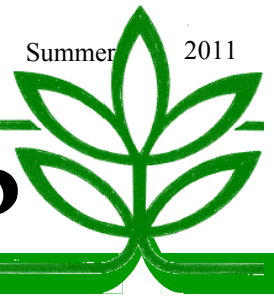


From the Ground Up



A Gardening and Native Plants Quarterly

Colorado State University Extension-Pueblo County

701 Court Street • Suite C • Pueblo, CO 81003 • 719-583-6566 • coopext_pueblo@mail.colostate.edu



GARDEN WALKS

CARROTS GROW UNDERGROUND!

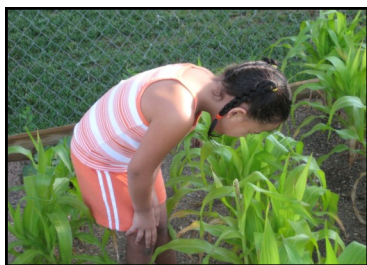
by Julie Kuhn, Project Coordinator, UGARDENS Project, Pueblo City-County Health Department

While I was working at one of the community gardens in Pueblo, a group of young children wandered through the garden and bombarded me with questions about what was I doing there, what were all the plants, and what kind of things were growing from the plants. I stopped my weeding and began to give them a tour of the project and pointed out the various vegetables that were hidden beneath the leaves or buried in the ground. A few were amazed as we dug up some carrots. The children had no idea that carrots grew underground.

This is part of the reason why the Health Department has taken an active role in the development of community and school gardens through the UGARDENS Project, funded by the Colorado Health Foundation. Today's youth struggle with obesity issues due in part to the lack of physical activity and healthy nutrition. Using this unique approach to address the obesity issues in Pueblo's youth and families, school gardens incorporate nutrition and physical activity curriculum into the daily lesson plans of students while engaging them in the planning, implementation and maintenance of a school garden. The garden provides the opportunity for the youth to experience fresh garden produce, all the while getting in some physical activity through the gardening process. Along with nutrition and physical activity, garden curriculum provides a hands-on, experiential learning opportunity.



Beulah School students gather "natural" fertilizer for their new school garden. Photo by R. Thompson



A student inspects a corn blossom at Washington Children's Center. Photo by J. Kuhn

Pueblo has numerous school gardens that include Pueblo West Elementary, Washington Children's Center, Beulah School, Highland Park Elementary, Central High School, and Avondale Boys and Girls Club.

Teacher Rachel Thompson, who heads the Beulah School Community Garden, comments, "Beulah School Community Garden is well nurtured by S.E.E.D.S., our garden club. The acronym is for Students Enjoying the Earth while Digging and Sweating. Gardening is hard work, but it fosters a good work ethic while planning nutritionally, maintaining a garden, composting, harvesting and finally savoring our produce. Gardens lead to healthy life styles and best of all "a garden is a friend you can visit every day!"

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Named for Asclepias, the Greek god of medicine, the Asclepiadaceae or milkweed family has several members that are native to this area. The most common of these is *Asclepias speciosa*, or showy milkweed, which grows on ditch banks and roadsides and in fields and produces large pods that open to release seeds with long silky hairs that act like parachutes when the seeds are windborne.

The Asclepiadaceae family takes its common name from the milky sap contained by nearly all of the species. Another identifying characteristic is the flowers, which have a corona or whorl of floral parts between the petals and the stamens. Each of these five petal-like parts is hooded and the hood may or may not have a horn.

Milkweed flowers have five sepals, five petals (usually reflexed) and five stamens, and they usually are borne in umbels or umbrella-like clusters with stalks radiating from a central point. They range in color from white, to pinkish-white, to green-ish white, to orange. They are bisexual and the stamens are united (botanical term meaning attached) to the style. Pollen grains in each anther stick together in a mass called a pollinium; the pollinia of one anther are connected to those of an adjacent anther by a thread-like structure called a translator. Insects catch their feet on the translator of a flower and carry its pollinia to another flower and cross-fertilization occurs.

Leaves of Asclepiadaceae family members are simple, opposite or whorled, and either lanceolate or egg-shaped.

In addition to *A. speciosa*, species growing in our area are *A. subverticillata*, or narrow-leaf milkweed; *A. pumila*, or dwarf or low milkweed; *A. tuberosa*, or butterflyweed or orange milkweed – it has bright orange flowers; and *A. asperula*, or antelope horns or creeping milkweed.

During the recent Native Plant Master class at Pueblo Reservoir, participants were fortunate enough to see the bizarre-looking yet beautiful *A. asperula* hugging the ground in an area just off the trail, and in full bloom. What a treat!

The canyon country of the Four Corners region has two additional milkweed species: *A. cryptoceras*, or pallid milkweed, which has greenish-white petals and pale-rose-colored hoods; and *A. macrosperma*, also commonly called dwarf milkweed, whose Latin name comes from its large seeds. *A. macrosperma* has very hairy stems and leaves.

Additional *Asclepias* species grow along the upper Rio Grande in New Mexico, bringing the total there to nearly a dozen. The native peoples of that region used the plants in many ways: the green pods and the fleshy uncooked roots of some species were eaten; *A. latifolia* was used to flavor meats; the milky sap from cut milkweed stems was allowed to thicken and chewed as gum. A tea made from milkweed was a remedy for stomach problems at some pueblos and for fevers and coronary ailments at other pueblos. Ground milkweed roots also were brewed into a tea to ease chest pains, and powdered leaves and stems were inhaled to relieve a stuffy nose. But the narrow-leaved species, *A. subverticillata*, would have been avoided because it is toxic. Milkweed fibers also were made into fabric, string and rope.

Asclepiadaceae family members are pollinated by bumblebees, honey bees, wasps and butterflies, and *A. speciosa* is a host plant for the monarch butterfly. 🦋



Above: *Asclepias tuberosa* beside Mace Trail at the Pueblo Mountain Park, July, 2009.

Below: *A. asperula* at Lake Pueblo State Park, May, 2011. Note the greenish petals and purple hoods. Photos by L. McMulkin



Subscribe to this newsletter by contacting Carolyn at 583-6574



Garden Walks Continued from Page 1

At Pueblo West Elementary, Principal Cheryl Vincent had written a thank you to the Health Department commenting on the school garden project. “The end result of our endeavors was a beautiful and prosperous community garden. Each student was able to take home produce and in some cases flowers. For many of our children who live in an accommodation where a yard is not available, the growing of a garden is impossible for them. Our Community Garden was indeed a first time life experience for them. What a beautiful experience!”

These are just two examples of how the community and school gardens in Pueblo are making a difference. Tackling the obesity issue is daunting, but utilizing the school and community gardens to educate and provide nutritious food is one way to battle this serious crisis. 📖



DIGGING DEEPER

THE EDIBLE FRONT YARD by Greg Nolan, Colorado Master Gardener, 2009

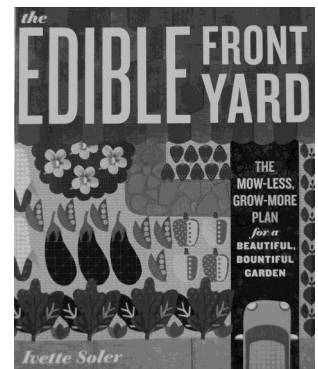
Recently, I read the *Edible Front Yard* by Ivette Soler. I loved the premise of the book; transforming the front yard into an edible landscape. I also liked the aspect that when the edible front yard is watered it has an element of conservation above that of a front yard that is just for curb appeal. Heck with curb appeal, these front yards look delicious for dinner. When was the last time someone described your front yard as delicious?

At first glance, I was taken by how visually attractive these yards look. I suspected the usual crops, corn, carrots, and tomatoes. I was unprepared for the integration of herbals, edible ornamentals, flowers and succulents, and various components one finds in any great front yard. In fact, integration of edibles into a landscape with great curb appeal is the basic premise of the book. I was taken and taken hard.

The book is about designing and maintaining a front yard using edible plants as a palette to create structure and interest. Chapter one, Curb Appeal, discusses the importance of integrating the edible landscape into the greater community and creating something that neighbors admire rather than abhor. To achieve that end, Soler covers the many aspects to consider in creating an edible yard. She covers individual edible plants and their use as part of the palette appropriate for the edible front yard, giving brief general descriptions of plants, how to grow them, and how to use each plant in the yard as well as on the plate.

Soler briefly covers the design process early on and then interweaves design processes throughout the book. She covers several different methods to lay out or redesign a yard for edible landscaping. Soler also covers how to build the bones and improve the structure of a yard. Building the bones literally means putting in raised beds, trellises, paths, hardscape, and irrigation. She then covers how to maintain the yard, with short sections on organic methodology, composting, building soil, dealing with weeds, and controlling pests and critters. Finally, Soler ends the book very appropriately with a chapter on harvesting.

Overall, I really liked the book. I could incorporate many of the ideas on the south side of my home but not in my front yard, which is very exposed and offers no relief from the wind. While reading this book, in gale force winds, the concept of “right plant, right place” came to mind. I’ll plant natives in my front yard and let those plants take the brutal forces of nature. The veggies will have to go on the protected south side of my home. 📖



Editor's note: A few copies of this book are available for \$14.00 each at the CSU Extension office in Pueblo County. Proceeds from book sales support the local Colorado Master Gardener program.

Garden Tip: Front Range Tree Recommendation Guide

Recently, a group of green industry and Extension professionals evaluated nearly 250 woody plant varieties and developed a table listing the species suitability to eastern Colorado conditions. While the study focused on trees from Colorado Springs to the Wyoming border, those of us in southeastern Colorado will find the information valuable in making decisions about the best trees and shrubs for our landscapes. The table contains information on hardiness, soil preferences, water needs, and potential environmental, insect and disease problems. You can find this publication at <http://www.ext.colostate.edu/pubs/garden/treereclist.pdf> or call your local CSU Extension office for a paper copy.



Garden Tip: Encourage Good Bugs in Your Garden

Most insects in your garden are not after your plants. Some are predators that eat the “bad” insects, while some are parasites on other insects, laying eggs on or in a host, which the larvae consume during development. Learn to recognize these beneficial insects and welcome them to your garden. To learn more about ladybugs, mantids, tachinid flies, and lacewings, see CSU Extension Fact Sheet 5.550 at <http://www.ext.colostate.edu/pubs/insect/05550.pdf>.

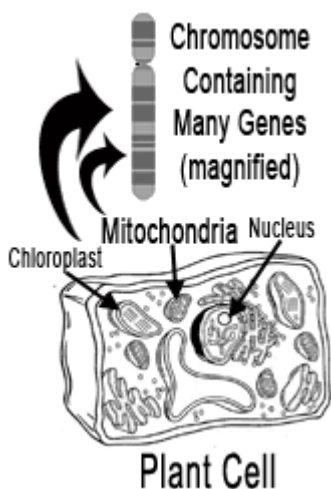
The Future of Taxonomic Classification, Part 2: Plants: Current Practices in

Classification by Marge Vorndam, Colorado Master Gardener, 1997, and Native Plant Master, 2008

In Part I (Spring, 2011), we discussed how the science of plant taxonomy originally developed, and how it has helped us to classify plants in an orderly fashion, so that we all understand what plant we are examining. While past taxonomic methods have served an important role in botany, current scientific techniques are creating a totally new approach to plant identification and classification.

In any given plant, every plant cell has a unique genetic map consisting of chromosomes that contain the genes which hold the information for the plant about what color its flowers will be, or how tall it will become, etc. Every aspect of a plant’s growth, structure and functioning is controlled by its genes. The chromosomes holding these genes occur in each plant cell, and are the same in every cell of the plant.

The development of molecular research techniques has allowed scientists to determine the sequence of



genes on plant chromosomes and establish genetic maps for many plants.

Now, instead of relying on morphological observations based on visual examination, taxonomists can use these new genetic maps to establish definitive relationships between plant species. This approach is a far more accurate, objective method of classification and is changing how plants and animals are identified and grouped. For instance, entire plant families are now being divided and reformed based on genetic maps, and some plant species are being moved into different families where their genetic maps match more closely to the new family’s genetic map.

But genetic maps contain thousands of genes for each plant species, and that amount of information would be unwieldy to handle in matching plants with other species, even if we use computers to do it. Paul Hebert and others at the University of Guelph proposed in 2003 that a “DNA barcode” system could be established that could store unique information markers for representative organisms for every living species. In 2009, the scientific Consortium for the Barcode of Life (COBL, accessible at

<http://www.barcodeoflife.org>) determined that the vast majority of land plants could be identified by focusing on the locations of two distinct genes for each plant. The location of these two representative genes on each plant’s genetic map provides a unique “fingerprint” for each species of plant.

The two genes chosen were *rbcl* (which codes for an enzyme that fixes CO₂ in a chloroplast) and *matK* (an encoding gene found in the mitochondria). These two barcode genes are located in nearly the same genetic map positions for related plants like tomatoes and potatoes, but farther apart for plants that are not as closely related, like potatoes and roses. The barcode information for an unknown plant can also be compared to the barcode information of known plant specimens to aid in identification.

So, what does all of this have to do with us? We will likely still be relying on plant keys to identify plants well into the future, but it is likely that those plant keys will be changing as scientists reshape how specific plants are related. In cases where exact plant identification is needed, a sample can be submitted to a plant identification laboratory that will determine the exact plant genetic map, and compare it to the barcode plant library. In fact, within our lifetimes, we may find that plant families are replaced with a new form of taxonomy that addresses plants based on an evolutionary relationship—how they are similar and different genetically, and what their ancestral parent plants were like. Stay tuned. 📖





There are many ways to control weeds depending on the size of your garden. A 4 x 6 foot garden is small enough for one person to hand-pull weeds. Larger areas, such as a city lot size may be more of a challenge for a one-person maintenance crew, and acres of land definitely requires some planning to maintain. Tools needed for managing weeds include plant identification and observation skills, as well as regularly scheduled times to check out the “farm.”

Certainly the conscientious gardener wants to know what seeds may have been sown into their future cropland, since many seedlings look alike. So, with some patience and general plant identification skills, leaf lettuce seedlings will look different than dandelion or kochia seedlings. Remember the few hundred desirable seeds sown are added to the thousands of vagabond seeds that are already in the top 2 – 3 inches of soil in the planting area. Seed packets may show the seedlings on the back of the package. Or refer to CSU publications available on weeds, including *Growing Plants From Seed* no.7.409 and *Weed Management For Small Rural Acreages* no. 3.106, at www.ext.colostate.edu, plus Colorado Master Gardener GardenNotes *Weed Management* #350 and #351 and *Broadleaf Weed Control In Lawns* #552 at <http://www.cmg.colostate.edu/>.

Just as with large farming operations, early detection of the presence of weeds is key to control on smaller crop areas. Small weed seedlings are easy to control through pulling, cultivation or herbicides. Weed seedlings are nearly as prone to damage as vegetable seedlings except a rogue dandelion seedling is genetically prepared for rough handling and has a leg up on the great tasting leaf lettuce. Frequent monitoring for odd looking or unexpected plants in the garden area will keep the gardener aware of what has sprouted, both good and bad. If a plant cannot be identified, the Colorado Master Gardeners are often available to assist gardeners with weed questions.

Remember, keeping weeds under control in your garden or “farm” depends on learning what your crops look like from seedlings to harvest, frequently monitoring your crops, and taking prompt action against allowing weeds to mature and set seed. Persistence is the key to successful, weed free crops. 🍂

Drought Impact on Landscape Trees by Linda McMulkin, CSU Extension-Pueblo County

Drought conditions continue to challenge the plants in our landscapes. Our office has received many calls about tree problems, especially on evergreens outside the city limits.

When soil is dry, root hairs can be damaged or killed. Since root hairs are the sight of most water uptake, spring uptake was severely compromised. The result is that evergreen needles are brown, deciduous canopies are sparse, and growth is reduced.

The biggest problems appear to be lack of winter irrigation and poor distribution of water. Many homeowners watered infrequently or not at all. For those who did winter irrigate, high winds stripped available moisture out of the soil and plant tissues. During visits to local landscapes this spring, I’ve discovered that irrigation systems are often plugged or deliver water only to the area near the trunk rather than to the entire root zone (canopy size times two).

I am recommending that homeowners look at where their drip emitters are located and adjust their systems so that water is applied to the area from the drip line to twice the length of the canopy. Many systems were designed to deliver water to the root balls of new plantings and were never adjusted for the spreading root system.

Homeowners need to rehydrate the soil and give woody plants a chance to distribute water from the roots to the canopy. This can take time, as root hairs must develop before much water can be absorbed. Saturate the soil, resist the urge to fertilize, and see what happens. I suspect that many of the evergreens will die and need to be replaced, but I have hope that with proper care, many of our landscape trees will survive. 🍂




Lawn Weed Management by Tony Koski, Extension Turf Specialist, Colorado State University

Reprinted from Green Scene newsletter by permission of the author.

Dandelion, clover, plantain and other broad-leaf weeds are among the most common and troublesome pest problems in lawns. Even though most broadleaf weeds can be easily controlled with herbicides, a completely weed-free lawn is neither practical nor environmentally sensible. A safe and sound approach to lawn weed control is to grow healthy turf, spot-treat weeds with the correct weed control product as they appear, and avoid the temptation to guarantee (or attempt to achieve) 100% weed-free turf.

The best way to minimize weed problems in lawns is through the use of good cultural practices: proper mowing height and frequency, sensible fertilization, and adequate irrigation. On the other hand, lawn weeds are encouraged by: mowing too short or not often enough; fertilizing too much, not enough, or at the wrong time of the year; and over- or under-watering.

The best time to apply herbicides for the control of perennial broadleaf weeds is early-September to early November, applications in late spring or early summer period after the weeds have flowered are also highly effective. If applying in the late spring, be extremely cautious with these herbicides near ornamentals, trees, flowers, and vegetable gardens. These plants can be damaged by herbicides through direct application, drift, and/or volatilization (where the herbicide turns into a vapor).

The number of turfgrass herbicides is too numerous to mention here. It should be noted that combination (2 to 4 herbicides) products provide broader spectrum and generally better control of weeds than single herbicides. 



Native Plant Master Program

This is a fun way to spend time in the field this summer, getting to know the plants of Colorado. You'll learn how to use native plants in your landscape and how they grow in nature.

Courses are taught in the field by Certified Native Plant Master instructors with extensive field experience using living examples of Colorado flora.

Register by July 1 for the final 2011 course

July 9, 16, 23 YMCA Camp Jackson 8:00 a.m. to 12:00 p.m.



HARMONIOUS HARDSCAPES

GOOD STRUCTURE GIVES A YARD BACKBONE

by Greg Nolan, Colorado Master Gardener, 2009

I need to develop a new plan for my bombed out Pueblo West disaster zone of a yard. Consequently, I have been looking at other people's yards for ideas. What I have noticed is hardscaping provides a yard with backbone and structure. In talking about hardscape, I am talking about the features in a yard that create borders. Various structures can divide a yard, define the edges, and add definition. Definition can be created by garden walls, rock gardens, raised gardens, retaining walls, dry river beds, sidewalks, transitions from mulch to plantings, paths to and through yards, as well as many other borders and accents in a yard. Borders and hardscapes are a great place to start landscape planning.

I encourage you to look at how yards are broken up and defined by various borders and features within the yard. I also encourage you to think of borders as the punctuation that helps you through a yard, to help it all make sense and add symmetry. With a critical eye, I think you will agree that borders either make or break a yard.

Continued on Page 7



Good Structures continued from page 6

The best yards have the best borders. The lines that create borders can contain plants, set them apart, make transitions, and add accents. Borders add winter interest and winter structure when many plants are dead or dormant. Borders are the periods, commas, and parentheses of a yard, helping you transition through a yard like punctuation through a sentence or paragraph. Borders can be where your eye stops then starts again or something your eye follows. I want good borders. Great yards are grammatically correct.

I have noticed that bad borders generally lack effort and planning. Examples of bad borders are loosely spaced bricks or rocks surrounding a tree or garden feature. Perhaps grasses and other undesirables encroach in between the rocks or bricks, making a tacky, unkempt look. Rocks dropped off the back of a truck to define a driveway lack symmetry and are hard to maintain. It is hard to mow between poorly spaced rocks and broken borders. Broken borders make for a broken yard; it creates a yard with poor punctuation.

The borders I like create neat, clean, and unbroken lines and transitions. These lines and transitions define various yard features. These lines and accents direct one's eye to and through a yard. These lines can be hard such as those produced by brick and stone or soft, such as the borders and lines created by low ground covers or shrubs lining a garden path.

Sometimes the best borders are no borders at all. Lack of borders can help in making the transition from yard to prairie, such as in Pueblo West. For example, a few pine trees interspersed with native mountain mahogany, rabbit bush, and some ornamental grasses, and perhaps a few large boulders, all sparsely planted, produce a very natural look that flows seamlessly into the adjacent prairie. It also produces a look of changing eco zones, particularly when complementary transitional plants are used.

With a little preplanning (this time) I hope to create a better backbone by improving the structure and borders within my yard. I hope to help my yard become easy to read. I want a grammatically correct yard before I plant a thing. 🍷

PRESERVING SUMMER'S BOUNTY

<u>2011 Date</u>	<u>Time</u>	<u>Topic</u>	<u>Price</u>
July 26	6:00-8:00pm	"Rooty-Toot, Can Your Fruit"	\$10.00
		•Learn the basics of water bath canning for fruits and tomatoes	
Aug 4	6:00-8:00pm	"Let's Veg Out"	\$10.00
		•Learn the basics of pressure canning low-acid vegetables	
Aug 9	9:00am-1:00pm	"In a Pickle"	\$15.00
		•Hands-on water bath canning with a focus on pickling	
Aug 16	6:00-8:00pm	"Freeze and Dry"	\$10.00
		•Learn techniques for freezing or dehydrating fruits and vegetables	
Aug 23	1:00-5:00pm	"Some Like It Hot"	\$15.00
		•Hands-on pressure canning class with a focus on how to preserve green chiles	

For classes listed above:

Location: CSU Extension - Pueblo County, 701 Court Street, Suite C, Pueblo, CO 81003

Fee must be paid in advance payable to Extension Program Fund (check or cash only)
at address above.

PAYMENT ONE WEEK PRIOR TO CLASS(ES) IS REQUIRED

Limit: Space is limited to 20 participants

Contact: Christine or Lois at 719-583-6566 for more information.





MASTER FOOD GROWER: KATA SCHMIDT

by Georgi Lipich, Colorado Master Gardener, 2007

She's a mother, a busy grandmother of 6 and a wife. She's small in stature, but big in heart, and walks with a cane. She's Pueblo County CMG program's "Mother Earth", our compost queen.....she's Kata Schmidt. Kata is one of Pueblo County's greatest assets, energetically volunteering more than 250 hours annually to the CSU Extension education program in Pueblo County.

Kata's dedication to gardening and preserving began as a child in, of all places, Chicago, where she helped in her parents' garden. Moving later to northern Colorado and living now in Colorado City, she has pursued her love of gardening and her passion for helping people learn about natural gardening. Over the past several years she has mentored new Colorado Master Gardener students and presented public classes in vegetable gardening and composting . Kata has also developed a successful and fun school program aimed at developing that same love of gardening in the young people in this area. As a frequent guest speaker for numerous organizations around Southern Colorado, she has brought her skills and ideas to the public.

When asked about her greatest passion, she says she feels it is so important that people discover how their produce is treated and that they learn that they have options to what they find in the produce department of their supermarkets. Kata describes her own organic garden as a "small city lot", using every square foot of her property to grow everything from vegetables in the hay bales edging her driveway to planting dwarf fruit trees alongside her garage wall. Her interest in hay bale gardening gained her an interview and article in the Denver Post "Grow" section in March, 2010.

She's also our "worm guru" and compost expert and has created buckets that serve as worm farms. Last year's hay or straw is used as mulch this year. Nothing is wasted or thrown out. Experimenting with straw and hay bales she's come up with her own recipe for bale gardening, and, of course, shares it with us in the article below. A big thank you, Kata, for setting such a good example for all of us! 📝

Garden Tip: Growing in the Bale

Colorado Master Gardener Kata Schmidt says that she prefers hay over straw; hay is used for animal feed and has a higher nutrient content. To prepare the bale for planting:

- ◆ Get the bale really wet-it may take 18 or more gallons of water
- ◆ Apply nitrogen fertilizer (blood meal is an organic option)
- ◆ Water it in well
- ◆ Keep the bale wet for at least a week to promote decomposition. The interior temperature will increase to as much as 140 degrees. Wait for it to cool down before you plant.
- ◆ Plant one or two plants per bale
- ◆ Either plant seeds or start plants in 3-inch peat pots
- ◆ After planting in the bale, spread compost around the plant
- ◆ Use a soaker hose stretched across the top of the bales to water.
- ◆ Water frequently to encourage continued decomposition and plant root growth.
- ◆ Once the plants are established and the bale is breaking down they will hold water better so the need for water is reduced
- ◆ Fertilize once or twice during the growing season.



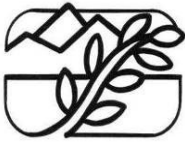
Photo by Kata S.

For additional information on growing in hay/straw bales, see Mississippi State University Extension Service publication 1678, Growing in the Bale, at <http://msucares.com/pubs/infosheets/is1678.pdf>.

Garden Tip: Tomato Problems

Nutrient deficiencies, insects, fungal and viral diseases, and environmental challenges can make tomatoes a challenge for some gardeners. For more information on common tomato disorders, see CSU Extension fact sheet 2.949: Recognizing Tomato Problems, at <http://www.ext.colostate.edu/pubs/garden/02949.pdf>.





In the garden, ornamental grasses can “weave” an area together by adding color, structure, and texture. Using native grasses in our landscapes not only brings a sense of place aesthetically but provides food, shelter, and habitat to many native species of wildlife.

Grasses add a gracefulness and softness not found in other plants and can be used in many styles of gardens. They are appropriate in formal, traditional, native and xeric gardens. Some of the easiest ornamental grasses to use are native to Colorado. When placed correctly, they add a lot of beauty to the landscape and are low maintenance.

Native grasses are lovely mixed into shrub or flower borders and can be used in mass or to punctuate a bed. No plants give greater winter interest than grasses except perhaps evergreens.

Many of the native grasses are quite drought tolerant once established. Container-grown grasses can be planted from spring to about a month before first frost. Grasses need to be cut back once a year just before their flush of growth begins in early spring.

One of the most graceful and dramatic grasses is *Sporobolus wrightii*, Giant Sacaton, a native of New Mexico that performs well in southern Colorado. At mature height it is about 6 to 8 feet tall with light, open flower heads. The foliage is arching, soft looking, and has a real presence in the garden due to its stature.

The Alkali dropseed, *Sporobolus airoides*, is much smaller, growing to about 3 feet. This grass is native to most of the western United States including Colorado. Alkali dropseed is also known as Prairie dropseed and is very tolerant of alkaline soils and has a low water requirement. This is a beautiful fine textured grass with a stunning flowering and seed head.


Achnatherum hymenoides, Indian rice grass, is a cool season Colorado native. Indian

rice grass wakes up early in the spring and flowers before the heat of summer begins. The seed heads are very pretty and showy and the foliage is a medium texture. This rather erect bunch grass is xeric and reaches about 2 feet in height. It needs a coarse, textured soil but can tolerate a pH up to 8.6.

Big bluestem, *Andropogon gerardii*, is another Colorado native with good landscape characteristics. Big bluestem is an upright bunch grass with good fall color. It can reach around 6 feet in flower and is also drought tolerant once established. It can become a large clump and a real presence in the garden.

Little bluestem, *Schizachyrium scoparium*, is smaller in stature than Big bluestem and only grows to about 3 feet at maturity. This warm season bunch grass tolerates many soil types and is xeric once established. It has a blue-gray tinge to its erect foliage and also has good fall color.

Panicum virgatum, Switch grass, is a tidy, rhizomatous grass with lacy seed heads. There are several named selections including: ‘Shenandoah’, with bright red blades, ‘Cloud Nine’ with very blue green foliage to 8 feet tall, ‘Prairie Fire’ which is slightly taller than ‘Shenandoah’ and ‘Heavy Metal’ another blue green foliaged cultivar. Switch grass is a rather rigid upright grower, but with dense foliage that sparkles in the sunlight.

For additional information see CSU Extension fact sheet 7.232: Ornamental Grasses at <http://www.ext.colostate.edu/pubs/garden/07232.html>. 



Plant Select®
Stimulate your landscape!



Giant Sacaton
Sporobolus wrightii

Height: 5-7'
Width: 3-5'
Blooms: Late summer to fall
Sun: Full sun to partial shade.
Soil Moisture: Moderate watering to very dry
Hardiness: USDA zones 5-8 (has been grown up to 7,000')
Culture: Garden loam, clay or sandy soil
Year Introduced: 2006

Description: Extravagant fountains of luxuriant foliage create a focal point in the Xeriscape™ garden. A wonderful southwestern native alternative to Pampas grass.

Note: When trade names are used, no discrimination is intended and no endorsement by CSU Extension is implied.



Growing Lavender at 7,000 Feet by Mary Knorr, Colorado Master Gardener, 2009

My first lavender plant arrived with the landscaper we hired to design and plant our new front yard at 7,000 feet elevation in El Paso County. What made lavender really stand-out for me was that our neighborhood deer wouldn't touch it, even when we had a drought and they were eating all other "deer resistant" plants. Lavandula won a place in my heart and so it started my growing lavender journey!

Since that first plant, I must have tried more than eleven varieties and there are only three that have survived for the last five years; Munstead (Dwarf, *Lavandula angustifolia* 'Munstead'), Hidcote (Semi-dwarf, *Lavandula angustifolia* 'Hidcote') and Alba (Giant – White, *Lavandula x intermedia* 'Alba'). The two that are thriving in the northern exposure are Munstead and Hidcote. The Alba's are happy in the southern facing yard hanging-out with an additional swath of Munstead. The plants that survived came from regional growers and local nurseries.

Colorado soil tends to be mildly alkaline and luckily the lavender plants prefer mildly alkaline soil. But they don't like to keep their feet wet, so I had to dig a deeper than normal trench to off-load any water that the plants didn't want (approximately two to two-and-a-half feet). I mix together native clay soil, sand, pea gravel and a smidge of black compost. Since my clay soil can be a challenge, I use enough sand and pea gravel so the clay isn't clumpy. My lavender begrudgingly will tolerate a top mulch of gorilla hair (shredded cedar), but it is most happy with a warm pea gravel/rock.

Over the years, I've learned that

- My lavenders are really happy in large groupings.
- I use ¼ inch drip irrigation at 6 inch .05 Gallons Per Hour (GPH) emitters.
- I've expensively found that I have better success planting in the fall so the root system develops over the winter. Transplant the volunteers in the fall.
- It took my lavenders about two to three years to get fully established.
- Survivability increases when a large ornamental grass, rock(s) or berm blocks the heavy blunt force of the wind.
- I use a hedge trimmer to sculpt/trim the plants in the spring and then individually prune-out any dead branches. The lavenders will fill-in the bare spots during the summer!
- Be careful of the bees when you harvest your lavender.



Flowering Lavender
Photo by C. Valdez



Lavender plants before (above) and after trimming. Photo by M. Knorr

Every summer I look forward to walking down my favorite path and smelling the blooming lavenders! 🌸

For more information on growing lavender, see the Plant Talk article at www.ext.colostate.edu/ptlk/1015.html and the CSU Extension fact sheet 7.245: Growing Lavender in Colorado, at <http://www.ext.colostate.edu/pubs/garden/07245.pdf>.

Garden Tip: Hiring a Tree Service

Are you thinking of hiring a tree service to prune, spray, or remove a tree and not sure how to find the best company? Protect your landscape investment by asking questions before you sign a contract. Check references, discuss the practices used by the company, and get the agreement in writing. For more suggestions on what you need to know before you choose a tree service, see a list developed by Linda McMulkin, CSU Extension-Pueblo County horticulturist, at <http://pueblo.colostate.edu/hor/hort.shtml>.

