Front Range Sustainable Small Acreage News

Winter 2012 Issue 12

www.ext.colostate.edu/sam

Inside this issue:



## Winter Grazing

By Sharon Bokan, Boulder County Extension

There is a lot of information about grazing during the growing season but what are the considerations for grazing in the winter? Good grazing management techniques do not end when the grass is dormant but are a year round practice. Here are some winter grazing strategies.

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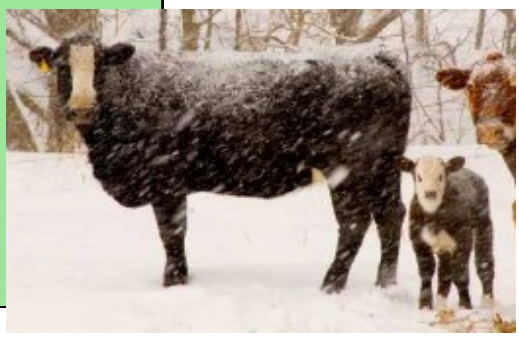

## Weeds Are Impacting Our Landscape

Have you noticed more and more non-native weeds invading your small acreage? Management of invasive weeds is critical when maintaining a small acreage and causes financial impacts due to reduced productivity and control costs. Nonindigenous species in the United States cause major environmental damage and losses totaling approximately $120 billion per year.

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Front Range Sustainable Small Acreages

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Colorado State University Extension

**Winter Grazing continued from page 1**

A good pasture management technique is to not allow your livestock access to your pastures starting in September. Keep them in your dry lot during fall. This allows the grass time to prepare for winter by storing energy in the roots and forming buds for next year's growth. Starting around November, once the pasture grasses are dormant, you can graze the dry material. Before allowing livestock to graze though, make sure that the grass is dormant and that there is no green growth evident.

Most grasses lose protein levels as the material dries out but they do retain some level of protein. Grazing pastures in the winter provides some level of nutrition and fiber. When calculating your rations, factor in the protein of the dry material. Livestock does require more feed in the winter to maintain health and weight. Some grasses retain their nutritional values better than others. If you are renovating or planting a pasture, you might consider planting some higher protein species if you plan on doing a lot of winter grazing. Here are some grasses and their protein content in the winter.

**Sheep grazing on irrigated pasture in the fall. Soon sheep will be removed so grasses can prepare for winter by storing energy in the roots and forming buds for next year's growth.**

**<u>Winter Protein % for Selected Grasses</u>**

Orchardgrass – 3 to 4% protein
Crested wheatgrass – 2 to 2.9% protein
Tall, Intermediate wheatgrass – 1.8 to 2.4% protein
Kentucky bluegrass – 3 to 3.9% protein
Meadow brome – 2.5 to 2.9% protein
Smooth brome – 2.5 to 2.9% protein
Blue Grama – approx. 5% protein
Tall fescue – 2.5 to 2.9% protein

Be just as careful to not over graze the grass in the winter as you are during the growing season. If your grasses are grazed to the base, you don't have sufficient plant material to allow grazing in the winter. Instead, try stockpiling the grass by allowing it to grow without grazing pressure in the late summer and fall. If your pasture has been over grazed during the growing season then you have not allowed the grass time in the fall to get ready for winter and to store energy in the root system, don't graze during the winter.

Care must be taken in the winter to not let livestock damage plant crowns and buds which are needed to produce the next year's growth. This damage can occur by over grazing, hoof damage or erosion.

When pastures are wet , snowy, or icy, livestock must be kept off them. Livestock can slip on wet, muddy areas damaging the crowns and buds or injuring themselves. Since this is where the grass will begin its growth in the spring, the grass will have to produce new buds to replace the damaged ones. This requires additional energy from the roots. Check the crowns to make sure that they are not being over grazed and that the buds are intact.

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**Winter Grazing continued from page 2**

Erosion and wind are also a winter concern for pasture plants. Over grazing with little or no stubble or snow cover exposes the buds to possible subzero temperatures and erosion or desiccation damage can occur due to high winds. Maintaining some grass stubble will help trap snow and protect the buds.

Starting in February, walk your pasture looking for the first indication of growth. Cool season grasses do most of their growth during cool temperatures. They may begin to grow when we get warmer spells in the winter. Look carefully through any remaining previous year's growth to spot the new green growth. Once you start seeing the new growth, you need to remove your livestock and keep them in the dry lot until the grass is 6 to 8" tall. After a winter of dry forage, livestock will seek out the new growth. Grazing this new growth will force the grass to send up a second round of buds which will use more stored root energy weakening the root system. Continuing to use up the stored root energy without allowing the grass to restore energy will eventually weaken the grass sufficiently so that it will die out.

There are other things to consider when winter grazing such as water and protection. You need to make sure that you provide ice free water at all times. The water does not need to be heated really warm but enough to keep it from freezing. There are in tank heaters that can be used but periodically inspect the wiring for damage to prevent fires and shock hazards.

We have plenty of days in the winter without snow or ice on the ground but the wind is blowing. You need to provide some kind of shelter for the livestock. A simple two-sided structure on the north and west sides with a roof is sufficient. This allows the livestock a place to get out of the wind.

Winter grazing does take some planning and monitoring. Let your livestock enjoy the exercise in the winter but be careful not to damage your pasture grasses.

References and Resources:

Website – United State Department of Agriculture, Forest Service, http://www.fs.fed.us/database/feis/plants/graminoid/index.html

Living on the Land curriculum, Module 5 Plants, University of Nevada Cooperative Extension and Western Region of Sustainable Agriculture Research and Education (WSARE)

Winter Grazing Management, Iowa State University http://www.ipm.iastate.edu/ipm/icm/1999/11-8-1999/wintergraze.html

**These llamas are in a dry lot to protect the pasture from grazing damage while the ground is wet with melting snow. Grazing in wet conditions will cause soil compaction, reducing the vigor and vitality of grass plants.**

**Weeds Are Impacting Our Landscape continued from page 1**

**What are noxious weeds?**

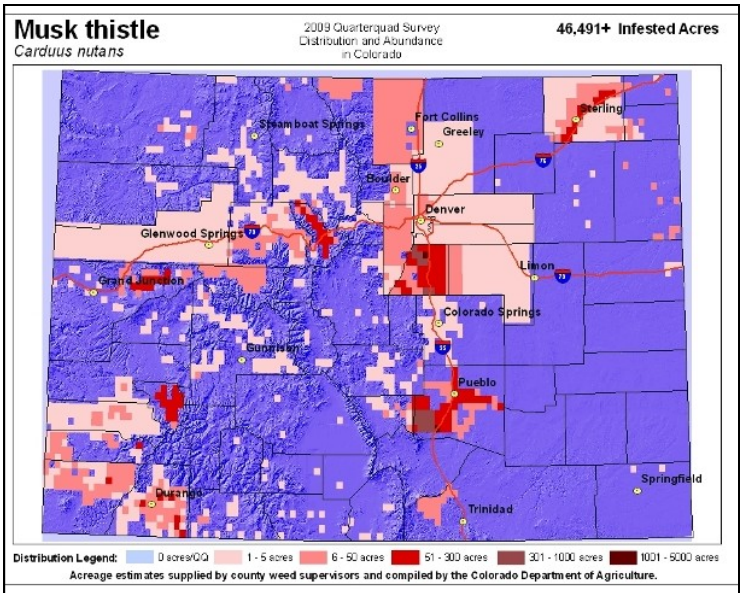
Noxious weeds are non-native plants that disrupt native vegetation because they have no natural controls and are able to adapt to varied climate conditions. As a result of the Colorado Noxious Weed Act, Colorado noxious weeds have been placed on three separate lists: A, B, and C.
List A plants are designated to be eliminated everywhere in Colorado. List B plants includes plants whose continued spread should be stopped.
List C plants includes plants in which control is recommended.

To see a list of the Colorado noxious weeds, including photos, and factsheets, please visit Colorado Department of Agriculture Noxious Weed Management Program website.

Noxious weeds are moving into valued ecosystems displacing natives at an alarming rate. Invasive plants are found on 133 million acres (as big as California and New York combined), in federal, state, and privately owned land. Each year, invasive species advance by 1.7 million acres. About 42% of the species on the Threatened or Endangered species lists are at risk primarily because of alien invasive species.

**What can private landowners do to control noxious weeds?**

1. Identify exactly what it is you want to get rid of. Use plant id guides or take a sample to your local CSU Extension office for identification.
2. Learn about the life cycle of your weeds in order to determine when the best time is to attack the plants.
3. Know that weeds can be controlled mechanically (mowing or shovel), chemically, or biologically. Find out what methods work best for the particular weeds on your property. It may be a combination of all three.
4. If weeds are taking over your property and you're not sure what to do, contact your local CSU Extension or USDA-NRCS office. There may even be a weed class in your area.




**Musk thistle, a noxious weed, is taking over many parts of Colorado. More maps like this can be found at the Colorado Department of Agriculture Noxious Weed Management Program website.**

## Learn More about Weeds

**Invasive Weed Ecology and Management Workshop**

The Jefferson County CSU Extension is offering a two day class titled "Invasive Weed Ecology and Management" on Tuesday and Wednesday, April 10 and 11. The class will be taught by award-winning instructor and noted weed scientist, Dr. George Beck. For details on this and other classes offered by the Native Plant Master® Program, see http://2012npm.eventbrite.com/. Register early as classes often have a waiting list later in the season.

**Understanding Weeds** and **Integrated Weed Management Webinars**

These helpful webinars are recorded and can be watched at the webinar archive page of CSU Extension Small Acreage Management website at www.ext.colostate.edu/sam/webinar.html

# Cover Crops Help in Dryland Grass Establishment

Jennifer Cook, Small Acreage Management Coordinator, NRCS/CSU Extension

Establishing grass is often difficult to do in our semi-arid climate, particularly when there is weed pressure. That's why I often recommend a cover crop be planted prior to seeding dryland grasses. A cover crop is allowed to grow, make cover, and is dead by the time grasses are planted. Here's how and why this strategy works well in Colorado.

First off, why take time to plant a cover crop before planting your grass seed?

**Cover Crops:**

- Provide weed control by shading weeds out;
- Add organic matter to soil by their roots and residue (dead plant material left on the ground);
- Hold moisture at the soil surface which is critical during grass seed germination and early root development;
- Protect soil from wind erosion by holding the soil in place.

Sterile sorghum may be the best option for a cover crop in our semi-arid climate, because the residue will not decompose quickly and will remain on the soil as mulch. Use sterile seed so the crop won't reseed itself. Sorghum is a warm season crop, like corn, and can be planted after May 15, or after the last frost has passed. Plant 4-8 pounds of sorghum seed per acre. Use a grass drill to plant sorghum seeds 1/2"-3/4" deep.

Sorghum will begin growing within 7-12 days after planting and will quickly tower over competing weeds. It will out-grow and out-compete weeds over the summer so much of the weed pressure will be reduced. Sorghum will grow over the summer and die off by the first frost in September or October.

The cover crop will be dead prior to planting your grass mix. You may need to mow the sorghum if it is taller than 10". Or you can take it off for hay, but make sure to leave 8-10" of stubble behind. A dormant grass seeding works well in Colorado. Depending on where you live, there is a window of time for planting grass, generally between November 15 and March 15. Use a no-till drill to plant your grass seed mix right into the sorghum stubble. A no-till drill does not require that the soil be tilled and smoothed like traditional drills do. It has double disc openers that slice through the residue and soil, then the seed is dropped at a set depth. Packer wheels close the gaps and press the seed and soil together.

While the grass seedlings are germinating and growing (some take weeks to years to finally establish), the thick sorghum residue will hold moisture and act as a mulch to reduce weed pressure and wind erosion from occurring.

For more assistance on grass establishment, contact your local CSU Extension or USDA-NRCS office.

**Sterile sorghum growing in August on a dryland field in Larimer County.**

## Help! I Need Some Local Meat.

Eric McPhail, CSU Extension, Gunnison County Director

Remember the butcher shop? It wasn't but just a few decades ago that Americans were buying meat in bulk. We were accustomed to buying our meat from a trusted friend. Much like the pharmacist, the local butcher was there to answer our frustrating questions and give us exactly what we needed, even when we ourselves hadn't a clue.

While many don't realize it, we still have local butcher shops. Most retail grocers have a very nice meat counter with a friendly butcher ready to customize our orders. However, most of us just look for what's packaged, grab it, never ask questions, and get on with the rest of our shopping.

Yes, today the supermarkets have taken over the role of being our meat managers for our convenience, but times seem to be changing. As more meat producers are able to offer their products locally and economically, more individuals are starting to buy meat locally and in quantity, typically by quarter, half, or even whole animals.

Buying meat in quantity allows you to know not only what the quality of the meat will be, but also how the animal was raised and fed, and you can choose exactly how you want your meat cut and packaged. While personal options are exciting, buying meat can be confusing. Consumers know little these days about meat storage and processing, or the hundreds of options available. With all the meat labels and concerns out there, it's no wonder people are intimidated and distrustful of all the claims such as "organic", "natural", "grass-fed", or "sustainably raised".

A great source, if you ever have questions about buying meat, is your local agricultural agent with CSU Extension. He/she will be able to give you unbiased information behind many of the claims and help you find producers who sell meat in your area.

While there's nothing more convenient than having meat in your own freezer, buying meat in bulk can be a large upfront cost. Sharing a purchase with one or more families can be very economical. In most cases, when priced out, the retail store meat will cost more than buying wholesale. But remember the product; local farmers invest the extra time and that extra time costs money. When a producer asks for a premium price, it's usually directly associated with higher feed costs. It's not rocket science to figure out why industry feeding operations are located in the Midwest and close to efficient feed sources.

A family of 4 will get between 100 and 130 meals of beef from a half beef, 50-65 from a quarter. For a family eating beef two times per week, it will take approximately one year to eat a half beef, or six months to eat a quarter. The empty freezer compartment of a new, average-size, home refrigerator is about 4.8 $ft^3$. If ordering a half or whole beef you may want to purchase a separate freezer, but if you only get one-eighth of a beef or a half hog, you should be able to fit it in a mostly-empty home freezer. Meat from one-eighth of a typical beef will weigh roughly 50-60 pounds and meat from one-half of a typical hog will weigh roughly 60-70 pounds.

# Resourceful Idea Helps Tree Seedlings Acclimate

By John Rizza, Small Acreage Management Specialist, CSU Extension/NRCS Western Region

Don McDavid owns 105 acres, of which 76 is forested, in Grand County, CO. He is a trained Colorado Master Gardener who involves himself in many community activities promoting good forestry practices. Don's property was significantly impacted by the mountain pine beetle outbreak beginning six years ago. At that time, Don recognized the need to adaptively manage his property to obtain sustainable long term goals for the land. His conservation efforts have promoted habitat enrichment for wildlife, natural and propagated regeneration of tree seedlings, and a strong desire to disseminate his experiences to others facing similar issues.

**Don and Mari inspecting trees in the 'tree house,' constructed in part from materials harvested from their property.**

There are a few significant reforestation issues Don and his wife Mari are trying to address on their property. Mainly, they want to accelerate the reforestation of the native forest that once stood on their property, and at the same time, diversify the tree species to reduce the stand's susceptibility to future insect outbreaks. After trying to plant a variety of species in the newly opened stand, Don noticed that survivability, particularly of Englemann spruce and subalpine fir seedlings, was poor. That's when Don thought of a resourceful way to help the seedlings acclimate.

"The initial idea of slowly acclimating trees to this elevation came quite by accident," Don says. He constructed a 'tree house' or shade structure, partially from materials harvested on his property, to enable the young seedlings time to increase root development and acclimate to the sun at 8,600' in elevation. "As the trees get larger and acclimate to the intense sun, they are moved to an area of the 'tree house' that offers less protection in preparation for planting in full sun," explains McDavid. Don has noticed a significant increase in survivability of the seedlings when introducing them to his site in this manner and is offering advice on his findings to enable other small acreage owners to "learn by some of the many mistakes I have made over the years."

Don is working with the Colorado Tree Farmers, Colorado State Forest Service, and CSU Extension to assist when workshops on recommendations for tree planting and care is provided in mountain communities, and together with his wife was awarded "Outstanding Forest Stewards of the Year 2010".

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## Resourceful Idea Helps Tree Seedlings Acclimate continued from page 7

Don is also a part of a team working to form a tree farmer group in Middle Park. Don can be reached for questions related to gardening and forestry problems through the CSU Extension office in Kremmling, CO at 970-724-3436.

The continued success of CSU Extension programs relies on a diverse network of cooperators and volunteers to assist in providing reliable research-based information to help landowners obtain their conservation goals. Don McDavid is one of these volunteers, and is part of the vast network of individuals who contribute significantly to the stewardship and sustainable use of our natural environment.

**Don McDavid demonstrating proper pruning techniques to a Colorado Master Gardener client.**

## Community Member Profile

# Upcoming Small Acreage Events

**Native Plant Master® Program**
**Colorado**
The Native Plant Master® Program has announced a newly expanded 2012 schedule of offerings. Explore a new park by taking an award-winning Native Plant Master® course. Sample one of the exciting new classes taught by CSU faculty and other experts. Topics include native plant landscaping, poisonous plants, native lawns, invasive weeds, grasses, orchids and more, alpine/ subalpine plants and ecological restoration. Most of these popular offerings have a waiting list each year, so register early to ensure you get the class you want. The Native Plant Master® Program is offered in many locations throughout Colorado. For more information and to register, please visit www.conativeplantmaster.org

**Water Law In A Nutshell**
**Feb 17, 2012 (8:00 am - 5:00 pm)**
**Glenwood Springs, CO**
This seminar will cover all aspects of the law related to water rights and ditch rights as applied in Colorado. Subject matter includes the appropriation, perfection, use, limitations, attributes, abandonment and enforcement of various types of water rights. Additional subject matter will include special rules for groundwater, ditch owner rights and responsibilities, mutual ditch company law, public rights in appropriated water, Federal and interstate compacts and more. Call Mount Sopris Conservation District to register 970-945-5494 x105

**Backyard Farming: Helping you realize your small acreage dreams**
**February 25, 2012 (9:00 am - 2:30 pm)**
**Glenwood Springs, CO**
Topics include Rural Living, Soil Health, Composting with Worms, Establishing Grass Stands, Small Farm Animals, and Hoop Houses. $10 registration fee includes lunch. Call 970-945-5494 x105 for more info.


**Risk Management and Financial Planning for Small/ Niche/Micro/Urban Farms**
**February 28 and March 3, 2012 (5:00 pm - 9:00 pm)**
**Golden, CO**
Join us to gain a greater understanding of:

- Your risks and risk preferences
- Tools for managing your risks
- Measuring financial performance
- Selecting alternative enterprises
- Other management skills and tools

This is a two-day workshop held at the Jefferson County Fairgrounds, CSU Extension. For more info call Jeff Tranel at 719-545-1845.

**Pruning Workshop**
**March 1, 2012 (9 am- 3 pm)**
**Yellowjacket, CO**
Join us at the Southwest Colorado Research Station in Yellow Jacket for hand-on pruning class offered by Montezuma/Dolores County Extension. The cost is $15.00 (free for Master Gardeners). For more information, call 970-667-2283 or 970-565-3123.

**Windbreak Design and Maintenance in Colorado**
**March 1, 2012 from 12:00 to 1:00pm MT**
**Webinar** (can be viewed via a computer with internet access)
Participants will learn how to plan and plant a proper windbreak, including site selection, soil considerations and species selection, proper care, maintenance, and wildlife protection. This webinar is appropriate for landowners all over Colorado. Presented by Megan Lowery, Conservation and Education Technician for West Greeley Conservation District.
To register for this webinar, please go to https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dDRPN2JkVElSd1JJY2drQmFvLVBMWVE6MQ#gid=0

**Water Law In a Nutshell**
**March 2, 2012 (8am-5pm)**
**Glenwood Springs, CO**
This seminar will cover all aspects of the law related to water rights and ditch rights as applied in Colorado. Subject matter includes the appropriation, perfection, use, limitations, attributes, abandonment and enforcement of various types of water rights. Additional subject matter will include special rules for groundwater, ditch owner rights and responsibilities, mutual ditch company law, public rights in appropriated water, Federal and interstate compacts and more. Lunch will be served. Class fee is $50. register early, this is a popular class! Call Mount Sopris Conservation District to register 970-945-5494 x105

**Proper Tree Care Practices for Small Acreage Landowners**
**March 7, 2012 from 12:00 to 1:00 pm MT**
**Webinar** (can be viewed via a computer with internet access)
Join Colorado State University Extension for a 1-hour webinar to discuss suitable plant selection and planting techniques, winter and summer watering, how to make proper pruning cuts, and when and how to apply fertilizers. Presented by Vince Urbina, Assistant Staff Forester, Colorado State Forest Service.
To register go to https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dFFPbTB6QXppbk9MS3M4YkNIbnZwM1E6MQ#gid=0

**Tree Workshop**
**March 8, 2012 (6:30-8:00 pm)**
**Strasburg, CO**
Learn about species selection, site preparation, weed barrier, drip irrigation, and pest control for your trees. To register call Deer Trail/East Adams Conservation District at 303-822-5257 x.101

**Sustainable Landscaping Workshop**
**March 10, 2012 (9am-12:00pm)**
**Aurora, CO**
Workshop includes native plants and pollinators, sustainable homesteading, noxious weed management, and farming with injuries or disabilities. Call Jenny Folley to register at 303-822-5257 x112.

**Major Forest Health Concerns for Small Acreage Landowners**
**March 14, 2012 from 12:00 to 1:00 pm MT**
**Webinar** (can be viewed via a computer with internet access)
Sky Stephens, Forest Entomologist with the Colorado State Forest Service will provide the most up to date information on what is affecting your forest lands and what to look out for related to insects, disease, and

# Upcoming Small Acreage Events

invasive forest plants including some great tips on what you can do to mitigate these impacts.
To register go to https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dDIwRlhYSkVPTk1oa1JPVGd2YjdzMUE6MQ#gid=0

**High Altitude Garden Workshop**
**April 7, 2012**
**Rollinsville, CO**
Learn from extension staff about soil amendments, season extension, keeping chickens, growing blueberries and native fruits in the mountains. Both beginners and experienced gardeners will find value in this workshop presented by Colorado State University Extension and USDA-Natural Resources Conservation Service. Also consider registering for the optional yoga class and lunch before the garden workshop. For more info go to https://docs.google.com/spreadsheet/viewform?hl=en_US&pli=1&formkey=dENxdWQydlhCZVE2bDBBbW5HS3hfSkE6MA#gid=0

**Best Management Practices (BMPs) on Small Acreages**
**April 11, 2012 from 12:00 to 1:00pm MT**
**Webinar** (can be viewed via a computer with internet access)
In this webinar, you will learn about how to implement specific management techniques to ensure protection of natural resources. This topic will touch on preserving water quality, soil health, and how to accomplish resource protection. Presented by Greg Sundstrom and Rich Edwards with the CSFS.
To register go to https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dDM5UkNJQkpKbXkxc0IyMWJFbWpRU3c6MQ#gid=0

**Your Horse and You, An Equine Field Day**
**April 14, 2012 (8:00 am- 5:00 pm)**
**Fort Collins, CO**
Horse owners, both youth and adult, will want to take advantage of this field day. Multiple sessions will include basic equine nutrition, assessing your horse's health, dental & hoof care, and more. Both classroom and live animal demonstrations! The workshop will be held at ARDEC Taylor Conference Center, 4616 NE Frontage Road, Fort Collins, CO. Hosted by Boulder, Larimer, and Weld County Extension. Online registration atwww.larimer.org/ext will be available by March 1, 2012. For more information contact Jennifer Cook at 303-659-7004 ext. 3 or jennifer.cook@colostate.edu

**Wildlife Habitat Improvements for Forests in Colorado**
**April 18, 2012 from 12:00 to 1:00 pm MT**
**Webinar** (can be viewed via a computer with internet access)
Learn how to manage your woodland for habitat improvement of certain wildlife species. The webinar will also discuss what to do in case of encroachment and how to fence with wildlife in mind. Riparian area livestock impacts and in-stream habitats will also be discussed by Russell Knight, Biologist from the NRCS.
To register go to https://docs.google.com/spreadsheet/viewform?hl=en_US&formkey=dGw3RUQ5YUdZX19ma0VSZmVYcGV3cXc6MQ#gid=0

**Small Acreage Workshop**
**April 21, 2012 (8:00 am-12:00pm)**
**Aurora, CO**
Learn more about attracting pollinators to your property, how to grow blueberries in Colorado, and beekeeping. Join us at the Arapahoe County Fairgrounds for this fun workshop! Click here to view the flyer. Registration fee is $10 per person. Contact Sheryl Wailes for more info and to register at 303-822-5257 ext. 101.