society is all about and also give you insight to other areas of horticulture interest. There are also many sections on this web site on how you can help support the Iowa State Horticultural Society in a variety of ways. We deeply appreciate our loyal subscribers to our magazine, and you can help the ISHS even more by becoming a Hall of Horticulture supporter. *The Iowa Horticulturist* magazine has a yearly subscription fee of \$15. For \$10 more or \$25 per year, your name will be added to the Hall of Horticulture section in both the magazine and the web site as a supporter of Iowa Horticulture and the Iowa State Horticultural Society.

A free complimentary issue of the summer issue of *The Iowa Horticulturist* is going to be given to each president and affiliate representative of the 23 ISHS associations. Our hope is for each association to help promote this magazine to their respective membership, so we can continue the level of excellence found in this award winning quarterly.

Something that might be of special interest to our members who market horticulture related products and services is our new Horticulture Finder section at our ISHS web site. For \$10

a year, we will list your name, address, telephone, and link your e-mail and web site in the Horticulture Finder section. You can go to the Horticulture Finder tab at the ISHS web site and download the form, or contact me for further details. My day job is as a golf course superintendent/manager of an 18 hole golf course. Members of my profession are always looking for vendors to supply horticulture related products on the golf course. This might provide access for businesses to many new areas of diversified horticulture sectors. We also encourage advertising in our magazine from vendors throughout the vast horticulture entities that fall within the ISHS.

Even though our loyal subscribers to our magazine, organization members within ISHS, and the horticulture industry represent many unique facets of horticulture, we all share a common bond. A bond horticulturists share universally, includes the passion to nurture plants through the cards Mother Nature deals us. A passion that drives each one of us to seek out knowledge that helps us work closer with the relationships of plants and the environment. Our horticultural passions collectively improve the beauty, landscape, environment, education, and economic vitality of Iowa for Iowans. It is our hope that *The Iowa Horticulturist* provides one link to this bond that binds our common goal to make Iowa a better place for us and our children.

Respectfully,
Gary Twedt
President of the Iowa State
Horticultural Society

Letter to the Editor

Dear Dr. Everhart,

I just wanted to thank you for a really great magazine! *The Iowa Horticulturist* is quality all the way. I appreciate the highly-detailed color photos as well as the black and white historical photos. Then there are the articles – always new ideas as well as ideas that were implemented in the 1800s that we often forget about.

My company has over 3,000 customers in central Iowa. Many of them have asked me if I write articles for the magazine. I tell them “once in a while,” as Dr. Everhart was my college professor.

Finally, and most meaningful to me, the editor of this magazine (Eldon Everhart) is the most knowledgeable and caring friend one could ask for. This probably explains the success of this magazine. Thanks Eldon.

Sincerely,

Larry Ginger, Owner
(and graduate horticulturist)
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Send your comments to Dr. Eldon
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The editor reserves the right to edit,
shorten or refuse to publish any of the
letters or e-mails received.

To The Point

TREES MAY REDUCE LIVESTOCK ODORS

Monitoring began in April 2005, to find out if trees, shrubs, and other perennials planted around an Iowa poultry facility near Eagle Grove, Iowa, could reduce odor and dust. The three-year study, by Iowa State University, is funded by a \$440,000 grant from the U.S. Department of Agriculture. For more information go to the Internet web site at: <http://www.ag.iastate.edu/aginfo/news/2005releases/odor.html>.

400,000 INJURIES RELATED TO GARDENING

Each year, emergency rooms in the United States treat more than 400,000 garden-tool-related injuries, according to the Consumer Product Safety Commission. The American Society for Surgery of the Hand lists the following precautions gardeners should take to help prevent injuries.

Wear gloves to protect your skin from fertilizers and pesticides as well as bacteria and fungus in the soil. When exposed to soil, even the smallest cut or lesion increases the risk of major infection. Leather gloves give protection from thorns, rodents, insect bites, poison ivy, and other skin irritants. Follow the label directions and wear unlined, rubber gloves when mixing or applying synthetic or organic pesticides.

Rotate tasks every 15 minutes to avoid over use of the same muscles. Repetitive prolonged, motions can irritate skin, tendons, or nerves.

Use a shovel, trowel, rake, or power tool rather than your hands when digging. Sharp objects and debris in the soil can cause cuts.

Don't use tools with finger grips unless the grip fits your hands. They usually fit only one size correctly. The fingers of people with larger hands must overlap, causing pain

and soreness. People with smaller hands must spread their fingers to match the grooves, causing reduced grip strength, which requires more pressure to keep control of the tool.

Keep your wrists straight when working. Tests have shown that up to 25 percent of grip strength is lost when wrists are bent.

For more information, visit the Internet at: www.HandCare.org.

(From American Society for Surgery of the Hand, 5/3/2004)

2,4-D IS WIDELY USED HERBICIDE

An economic evaluation by the U.S. Department of Agriculture (Report 1-PA-96) concluded that if 2,4-D was no longer available, the cost to the U.S. economy in higher food production costs and weed control expense would total \$1.7 billion annually.

Since being first registered in the United States in 1947, the herbicide 2,4-D has become one of the most widely used agricultural herbicides in this country and worldwide. It is used on many crops such as wheat, barley, rice, soybeans, potatoes, sugar cane, pome fruits, stone fruits and nuts. It is also a component of herbicides used to protect turf grass from weeds and federally protected areas from invasive species.

The original patent on 2,4-D was issued in 1945 to Dr. Franklin D. Jones, a plant physiologist. Dr. Jones was working with the naturally occurring plant auxin, indole acetic acid (IAA). IAA is present in all plant matter and humans consume it daily whenever we eat fruit, vegetables and cereals. In an effort to work with a more chemically stable, auxin-like compound, Dr. Jones included 2,4-D in his experiments. The chemical structure of 2,4-D and IAA are very similar.

(From Task Force on 2,4-D Research Data, <http://www.24d.org/>)

Monarch & Mexican Sunflower

Made for Each Other

By Nancy Newlon
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To me there is nothing more dazzling in my garden than a Monarch butterfly sitting on a flower of Mexican sunflower, *Tithonia rotundifolia*. The dog days of summer are set ablaze with their sizzling orange flowers. The bright flowers attract many kinds of butterflies but none compare in beauty to the Monarch.

There are about 10 species in the genus *Tithonia*, a member of the composite or sunflower family. All of them are native to Mexico and Central America, but *Tithonia rotundifolia* is the only one cultivated to any extent.

'Torch' is a cultivar of *T. rotundifolia* that has a vibrant orange, velvety flower with a shape that reminds me of a single-flowered daisy. 'Torch' was chosen as an All-America Selection winner in 1951 and it is still popular. It is an annual which requires very little care and seems to like the heat. The more

I remove the spent flowers, the more it blooms. 'Torch' grows about 2 to 4 feet tall, perfect for smaller gardens. Although the directions say that it might need to be staked, I have never staked it and have had no problems. Basically pest free, not even deer find the hairy leaves worth eating.



Other cultivars of *Tithonia rotundifolia* include yellow flowered 'Aztec Sun' (2 to 4 feet tall), orange flowered 'Goldfinger' (6 to 8 feet tall), and 'Fiesta Del Sol' (2 to 3 feet tall), an All-America Selections Winner in 2000.

During the first weeks of September, I can count on hundreds of Monarchs visiting my flower beds. As they sit on the Mexican sunflower sucking the sweet nectar, I think about the long journey they have ahead of them as they migrate for the winter to Mexico. For the last four years I have

participated in the University of Kansas' Monarch Watch program as they track the Monarch to its winter resting place in Mexico. With my butterfly net, I capture a Monarch, attach a tag no bigger around than a pencil eraser to its wing and send the Monarch on its way. From the Mexican sunflowers in my flowerbed to El Rosair, Mexico, it is 1,485 miles. I know the mileage is correct because

in 2003 one of my tagged Monarchs was found in El Rosair.

This spring when the danger of frost has passed, plant some Mexican sunflower seeds and come summer you will be rewarded with a butterfly and flower meant for each other – the Monarch and the Mexican sunflower.

Drip Irrigation for the Home Garden

By Vickie Pondell Hines

If you think irrigation systems are only for large estates, companies, and public plantings, you are wrong. They are useful in many home landscapes and gardens.

One of the most common systems is known as drip irrigation because it releases small amounts of water, one drop at a time. It is easy to install, inexpensive, and efficient.

WATER CONSERVATION

Drip irrigation has many benefits. In fact, it is the preferred irrigation system used by commercial fruit and vegetable growers, landscapers, and nurseries.

Today it is even more important to conserve water to reduce your water bill and to survive water restrictions. This watering system is an effective way to reduce water consumption. Water goes directly into the root zone, the entire area where roots are growing in the soil. Water loss by evaporation is minimal.

With overhead irrigation such as a sprinkler system or hand watering, the water is sprayed into the air and up to 50% of the water is lost to evaporation before it reaches the soil. Water also gets on the leaves increasing the incidence of foliage diseases. This is because wet foliage does not always have a chance to dry out and the water on the leaves is a breeding ground for fungus and bacteria. It is especially important to keep irrigation water off plants such as roses that are prone to blackspot disease.

Drip irrigation also conserves water by targeting specific plants and reducing the access that weeds have to water. It can deliver water to even the most difficult areas to water such as steep banks where overhead irrigation is likely to runoff.

Drip irrigation is inexpensive and requires only a few parts. It is easy and quick to install and does not require trenching like a sprinkler system. Professional installation is available, but it is so simple to put in that anyone can do it.

Higher quality plants are grown with drip irrigation. With the intense pressure of a garden hose, plants are often crushed with top watering. This system eliminates

unsightly garden hoses that are a tripping hazard. Another benefit of drip irrigation is it is versatile. It is great for flower gardens, fruit and vegetable plantings, and containers. However, sprinkler systems should be used in large areas such as lawns. A drip irrigation system can be incorporated with a sprinkler system.



REDUCED LABOR

Drip irrigation saves on labor. Instead of dragging the garden hose around, all your plants can be watered by simply turning the water source on. Easier yet, the system can be placed on a timer. The timer will start watering the plants whether you are at home or on vacation. With a drip irrigation system, plants need water less often, but for a longer time. This encourages deep root growth. Do not let puddles form when irrigating. This is a sign of excess water.

PLANNING & IMPLEMENTING

The first step to implementing a drip irrigation system is to make a plan. There

are some considerations one has to make such as the placement of the irrigation system, the watering needs and placement of the plants, the water source that is to be used, and if the system should be controlled by hand or automatically. After your plan is drawn up, you need to buy a few simple parts. A basic drip irrigation system consists of a water source, control valve, tubing, filters, emitters, and stakes.

The control valve can be a manual valve, which is the same as any shutoff valve in the home, or an automatic valve with a timer. Each water valve is considered a zone. If you have groups of plants with different watering needs, each of these groups will require their own zone. Tubing is needed to supply water to the desired areas. Tubing is typically one-half or one-quarter inch diameter. One-half inch tubing is for the main supply line and the smaller tubing is for the branches. The tubing can be placed on top of the soil or buried beneath. Usually the tubing is black or brown. These unobtrusive colors blend well with the soil color. The tubing should be staked down to reduce movement. The tubing has small holes called emitters. Emitters discharge the water. The emitters should be placed directly at the base of the plant. Tubing can be purchased with the emitters in place or they can be manually punched into the tubing.

To prevent the system from clogging, filters should be used and the system should be periodically inspected. Filters should be placed in the tubing near the water source.

With little time, effort, or money, your drip irrigation system will be in place. It will be paid off by the savings in the water bill and reduced weed and disease problems. Most importantly, you will spend less time watering your plants and more time enjoying the beauty of your garden.

ABOUT THE AUTHOR

Vickie Pondell Hines has a degree in horticulture and is a Certified Nursery and Landscape Professional.

Flemings' Hardy Hibiscus

The Fleming Brothers Legacy to Midwest Gardens

By Randy Wolf, Production Manager
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Fifty years ago, the Fleming brothers, Bob, Jim, and Dave (now deceased), began hybridizing perennials to better suit the harsh conditions of the Midwest. In a small greenhouse in Lincoln, Nebraska, near East Campus of the University of Nebraska, the brothers developed numerous cultivars of some popular garden perennials. Their work included breeding *Ajuga*, chrysanthemums, *Dianthus*, and *Penstemon*.

You may even be acquainted with some of their early work as they introduced *Dianthus* 'Spotty' and *Ajuga* 'Burgundy Glow,' both of which are still grown by the thousands for the landscaping and gardening industry.

Early on, the brothers decided that any plant worthy of their name should be able to flourish in less-than-perfect growing conditions. All Midwest gardeners know the vagaries of Mother Nature here on the prairie and we all have had failures due to late and early frosts, too much or too little precipitation, extreme cold, open winters, wind, ice storms, and the like. The Fleming brothers set out to develop perennials that can be considered the best of the best in hardiness, pest resistance, and flower production.

One of the perennials that the Flemings worked on the longest

is the hardy hibiscus. Starting out with *Hibiscus moschuetos*, commonly known as swamp rose mallow or swamp hibiscus, they began hybridizing it with many of the hardiest hibiscus species. In the end, they developed a fantastic line of hibiscus cultivars with many other good garden traits that are hardy in USDA Zone 4 (-30 degree Fahrenheit). Their hibiscus cultivars are more compact. They are a better size for small gardens and more able to handle windy conditions.

Another trait that to date no one has duplicated is the development of red or burgundy foliage. Several of the cultivars developed by the Flemings have varying shades of red pigment in the stems and leaves including some, like 'Kopper King' and 'Crown Jewels,' that are deep burgundy. This provides color during May and June before the hibiscus flowers open.

As for hibiscus flowers, it is hard to find hibiscus with larger blooms than the Flemings' selections. Nine and ten inch flowers are not uncommon on most of their cultivars with some up to 12 inches in diameter. Another plus is the overlapping petals which give the bloom even more flower power.

As with all hardy hibiscus plants, these cultivars are slow to break dormancy in the spring. Mark them well when planting and be patient in the spring. Whenever my clients call to tell me that one of their hibiscus plants didn't survive the winter I tell

them to call back around the first of June, by then the plants have usually greened up. During the long days of summer, they begin to grow very quickly, almost as fast as corn.

Hardy hibiscus plants do need plentiful water for the first couple of years in the garden. After that, they are fairly drought tolerant. With that said, don't be surprised to see them excel in wet areas of your garden. One thing they don't handle well is wet heavy soil right after planting.

Don't be afraid to trim the stems back during the summer. This will cause the plant to branch out, but it will delay blooming for a couple of weeks. Pruning will also increase the number of flowers per plant.

Early in the 1990s the Flemings introduced 'Kopper King,' 'Old Yella,' 'Plum Crazy,' 'Fantasia,' and 'Fireball.' These cultivars have proven to be standards of the nursery industry. Now another generation is available to gardeners. New cultivars such as 'Crown Jewels,' 'Robert Fleming,' 'Dreamcatcher,' and 'Eruption' are coming on the market giving us very deep reds and hot pink colors as well as even more compact plants. Just give them some sun and some time and they will respond!

More information can be found at www.flemingsflowerfields.com or www.seedsoflifenursery.com.

Prairie Wildflower Stars:

Poppy Mallow – *Callirhoe*

By Harlan Hamernik
Bluebird Nursery
519 Bryan Street
Clarkson, NE 68629

Purple poppy mallow or wine cups, *Callirhoe involucrata*, has fascinated me for over a half century with its strikingly attractive and deliciously fragrant magenta flowers. This Great Plains native is a tough xeric plant with thick, deep growing roots. The edible, parsnip-like roots helped many people survive the extended periods of drought in the “dirty thirties” and many times before.

I first began to appreciate the virtues of this long time resident of prairies while exploring for plants in old country cemeteries in which it persisted even with an occasional mowing. I could then visualize its flashing beauty, even before the graveyard was established, and see the smile on the cowboy’s face when it was called “Cowboy’s delight.”

“If it grows in Nebraska, it’ll grow anywhere.” This colorful summer-blooming 4 to 8” blanket, 3 to 6 foot wide, with nicely textured foliage, can be a companion to many native flowering perennials and grasses in large gardens and especially public gardens, parks, parkways, and roadsides. It can even stand some foot traffic.

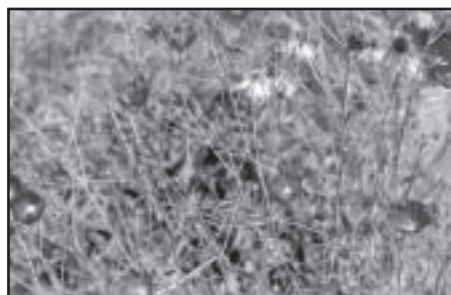
These USDA Zone 3 plants are adaptable to all kinds of well-drained situations and would appreciate a sunny spot, but can stand a little shade.

It was my privilege and pleasure to name an incredible white form ‘Logan Calhoun’ after the Native American plantsman who found it.

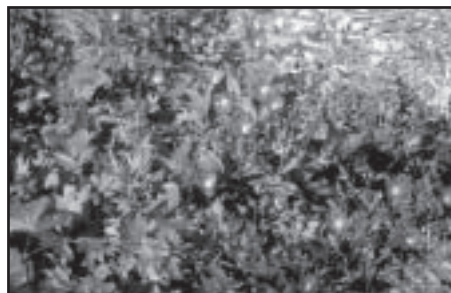
Another outstanding plant is *C. involucrata* var. *tenuissima*, with its lacy foliage and attractive white-centered pink blossoms.



Callirhoe involucrata



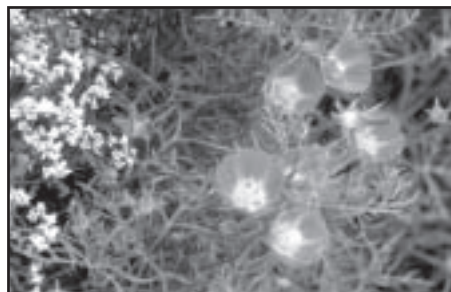
Callirhoe digitata



Callirhoe bushii



Callirhoe tenuissima



Callirhoe tenuissima

Kelly Kindscher in *Edible Wild Plants of the Prairie* says the plains native people dug and stored these thick white roots, which taste somewhat like a sweet potato, for use in winter. It is said to taste even better than prairie turnip, *Psoralea esculenta*. The leaves, too, were used to thicken soups. That’s easy to understand if you know that callirhoes and okra are in the same plant family, the mallow family, Malvaceae.

According to *Uses of Plants by Indians of the Missouri River Region* by Melvin R. Gilmore, the plant was chewed and applied to sores and wounds as a healing salve. The dried roots were burned and the smoke inhaled to treat “colds in the head.”

Two other species are delightful charmers in any sunny garden. They are the nearly extinct in the wild *C. papaver bushii*, with its more upright 15 to 18” habit, with hastate, even maple-like leaves and brighter cerise-red flowers, and *C. digitata*. Obviously *digitata* refers to digits or the fingers of one’s hand and describes the narrow blue-green, finger-like leaves on this 30 to 50 inch tall plant that loves to grow through other perennials, shrubs and grasses and surprise everyone with its striking cerise-magenta blossoms that resemble fireworks.

The entire genus is easy; even I can grow them, if you remember to keep them out of a continuous wet situation. They despise the lawn sprinkler on a clock. The genus *Callirhoe* honors the daughter of a God in Greek mythology. I recall that *Calli* meant “beautiful” in ancient Greek. The species name refers to the three bracts under the petals.

“Be suspicious of weed books that include this and other beautiful native wildflowers.”

Hortline

Questions & Answers

By Richard Jauron
Iowa State University Extension
Reiman Gardens, Ames, Iowa 50011

Hortline is a service of Iowa State University Extension that assists Iowans with gardening questions. Assistance is available by e-mail: hortline@iastate.edu or telephone: 515-294-3108 from 10 a.m. to noon and 1 to 4:30 p.m., Monday through Friday.

Q. When is the best time to prune forsythia?

A. The forsythia's chief ornamental feature is its bright yellow flowers in early spring. Since these shrubs produce blooms only on the previous season's wood, they should be pruned immediately after flowering. Pruning the shrubs from mid-summer to late winter will drastically reduce flowering in spring.

The oldest stems should be pruned out down to the crown leaving no stubs. This thinning may be done over a 2 to 4 year period to gradually renew the shrub. Also, head back any stems that are out of proportion with the rest of the shrub.

Q. What is the correct mowing height for a lawn in summer?

A. Kentucky bluegrass and other cool-season grasses thrive in the cool weather of spring and fall. Hot, dry conditions in summer are stressful for cool-season grasses. Kentucky bluegrass lawns should be mowed at a height of 3 to 3 ½ inches during the summer months. Bluegrass lawns should be mowed at a height of 2 ½ to 3 inches in the spring and fall. The additional leaf area during summer shades and cools the crowns of the turfgrass plants. The higher mowing height also provides more food-producing foliage and promotes deeper root growth.

When mowing the lawn, never remove more than ⅓ of the total leaf area at any one time. Removing more than ⅓ of the leaf area severely injures the turfgrass plants and reduces their ability to withstand additional environmental stresses.

Q. What is the correct way to plant sweet corn in the home garden?

A. Sweet corn performs best in fertile, well-drained soils in full sun. Standard sweet corn (su) varieties may be planted in late April in central Iowa. It's generally recommended that sugar enhanced (se) varieties be planted 1 week later than standard sweet corn varieties. The seeds of shrunken-2 or supersweet (sh2) varieties germinate poorly when soil temperatures are below 65°F. As a result, shrunken-2 varieties should not be planted until mid-May in central Iowa. For a continuous supply of sweet corn, plant early, mid-season, and late varieties or plant every 2 or 3 weeks. The last practical planting date for early varieties is July 1.

Sow seeds at a depth of 1 inch in heavy soils. In light sandy soils, the planting depth may be 2 inches. Space the seeds 8 to 12 inches apart in rows 2 ½ to 3 feet apart. Sweet corn may also be planted in "hills." Sow 4 to 5 seeds per hill with approximately 3 inches between seeds. Hills should be spaced 2 ½ feet apart with 2 ½ to 3 feet between rows.

Sweet corn is wind pollinated. To insure good pollination and ear development, plant several short rows or blocks rather than 1 or 2 long rows. Inadequate pollination results in poorly filled ears.

Since different types of corn can cross-pollinate and contaminate one another, they should be isolated from each other. All sweet corn types should be isolated from field corn, popcorn,

and ornamental corn. Shrunken-2 varieties must also be isolated from sugar-enhanced and standard sweet corn varieties. Cross-pollination between the sh2 and se or su varieties will destroy the quality of both. It is not essential to isolate sugar-enhanced varieties from standard sweet corn.

Isolation can be achieved by planting the different types at least 250 feet from one another and by avoiding prevailing winds. Another method is to stagger planting dates or to select varieties that mature at different times. A minimum of 14 days should separate the tasseling times of the different types.

Q. When can I plant cannas outdoors?

A. Cannas are tender perennials that are normally grown from rhizomes. Canna rhizomes can be planted directly outdoors after the danger of frost is past (mid-May in central Iowa) or started indoors in large pots in March. The rhizomes should be planted 4 to 5 inches deep.

Q. When can I harvest cabbage?

A. The harvest of cabbage may begin when the heads are firm and the size of a softball. Mature cabbage should be harvested when the head is solid and tight, before they crack or split. Splitting is caused by excessive water uptake; the resulting pressure splits the head. Splitting of mature heads may be prevented by pulling the plant upward and gently twisting. Some of the roots will be broken, thereby reducing water uptake.

Cabbage may be placed in a perforated plastic bag and stored in the refrigerator. A cool, moist (32°F, 98 to 100% relative humidity) storage site is required for prolonged storage of up to 3 to 4 months.

The Garden Calendar



By Dr. Cynthia L. Haynes

Assistant Professor, Iowa State University, Department of Horticulture, Ames, Iowa 50011
telephone: 515-294-4006, e-mail: chaynes@iastate.edu

JUNE

Lawn

During dry weather, irrigate lawns early in the morning to allow the foliage to dry by afternoon. Grass that remains wet into the evening is more susceptible to disease. Watering in the morning will also reduce the amount of water lost to evaporation.

Fruits

Immediately after the last harvest of June-bearing strawberries, renovate the beds. This will encourage new, more vigorous plants during the rest of the growing season. For more information on renovation of strawberries, ask for a copy of Growing Strawberries (PM 717) from your local county ISU Extension office.

Serviceberry, Juneberry, or Shadblow (*Amelanchier*) are producing tasty fruits this month. Try to beat the birds to a few of the blueberry-like fruits for muffins, pies, or pancakes!

Trees and Shrubs

Apply 2 inches of mulch around the base of trees and shrubs. This will help conserve moisture and prevent weed competition. The mulched zone around the base of trees and shrubs will also prevent lawn equipment such as mowers and weed eaters from damaging trunks. (RG 209, SUL 12)

Prune spring blooming shrubs like lilac and forsythia early this month. They will set next year's flowers late this summer and fall. For more information on pruning shrubs, check

out Pruning Ornamental Shrubs (PM 1958) from your local county ISU Extension office.

Consider Hydrangeas for your landscape. There are several species of hydrangeas that perform well in Iowa gardens. 'Annabelle' Hydrangea (*Hydrangea arborescens*) has large snow-ball white flowers starting in June. Pee Gee Hydrangea (*Hydrangea paniculata* 'Grandiflora') has cone-shaped white flowers in July and August that fade to pink. Pee Gee is often sold in small tree forms. A new Hydrangea is Endless Summer™ which has pink or blue, globe-shaped blooms in late summer. Unlike other *Hydrangea macrophylla* types, Endless Summer™ blooms on new growth and the flower buds are therefore not damaged by our winter temperatures. For more information on Hydrangeas, check out Deciduous Shrubs (PM 1943).

Flowers

Fertilize and water annual flowers in containers regularly. Plants in containers in sunny sites may require watering every day for best performance. To reduce watering chores, consider planting more drought tolerant plants like rose moss (*Portulaca*). Drought Tolerant Plants (PM 1932) from your local county ISU Extension office offers other planting ideas. Another option is including water absorbing crystals into your potting soil at planting. This will help keep the soil moist

longer in containers. Ask for these crystals at your local garden center or nursery. While they will not eliminate watering chores for containers, they help make watering easier.

Vegetables

Stop harvesting asparagus and rhubarb in early June.

Water the vegetable garden when the weather is dry. Most vegetables need 1 inch of water per week to perform at their peak. Regular watering will also help prevent problems with blossom end rot on tomatoes. Help to conserve water by mulching around vegetables. Straw, shredded newspapers, or rotted grass clippings may be used as mulch in the vegetable garden.

Start staking or caging indeterminate tomato plants this month. This will help discourage foliar diseases.

Continue to stagger plantings of beans, beets, radishes, and sweet corn for extended harvests into late summer.

Herbs

Begin harvesting leaves for cooking or drying before flowering. The peak flavor of most herbs is prior to flowering.

Houseplants

Place houseplants outside in sites with partial to full shade. Pots can be sunk partially into the ground for stability. Remember to water and fertilize the plants regularly.

JULY

Lawn

Raise the lawnmower height early this month. This will allow the lawn to better adapt to the dry, hot conditions that often occur in July and August.

Fruits

Harvest raspberries and blueberries as they ripen.

Remove the suckers at the base of apples and other fruit trees. Cut the sucker off at or below the ground level. Do not apply herbicides to the suckers since this could damage the tree.

Trees and Shrubs

Water newly planted trees and shrubs as needed. They will need frequent attention until their root systems are established.

Roses

Continue to water, fertilize, and deadhead hybrid tea roses through July and August. For more information on rose care, download a copy of Caring for Roses in Iowa (RG 310) from www.extension.iastate.edu/pubs.

Flowers

Prune back leggy annuals early this month. This will encourage new growth, branching, and ultimately more compact plants. Don't worry – you will be enjoying new blooms on fuller plants in only a couple of weeks!

Enjoy all the flowers blooming this month in the garden. Collect a few stems for vases to enjoy indoors. Harvest a few blooms for drying or pressing. Or simply take pictures of the flowers and garden. You can show off your photographs to friends and neighbors now and during the winter.

Vegetables

This is the month for harvesting. Beans, beets, carrots, lettuce, summer squash, onions, peppers, and even potatoes should be ready to harvest by the end of the month. Tomatoes might not be ready until August, but they are coming! Regularly inspect the plants

in the vegetable garden. Plants like beans, cucumbers, and summer squash will need to be harvested a minimum of 2 or 3 times per week. Frequent inspections will also catch pests like tomato hornworm that can damage plants quickly.

Houseplants

Wash houseplants with soapy water while they are outdoors. This will remove the dust and grime that built up on the plants during the winter. While washing, inspect the plants for insects or disease.

AUGUST

Lawn

If you need to seed a new lawn or bare patches in an existing lawn, mid to late August is the ideal time! A few tips for germinating lawn seed: 1) make sure the seed is in good contact with the soil, 2) cover lightly with straw to keep the seed in place, 3) water regularly (daily if needed) to keep the seed and soil moist, and 4) be patient – some seed may take a couple of weeks to germinate. For more tips get a copy of PM 1072 from your local county ISU Extension office.

Flowers

Divide peonies and irises if needed. Replant as soon as possible. Be sure to water and mulch after planting.

Trees and Shrubs

This is a good time to plant evergreen trees and shrubs. Make sure to select the right plant for your site. Proper planting depth is also crucial to long term survival.

Fruits

Pears should be ready to harvest in late August and early September. Pears are ready to harvest when their color changes to a lighter green.

Vegetables

Plant seeds of lettuce, spinach, and radish for harvest in fall. These plants don't require much space in the garden and are easy to grow.

Potatoes and onions are ready to harvest when the tops are yellow and starting to die.

When harvesting bell peppers, it is best to allow a few to stay on the plants until they change colors. Many bell peppers will eventually turn yellow, orange, or red.

Tomatoes should be abundant this month. Remember that excess tomatoes can be frozen or canned for use in the winter months.

If you are overrun with vegetables this month, consider donating some of your excess to a local food pantry or mission.

More Information

The Horticulture and Home Pest Newsletter is now on the Internet. This is a great source of information on what's happening in the garden. With 26 issues per year, you will always be "in the know." To check out the current issue, visit the following web site: <http://www.ipm.iastate.edu/ipm/hortnews/>.

Want to learn more about gardening? Now is the time to sign up for the Master Gardener Program. Check with your local county ISU Extension office for more information.

Garden Publications: Want More?

Even with lots of ISU Extension publications available to Iowa gardeners, we always miss a few topics. So here is your chance... What do you think we should write more about? Drop me a list of topics you want more information about.

Send your comments to:
Iowa State University,
Department of Horticulture
Attention: Cindy Haynes
Ames, IA 50011

Or e-mail me at:
chaynes@iastate.edu

Calendar of Events

JUNE

Jun 11 – Des Moines Rose Soc. Sec., Rosseanbrodeen@aol.com, 515-282-1122

Jun 11 – Garden Tour, Indianola, eventsmgr@crosspaths.net

Jun 11 – Garden Walk, Muscatine, bobowen@iastate.edu, 800-992-0894

Jun 11 – God's Grand Garden Walk, Amana Colonies, 800-579-2294, info@amanacolonies.com

Jun 11 – Nature Walk for Kids, Brenton Arboretum, Dallas Center, kay@thebrentonarboretum.org, 515-992-4211

Jun 11 – Plant Sale & Gardening Tips, Amana Colonies, 800-579-2294, info@amanacolonies.com

Jun 11 – Post-set Vineyard Care, Thurman, 712-482-3029, eli.bergmeier@goldenhillsrscd.org

Jun 11 – Summer Slam – School's Out Party for Kids & Families, Des Moines Botanical Center, 10 a.m. to 4 p.m., 515-323-6290

Jun 11-12 – Flower Celebration, Amana Colonies, 800-579-2294, info@amanacolonies.com

Jun 12 – Water Gardens Tour, Cedar Rapids, 319-366-3313 or -1170, mmiller@f2online.org

Jun 16 – Tree Walk, Charles City, xfloyd@iastate.edu, 641-228-1453

Jun 17 – Woodlands Field Day, Iowa Falls, 641-648-4850, darwinm@iastate.edu

Jun 17-18 – Flower Show, Federated Garden Clubs of Iowa, Madrid, 515-232-5110, srgossman@aol.com

Jun 17-19 – Woodlands Field Day, Iowa Falls, 641-648-4850, darwinm@iastate.edu

Jun 17-19 – Rose Festival & Flower Show, Dubuque Arboretum & Botanical Gardens, 563-556-2100

Jun 18 – FGCI Annual Meeting & Flower Show Iowa Arboretum, Madrid, srgossman@aol.com, 515-232-5110

Jun 18 – Garden Tour, Indianola, eventsmgr@crosspaths.net, 515-961-6269

Jun 18 – Rose Festival, Reiman Gardens, Ames, 515-294-2710, reimangardens@iastate.edu

Jun 18 – Grape Field Day, Lewis, gloria.lyman@goldenhillsrscd.org, 712-482-3029

Jun 19 – Trees of Merit, Brenton Arboretum, Dallas Center, 515-992-4211, kay@thebrentonarboretum.org

Jun 21 – Grilling with Herbs, Iowa Arboretum, Madrid, 515-795-3216, www.iowaarboretum.org

Jun 22-29 – Garden Walk & Show, Clinton, 563-243-3300, www.clintonia.com

Jun 23-24 – Lily Show, Merle Hay Mall, Des Moines, 515-987-4364, srjeven@msn.com

Jun 24-25 – Special Garden & Mansion Tours, Cedar Rapids, 319-362-7375, mail@brucemore.org

Jun 24 – White Hot Party, Riverwalk Cafe, Des Moines Botanical Center, reservations, 515-323-6288

Jun 24-26 – GardenFest Weekend, Clear Lake, 800-285-5338, centralgardens@netins.net

Jun 25 – Garden Walk, Malvern/Hastings area, 712-624-8616, xmills@iastate.edu

Jun 25 – Vineyard Canopy Management, Glenwood, eli.bergmeier@goldenhillsrscd.org, 712-482-3029

Jun 25-26 – Federated Flower Show, Ft Dodge, 515-576-6021, pmmody@mchsi.com

Jun 27 – Northwest Iowa Grape Growers, Farnhamville, 712-297-8611, jwchizek@iastate.edu

JULY

Jul 4 – Flower Show, Morning Sun, 319-868-7919

Jul 7 – Living Wreath, Charles City, xfloyd@iastate.edu, 641-228-1453

Jul 9 – Field Day, Woodland Owners, near Palo, 563-391-8227, APWood70@aol.com

Jul 9 – Garden Disease & Pest Clinic, Indianola, 515-961-6237, jmrhouse@iastate.edu

Jul 10 – Garden Tour, Historical Society, Cedar Falls, 319-266-5149

Jul 10 – 13th Annual Dodge House Garden Walk, 605 3rd Street, Council Bluffs, 10 a.m. to 4 p.m., 712-322-2406

Jul 16 – Field Day, Honey Producers, Ames, 712-774-5878, thebuzz@abuzzaboutbees.com

Jul 16 – Operation Wildflower, Stratford, mjhatfield@oneota.org, 515-232-6091

Jul 16-17 – Water Gardens Tour, Ames & Des Moines, 515-433-0194, BeyersBog@aol.com

Jul 18 – Field Day Ia. Fruit & Veg. Growers, Council Bluffs, 515-465-5992, ifvga@att.net

Jul 18-19 – Flower Show Judges Symposium, Marshalltown, 515-576-6021, pmmood@ychsi.com

Jul 19 – IGGA Scholarship Golf Outing, Adel, 515-282-8192, sdietz@assoc-mgmt.com

Jul 21 – That Darn Blight, Greene, xfloyd@iastate.edu, 641-228-1453

Jul 23 – Farm Vineyard Field Day, Farnhamville, 712-297-8611, jwchizek@iastate.edu

Jul 25 – Home Garden Field Day, ISU Research Farm, Sutherland, 712-446-2526

Jul 26 – Home Garden Field Day, ISU Research Farm, Rock Rapids, 712-472-2576

Jul 27 – Home Garden Field Day, ISU Armstrong Research Farm, Lewis, 712-769-2402

Jul 28 – Home Garden Field Day, ISU Research Farm, Crawfordsville, 319-658-2353

Jul 29 – Home Garden Field Day, ISU Research Farm, Muscatine, 563-262-8787

Jul 31-Aug 3 – Northern Nut Growers Meeting, Pella, 515-733-2674, arbnbd@iowatelecom.net

AUGUST

Aug 1 – Home Garden Field Day, ISU Hort. Station, Ames, 515-294-4006, chaynes@iastate.edu

Aug 2 – Home Garden Field Day, ISU Research Farm, Kanawha, 641-762-3247

Aug 4 – Home Garden Field Day, McNay ISU Research Farm, Chariton, 641-766-6465

Aug 5-6 – Garden Walks, Tripoli, 319-882-4801, 319-882-4286, gladr@butler-bremer.com

Aug 6 – Home Garden Field Day, Research Farm, Nashua, 641-228-1453, xfloyd@iastate.edu

Aug 7 – Sunday Sketchers, Des Moines Botanical Center, 515-323-6290

Aug 11-21 – Iowa State Fair, Des Moines, volunteers needed at ISHS display, 515-795-3216

Aug 18 – Butterfly Gardens, Rudd, xfloyd@iastate.edu, 641-228-1453

Aug 19-21 – Herbfest, Frontier near Norway, 800-669-3275, herbfest@frontiercoop.com

Aug 22 – Northwest Iowa Grape Growers, Farnhamville, 712-297-8611, jwchizek@iastate.edu

Aug 27 – Garden & Landscape Show, Cedar Rapids, 319-362-7375, mail@bruce-more.org

SEPTEMBER

Sep (date not set yet) – High Tunnel & Greenhouse Workshop, Lewis, 515-294-8946, lnaeve@iastate.edu

Sep 9 – Annual Meeting, Woodland Owners, Amana, 563-391-8227, APWood70@aol.com

Sep 10 – SW Dist. Ia. Rose Soc. Show & Meeting, 515-282-1122, Rosseanbrodeen@aol.com

Sep 15 – Creating That Barefoot Lawn, Charles City, 641-228-1453, xfloyd@iastate.edu

Sep 30 – Harvest Moon Festival, Des Moines Botanical Center, 515-323-6290

OCTOBER

Oct 5-7 – Flower Show Judges School, LeMars, 515-576-6021, pmmood@ychsi.com

Oct 15 – Lily Bulb Sale, Merle Hay Mall, Des Moines, 515-987-4364, srjeven@msn.com

Oct 20 – Pumpkins, Gourds & Cucurbits, Charles City, 641-228-1453, xfloyd@iastate.edu

Oct 23 – Sunday Sketchers, Des Moines Botanical Center, 515-323-6290

Oct 27-29 – Landscape Design Course I, Madrid, 515-576-6021, pmmood@ychsi.com

NOVEMBER

Nov 5-6 – Gift Shop Open House, 10 a.m. to 5 p.m., Des Moines Botanical Center, 515-323-6290

Nov 11-12 – Herbaceous Perennials Across the State

Nov 12-13 – Family Portrait Day, Des Moines Botanical Center, 515-323-6290

Nov 19 – Wreath Making Workshop, Charles City, 641-228-1453, xfloyd@iastate.edu

DECEMBER

Dec 4 – Sounds of the Season, 1 p.m. and 5 p.m., Des Moines Botanical Center, 515-323-6290

Dec 11 – Sounds of the Season, 1 p.m. and 5 p.m., Des Moines Botanical Center, 515-323-6290

List your Events in the next issue **FREE!**

Dr. Eldon Everhart
1208 Chestnut Street
Atlantic, IA 50022
everhart@iastate.edu

Send the date, title or short description of the event, sponsor, city or town of the event, and telephone number and/or e-mail address of contact person. There is no charge for this service. The editor reserves the right to edit the list for length.

Ecstatic for Echinaceas

The Coneflower Craze

By Kelly Norris, Rainbow Iris Farm
3149 Kentucky Avenue
Bedford, IA 50833-8039
712-523-2807
irisfarm@frontiernet.net

The history of horticulture includes many gardening trends beginning in the 1600s with the Tulip-Bulb Craze, the Victory Gardens in the 1940s, the house plant fad of the 1970s, and the never-ending demand for hostas. Now another genus, *Echinacea*, is gaining popularity worldwide.

New coneflower cultivars are storming their way into home gardens and commercial landscapes. From a humble beginning in nature, most species in the genus *Echinacea* originated as wildflowers in the tallgrass prairies of the Midwest. Well known Iowa natives include pale purple coneflower, *E. pallida*, and purple coneflower, *E. purpurea*. Because of their beauty, reliability, and adaptability to cultivation, these species and older cultivars, such as 'Kim's Knee High' and 'Magnus,' have stimulated renewed interest in coneflower breeding and selection.

Coneflowers' showy, petal-like ray flowers are sterile, but the small disk flowers in the center are fertile, producing pollen and capable of producing seed. The recent work of plant breeders in the United States and Europe is beginning to stock the nursery shelves with a plethora of wonderful new coneflower cultivars. Eleven of the newest and most recent are described in this article.

'Art's Pride' and 'Mango Meadowbrite'

Dr. Jim Ault,
Chicago Botanic Gardens

Echinacea 'Art's Pride' can be found marketed under the name Orange Meadowbrite. With its bright orange flowers, wispy stature, and intoxicating fragrance 'Art's Pride' is the perfect addition to the wildflower border or cottage garden. It resulted from a cross made in 1996 between two different *Echinacea* species (an interspecific cross). The species *E. purpurea* and *E. paradoxa* were cross pollinated at the Chicago Botanic Garden (CBG) by Dr. Jim Ault. In 2000, the crosses were repeated. The first orange flowered plants were observed in the F₂ generation (the second generation after the original crosses were made). The F₂ progeny included plants with flower colors that include pink, tangerine, orange, and white. 'Art's Pride' was selected from these plants.

'Mango Meadowbrite' was discovered during tissue culture propagation of 'Art's Pride' as a branch sport or mutation. 'Mango Meadowbrite' may lack only the red pigment of 'Art's Pride' which results in its mango-yellow flowers with bright, golden-orange centers. It also may have the strongest fragrance of any coneflower introduced so far.

Coneflower breeding is now an integral part of the ornamental plant selection program at the CBG and new releases are planned for the

next few years. 'Pixie Meadowbrite' may be introduced in 2006. It is a compact 18 inch tall selection from a three-way cross of *E. angustifolia*, *E. purpurea*, and *E. tenesseeensis*. 'Pixie Meadowbrite' has small flowers (a trait likely obtained from *E. tenesseeensis*) that are pinkish to raspberry flowers.

'Sunrise', 'Sunset' & 'Twilight'

Richard Saul, ItSaul Plants

The blossoms of this trio of new Echinaceas cultivars are capable of making time stop in your garden. These cultivars are the result of controlled crosses between *E. purpurea* and *E. paradoxa*. These crosses were independently made at the same time as Dr. Ault's crosses were made. Richard Saul, of ItSaul Plants, had the basic goal of creating a winter hardy *Echinacea* for the container nursery industry. The crosses produced variable results and some seed was shared with Tony Avent of Plant Delights Nursery. Avent introduced 'Paranoia,' a first generation (an F₁) sibling of the future cultivars 'Sunrise,' 'Sunset,' and 'Twilight,' whose selection was inspired by the success of the former. These three cultivars are intensely fragrant and should do very well in Northern climates because they appear to be more like *E. purpurea* in their growth habits than *E. paradoxa*.

However, these three are only the beginning. There are 18 cultivars in the

Big Sky™ series that will be released over the next three to four years. ‘Harvest Moon,’ a golden squash-colored flower, will be released this fall as will ‘Sundown,’ a strong orange colored flower with a smaller cone that blooms well above the foliage.

‘Sparkler’ & ‘Fragrant Angel’

Dan Heims, Terra Nova Nurseries

Dan Heims, the modern guru of plant breeding, has released several new coneflowers in the last few years with more to come. These include dwarfs, semi-double flowered forms, and new color variations according to the Terra Nova Nurseries web site: <http://www.terranovanurseries.com/>.

Notable recent selections include ‘Sparkler’ and ‘Fragrant Angel’. Most of Terra Nova’s program has been centered on the successful ‘Ruby Giant’. These cultivars possess strong, branched stems along with horizontal, well balanced flowers. ‘Fragrant Angel’ is likely to become the superior rival to ‘White Swan’ with 4 to 5 inch diameter flowers with contrasting orange centers. As the name indicates this cultivar is sumptuously fragrant. ‘Fragrant Angel’ is asexually propagated for more uniformity.

‘Sparkler’ is the variegated sport of ‘Ruby Giant’. Its cream dappled leaves contribute astonishment and intrigue to the garden while maintaining a somewhat dwarf habit. The variegation of ‘Sparkler’ lasts well into the heat of summer. By mid-summer the plant is

festooned with light pink, 4 inch wide flower heads.

‘Jade’, ‘Vintage Wine,’ and ‘Razzmatazz’

Jan van Winsen and Piet Oudolf

From European breeders, Jan van Winsen and Piet Oudolf, come three unique new cultivars. Gardeners may be familiar with

perkier and more horizontal rather than droopy like many of the species and early cultivars. ‘Vintage Wine,’ with traits from *E. purpurea* needs full sun in order to maintain the rich colors of the flowers.

‘Razzmatazz,’ a creation of Jan van Winsen, is the world’s first fully double *Echinacea*. ‘Razzmatazz’ was selected from a batch of *E. purpurea* seedlings in 1997 and was immediately valued for its unique floral qualities in the garden and as a cut flower.

‘Jade’ is being introduced in 2005. It has non-drooping bright silvery white flowers with green centers. The compact plants grow 24 inches high. ‘Jade’ is the product of an extensive breeding program that Piet Oudolf conducts to supply his garden design business.

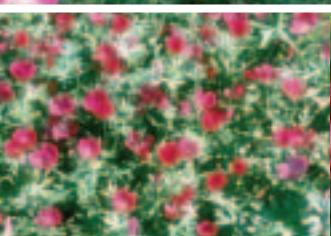
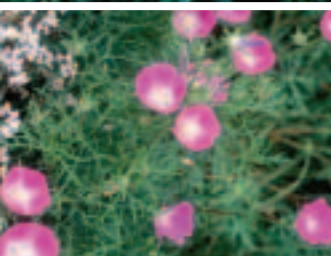
Many of these cultivars are available from mail-order business and will also start appearing at your local nurseries within the next few seasons if they haven’t already. A simple Internet search will likely turn up several sources online as well.

Plant breeders have transformed *Echinacea* into outstanding garden plants that will only continue to amaze us with their untapped color spectrum and plant habits. These new *Echinacea* are definitely addictive and are sure to infect gardeners with the “coneflower craze.”



‘Vintage Wine’ and ‘Razzmatazz’ both introduced in 2003.

‘Vintage Wine’ has a daisy-like red and purple flower that is the result of an extensive breeding program conducted by Piet Oudolf. Oudolf wanted *Echinacea* flowers to be



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