



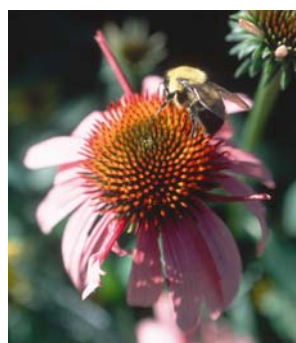
Spring 2010

Issue 5

www.ext.colostate.edu/sam

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POLLINATORS



By Jennifer Cook,
Small Acreage
Management
Coordinator

Pollinators are
needed for repro-
duction of 90% of

all flowering plants and one-third of all human crops. We all depend on pollinators to provide us with the wide range of food we eat. But pollinators are disappearing at alarming rates due to habitat loss, disease, inappropriate or excessive pesticide use, and most recently, Colony Collapse Disorder (CCD). By adding certain plants to your landscape that provide food and shelter for pollinators, you can help them and our food supply.

Toxic Weeds and Horses

By Tina Booton, Weld County Weed
Division Supervisor

Horses are a part of the Colorado landscape and it is so important to keep them safe. This includes knowing what they are eating. The green plants in your pens and pasture may not be as safe as you think. The following plants are some of the more toxic plants in Colorado's pastures.

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Front Range Sustainable Small Acreage News is edited and published by Jennifer Cook, Small Acreage Management Coordinator, NRCS/CSU Extension, 57 West Bromley Lane, Brighton, CO 80601
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Colorado State University Extension and U.S. Department of Agriculture programs are available to all without discrimination. Colorado State University Extension, U.S. Department of Agriculture and Colorado counties cooperating.

Toxic Weeds and Horses continued from page 1

Leafy spurge, field bindweed, yellow sweet clover and alsike clover can increase skin sensitivity to light, causing burns or colic. Horses will generally eat vegetation other than these plants, if other choices are available. However, these plants are very aggressive and tend to overtake a pasture.

Gum weed, penstemon, prince's plume, salt-bush, woody aster, and some milkvetch species are selenium accumulators. When a horse consumes these plants, the selenium replaces the sulfur that is needed in keratin formation. Keratin is the primary protein in the hoof and hair. Extended ingestion of these plants can cause permanent damage and may cripple the horse for life.

When horses eat too much senecio and houndstongue, the symptoms are similar. These include diarrhea, red urine, light sensitivity, circling, weight loss, and liver disease. There is no treatment for the liver disease.

Russian knapweed and yellow starthistle symptoms include frozen facial muscles, excessive salivation, severe weight loss, inability to chew or drink, drooping look to the face and lips. There is no treatment for these poisonings and euthanasia is recommended.

There are three species of locoweed: purple, white, and wooly. The poisoning symptoms from these species include abortions, weight loss, depression, excessive sleeping, violent reactions to routine items. There is no treatment for locoweed.



White locoweed



Sand Sage

Sand and fringed sage cause very similar poisoning indicators to the loco-weeds, with the addition of a sage

smell to the breath and feces. Remove horses from the sage plants and feed a nutritious diet. The horses should be able to recover if given proper support as needed.

It is imperative to manage pastures for good grass growth and competition against these dangerous plants. This may mean that the horses will need to be removed from the pasture for it to rest and recover. It may also be necessary to reseed the pasture for good grass growth. You may also need to implement a noxious weed management plan to evaluate the best options for addressing the weeds in your pasture.

The first step is to identify the plants in your pasture. Once this step is completed, it is possible to make the choices that are needed to enhance the vegetation as well as protect your horse(s).

For more information and help in identifying the vegetation in your pasture go to www.weldweeds.org

To view photos and learn more about toxic plants, visit the CSU Guide to Poisonous Plants website at http://southcampus.colostate.edu/poisonous_plants/index.cfm?countno=NO

Pollinators continued from page 1

Who are the pollinators? Bees, butterflies, moths, beetles, flies, birds, and bats all contribute to plant pollination, as well as wind.

Bees pollinate alfalfa, melons, squash, and heirloom tomatoes. Most of us are familiar with the honey-bee, which were imported from Europe almost 400 years ago. There are also nearly 4,000 species of native and twig nesting bees in the US, such as bumble bees, wood diggers, carpenter bees, and polyester bees. Bees have tongues of varying lengths that help determine which flowers they can obtain nectar and pollen from.

Butterflies are attracted to eye catching bright flowers. Numerous trees, shrubs, and herbaceous plants support butterfly populations. Butterflies prefer plants in full sun with flowers that provide a good landing platform, such as black-eyed Susan (*Rudbeckia hirta*) and smooth blue aster (*Symphotrichum laeve*).



Butterfly proboscises are slender, tubular feeding structures which work like a straw through which butterflies drink their food.

Moths are typically active during the night. Moth bodies are hairy and more stout than butterflies, with simple to featherlike antennae. Moths are attracted to flowers with a strongly sweet aroma which open in late afternoon or night, such as antelope bitterbrush (*Purshia tridentata*).

There are over 30,000 species of beetles in the US. Beetles are not as efficient as some pollinators and many have a bad reputation because they damage plants. Beetle pollinated plants tend to be large strong smelling flowers with their sexual organs exposed, such as red elderberry (*Sambucus racemosa*). Flies are generalist pollinators, which means they visit many different species of plants. Flies pollinate small flowers that bloom in shade in seasonally moist habitats, such as goldenrod, members of the carrot family, and skunk cabbage.

Hummingbirds are the primary pollinating birds, with long beaks and tongues that draw nectar from tubular plants. Pollen is carried on both the beaks and feathers of different hummingbirds. Hummingbirds can see the color red, while bees cannot. Colorado blue columbine (*Aquilegia caerulea*) and wholeleaf Indian paintbrush (*Castilleja integra*) attract hummingbirds in the Southern Rocky Mountains. White-winged doves (*Zenaida asiatica*) are another bird pollinator that pollinate the saguaro cactus in the south central US.

The long noses and tongues of bats allow them to extract pollen and nectar from flowers. Though bats in the Southern Rocky Mountains are not pollinators, bats are important pollinators in other regions such as the southwest

where they feed on agave and cactus.

You can attract pollinator populations by planting a pollinator-friendly habitat in your garden or farmscape.

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Pollinators continued from page 3

Check out **Pollinator Partnership** at www.pollinator.org to learn more about how you can support pollinators in your region as a gardener, farmer, or land manager. Download a regional guide which is a complete “How To” guide for beginners, and discusses plant traits, habitat hints, and lists plants that attract pollinators in your region. Colorado’s Front Range is included in the Southern Rocky Mountain Steppe region.

Here are some helpful hints from the guide:

- Pollinators travel through the landscape without regard to property boundaries. Understand the vegetation patterns of your neighboring land and strive to provide appropriate food and shelter.
- Plant flowers in groups of the same species to increase pollinator efficiency.
- Plant herbs such as mint, oregano, chives, parsley, and lavender.
- Choose a variety of flowering colors and make sure something is blooming at all times.
- Choose a variety of native plants when planting windbreaks and field borders.
- Practice integrated pest management (IPM) and minimize the use of pesticides and herbicides. **To learn more about IPM, watch the July 8 webinar on Integrated Weed Management. More info on pages 6 and 13.**



How can I learn more about Pollinators?

Alternative Pollinators: Native Bees – This is a downloadable guide that discusses native bee biology, habitat, and how you can attract native bees. Includes case studies, how to build nesting sites, and forage lists by region. <http://attra.ncat.org/attra-pub/nativebee.html>

Farming For Pollinators—NRCS website contains lots of pollinator info and links <http://www.nrcs.usda.gov/feature/pollinators.html>

Maintaining Water Quality

**By Sharon Bokan, Boulder County Extension
Small Acreage Coordinator**

We don’t often think about how our actions affect water quality. Whether you have a ditch or stream or no obvious water source on your property, there are things you can do to protect water quality for you and for others. For most people, our water starts as a snowflake or a rain drop in the mountains. If we follow that drop as it comes down to the plains, notice the number of people and things that could possibly contaminate the water before it gets to you. Think about your actions that could contaminate it for others around you.

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Maintaining Water Quality continued from page 4

Inside the house

When locating your septic system, you will need to follow local and state guidelines and regulations to prevent contamination of local wells and ground water. Do not dump chemicals, oil or other hazardous materials into the system. Take advantage of local hazardous waste disposal. Maintain your system by inspecting your system annually. Systems should have solids pumped every 3-5 years. Additives have not been proven to improve system performance; some may actually be harmful or contaminate ground water. Don't divert storm drains or other potentially contaminated water (i.e., runoff from a dry lot area) into the system. When possible, compost kitchen scraps instead of using your garbage disposal. Using your garbage disposal increases the amount of solids your system must digest. This decreases the time between pumping. Do not dump any other things into the system.

Also in the house, use less toxic products and do not dispose of unwanted products in the drain. Don't dump expired or unneeded medications in the toilet.

Outside the house

In your yard, do not over fertilize your lawn, or spray unneeded pesticides. Plant low maintenance plants and use mulch to cover bare ground and prevent runoff. Compost or chip and mulch yard waste and leave grass clippings on the lawn to reduce soil erosion, improve soil quality, and reduce fertilizer needs.

Keep your pasture healthy and minimize bare areas. A healthy pasture helps filter water. Maintain a filter strip area around your dry lot to prevent feces and urine-contaminated water from reaching surface and ground water. You can include a few shrubs or trees around the filter strip. Having shrubs, windbreaks or solid fencing will keep the soil in the dry lot from blowing away too. Soil can erode away both by water and wind. Some trees

require significant water to thrive so they can help filter the dry lot contaminated water.

Practice good grazing management to keep your pasture grass healthy. By setting grazing cells and access areas up for easy access and maximum efficiency you can minimize bare areas. Keeping the grass healthy also minimizes the use of herbicides for weeds and fertilizer, limiting the potential to contaminate ground water. When using herbicides be sure to follow the label. Apply at the label rates and be sure to follow restrictions concerning use around water. If you have to apply an herbicide near water make sure to purchase one that is labeled for that use. Do not over fertilize to prevent nitrate contamination of ground water. Periodically sample your soil to detect nitrogen buildup. Dispose of all pesticides through a local hazardous waste facility. Do not dump pesticides you no longer need on the ground; also mix them in an area to contain spills

Limit animal's access to ditches and water sources. Fence off ditches and streams and lakes, etc. Fence animals and divert surface water away from wellheads. Set-up dry lots on high ground away from wells and water, ditches, etc.

Build a berm or ditch around the dry lot area to help contain runoff water. Precipitation off a stable roof should be diverted away from the dry lot

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Maintaining Water Quality continued from page 5

area. Locate the dry lot so that there is a sufficient vegetative buffer area between dry lot and ditches, streams, ponds, and wetland areas. Keep the manure cleaned up in the dry lot area to minimize water contamination with feces. Depending on your soils, vegetation, and slope the buffer areas need to be at least 50' wide. Limited grazing can occur in the buffer areas.

Either spread manure in the pasture on a regular basis and harrow the field after application to spread manure or compost the manure. Again you will want to make sure you have sufficient vegetative buffer areas to prevent runoff from the compost pile from reaching water sources. The ideal situation is to place manure on an impermeable surface with water containment around the pile and when moisture is expected to cover the pile. Make sure that runoff from the dry lot does not run through or directly past your compost pile. Compost piles must be at least 100' from a well.

To check how well you are doing and to protect yourself you should have your well tested yearly.

With all of us doing our part, we can help keep our water quality safe for everyone.

References:

"Living on the Land" University of Nevada Cooperative Extension and Western Region SARE U.S. Environmental Protection Agency website <http://www.epa.gov/watertrain/agmodule/index.htm>

Texas A&M University website, <http://oceanworld.tamu.edu/resources/environment-book/groundwatercontamination.html>

Webinar Learning

The small acreage webinars will continue throughout the summer. Many of you have participated and bring wonderful questions to the discussion.



Webinars are web-based seminars. Participants can connect via any computer with internet access. You'll need speakers or headphones to listen in. During the presentation, you can ask questions by typing in the chat box. It's easy!

Upcoming Small Acreage Webinars:

Contact Jennifer.cook@colostate.edu to register

If you are not able to attend the live webinars, you can watch the recorded versions at www.ext.colostate.edu/sam Look for the "Webinar" heading on the right column.

June 10, 2010

Effective Forestland Management

Learn how to manage for forest health, wildlife, recreation, watershed protection, fire, weeds, insects, and diseases.

Presenter: Jonas Feinstein, NRCS State Forester

July 8, 2010

Integrated Weed Management

Learn sustainable weed management strategies based on understanding the natural processes and mechanisms that direct vegetation change.

Presenter: Ryan Edwards, CSU Graduate Student

August 16, 2010

Understanding Weeds

Understand weed life cycles and growing preferences. Common weeds and appropriate control options will be discussed.

Presenter: Sharon Bokan, CSU Extension Small Acreage Coordinator

Pasture Use and Rotation

Grazing Systems

By Dan Nosal, Rangeland Management

Specialist, NRCS

Spring green-up is underway in our pastures. However, many pastures have been overgrazed in the past and have become degraded as a result. Carrying capacity, plant recovery, and a rotational grazing system should be considered to prevent further degradation.

Carrying capacity is defined as the number of animals that a parcel of land can support without overgrazing. A good rule of thumb for a Front Range dryland pasture is that it takes about 35 acres to carry one animal unit (a 1,000 lb. animal) for one year without additional supplementation.

Grass plants need a recovery period after grazing to stay healthy. Once grazed, a growing plant draws energy (carbohydrates) from the roots to grow new leaves. Mobilizing this energy required for growing leaves also kills plant roots. Continuously grazing new grass growth causes the plant to kill its roots to support further regrowth. The result is a plant with reduced root volume, reduced vigor, and one that is not as productive as a healthy plant. The grass plant will replace the lost roots (and again store food energy in the roots) once there has been sufficient new leaf growth to trap more sunlight energy than is

Animals are more likely to graze on new leaf growth because the plants with new leaf blades contain more energy than plants that are not grazed. Overgrazing is not necessarily caused by stock density or the percentage of plants grazed, but rather on how often plants are regrazed without a recovery period. It is possible to overgraze some plants in a pasture while other plants are left untouched.

needed for plant maintenance and growth.

In addition to weakening a grass plant, continuous grazing can shift the species composition to predominantly plant species with lower palatability. If a pasture is exposed to continuous grazing (no rest or recovery period), the most palatable plants will be repeatedly grazed (overgrazed), resulting in unhealthy, less vigorous plants. The less palatable species will not be grazed, resulting in these plants being healthy and vigorous. As a result, the unpalatable plants may end up dominating the pasture.

Historically on the Great Plains, bison were migratory animals that grazed in large herds while continually moving to new areas. Since bison herds continually moved, grazed plants had a sufficient recovery period to renew their leaf volumes, grow new roots, and stay healthy and vigorous. As a result they were able to compete better with the less desirable vegetation. Although grazing reduces root carbohydrate reserves, the reduction is short-lived as long as defoliation is not a continuous occurrence. Rotational grazing can provide a recovery period much like the one provided by migrating animals.

Cross fencing is a tool for managing and manipulating vegetation. With numerous pastures, livestock can be rotated as one herd through the system, allowing plants a chance to recover after being defoliated. During the slow plant growth period (generally July–October) it is best to graze

a pasture a maximum of 10 days followed by at least 90 days recovery before returning to that pasture for more grazing.

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Pasture Use and Rotation Grazing Systems continued from page 7

During the fast plant growth period (generally May–June) grazing a pasture for a maximum of 5 days followed by at least 45 days recovery is best. Although duration of grazing has an effect, the rest period is most important. The slower the grass growth, the longer the rest period should be.

The greater the number of pastures, the easier it is to develop a system with a sufficient rest period, and the more quickly the rangeland improvement will occur. To implement a high-intensity, short-duration grazing system with the grazing and recovery periods described above, a minimum of 10 pastures (fairly equal in available forage) would be required. Occasionally, a pasture should be rested for the entire growing season.

We have just touched on grass productivity and grazing strategies. Remember that good grass is an investment in your future. Your healthy grass stand will remain more productive than a poor stand, resulting in higher productivity and less weeds.

For additional information on implementing a rotation grazing system contact your local NRCS office www.co.usda.nrcs.gov

Tillage and Compaction

Adrian Card, CSU Extension Boulder

Tillage on wet soil can cause soil compaction, which can reduce root growth and plant productivity. This spring has been pretty wet! For those of you who are waiting for soils to dry down in order to till and plant (and cultivate!) here are a few thoughts.

If you are on really sandy soil, give thanks, you can likely stop reading. If you are like most of us, on soils vulnerable to crusting:

- 1) Avoid compaction by waiting to drive tractors onto fields. Drive in pathways, not the beds. **WORKING (tilling) SOIL THAT IS TOO WET WILL DO MORE HARM THAN GOOD** - compaction and clay clods.
- 2) As soon as the top inches dry somewhat and a crust forms, consider very shallow tillage with the goal to open up the soil for drying while not disturbing or pulling up deeper wet soil that will harden into season-long clay clods. Leaving a crust will delay the drying of deeper layers.
- 3) Methods to break a crust include: rotary hoe (not a rotary tiller), chain harrow, flex tine weeders, very shallow field cultivator, etc.

This is all the art of tillage and if you are new to it, be careful. This same principal applies to small-scale gardens as well. Drive 20 feet or so with your tillage operation, get off the tractor and check to see if you are making clay clods. If so, just be patient and wait until it dries down further.

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Flex tine weeder can be used to break the soil crust.

Compaction and Tillage continued from page 8

A very general test for sandy clay loam to clay loam soils for readiness for tillage (evaluate this with your own soils):

1. Dig to the depth of the tillage operation to be done
2. Make a golf ball sized lump of the soil in your hand, packing lightly
3. Drop from 5-6 feet
4. If the ball breaks apart on impact, tillage likely won't make clods, however compaction still may be possible

Here's to a dryer and warmer spring!

To learn more about you soil type, check out the NRCS Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>



Above: Rotary Hoe

Below: Field Cultivator



Colorado Snow Survey Program

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

We commonly see reservoirs, rivers, ditches, and pipelines bringing us the water we use every day. But our water supply actually originates high in the mountains in the form of snow. All the snow we receive in the mountains of Colorado provides the primary water source for the Western US. According to the Natural Resources Conservation Service (NRCS) Snow Survey program, the West's high mountain snowpack provides 50 to 80 percent of the year's water supply. I enjoy the snow for skiing, but I now have a greater respect for our snow know-

ing how important it is for our water supply in Colorado.

The relationship between snowpack and snowmelt is complex. Factors such as moisture content of soil, ground water contributions, precipitation patterns, air temperature fluctuations, and use of water by plants all affect the snowpack and snowmelt, which ultimately affects the amount of water we receive from snowmelt runoff each spring. How the snowpack accumulates affects its density (amount of water per unit volume of snow) and texture (crystalline structure). Density increases as snowpack becomes

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Colorado Snow Survey Program continued from page 9

deeper and lower layers of snow are compressed. The compression affects the crystalline structures of the snowpack. Together, the density and crystalline structure determine how fast the snowpack melts and how much water it yields.

The Snow Survey Program is directed by the USDA-NRCS and provides an accurate system to forecast water supply from snowmelt in Colorado through the data that is collected each year. To gather the appropriate snow data, specially trained snow surveyors sample snowpack throughout the winter. Additionally, remote and hazardous snowpacks are able to be measured through SNOTEL automatic sensing and data transmission. Each SNOTEL remote site consists of measuring devices and sensors, a shelter house for radio telemetry equipment, an antenna, and solar powered batteries.



Left: Data collectors are weighing the snow to determine the amount of water content in the snowpack. It is converted to water inches and is compared to 30 year average to determine percent of average snowpack.

I spoke with snow surveyor, Boyd Byelich of NRCS in Longmont. Snow surveying is just one small part of Boyd's job. He, and two other coworkers, head out to specific sites at the end of each month during January through April. In the Front Range, there are five sites they visit regularly near Longs Peak, Ward, Peaceful Valley, and Arapahoe Basin. Boyd mentioned the sites are sometimes difficult to get to, often requiring snowmobiles, snow shoes, or a good pair of hiking boots. To get to the site on Long's Peak, for example, they must snowshoe four miles through difficult terrain near tree-line. And, the Peaceful Valley site requires either a ten mile snowmobile ride if you are lucky, or a rough hike if the conditions are poor.

Once at a site, it takes about an hour to sample the snowpack. Boyd explained the process, "We set up transects and take 5 to 10 snow core sample points. At each point, we weigh the core to determine the density, and we measure the snow depth."

The data collected from all across Colorado and other western states is assimilated to forecast local water runoff each spring. Scientists use this data for estimating stream and river flow volumes, reservoir storage capacities, and state and local water supply availability.

Check out the Colorado NRCS Snow Survey website at

<http://www.co.nrcs.usda.gov/snow/>

Take a look at the recent Colorado Basin Outlook Report for local data at

<http://www.co.nrcs.usda.gov/snow/fcst/state/current/monthly/data/reportselection.html>

Feeding Your Horse

By Cindy Einspahr, NRCS District Conservationist,
Adams County

You can keep your horse happy and healthy by making sure he has a good diet.

An average horse that weighs 1,000 pounds will consume approximately 1.5% to 2% of his body weight in feed each day. This is approximately 15 to 20 pounds of hay, pasture, and grain. My horse Diesel eats good alfalfa, grass hay, or pasture grass. Because I ride my horse, I feed him a small amount of grain. If your horse has a job, consider feeding him more grain, about 3 pounds for every two hours of activity. If your horse is not being ridden or just has too much energy and wants to buck, STOP feeding grain, it just may help. Salt and other necessary minerals should be provided to your horse in the form of a salt block, mineral block, or a fortified grain mix to balance his diet.



My daughter Hanna loves to ride Diesel

My horse Diesel eats about 600 pounds of forage each month. Most non-irrigated pastures produce 500 to 1,500 pounds of forage per acre, depending on rain fall, soil type, and species of plants. Natural Resources Conservation Service (NRCS) uses the following rule of thumb for grazing management, "Take-Half, Leave-Half." This principle helps us keep healthy grasses. It means that I look at the height of grass plants in order to determine if my horse can graze the pasture. I wait until the grasses are at least 6-8 inches high before I let my horse graze. Then, I remove my horse from the pasture when the grass is eaten to 3-4 inches, or half the height. My horse eats half and leaves half.

Some parts of the Front Range may require 29 or more acres to meet a horse's forage needs using the Take-Half, Leave-Half principle. On my small acreage, I limit Diesel's grazing to just several hours per day with supplemental feeding in his pen. If I let him in the pasture all the time he would eat everything and denude the landscape; plus eating only forage would give him a thin rough hair coat. Remember too that overgrazing causes weeds which don't help the value of your

property. Weeds and overgrazed pastures are what gives us horse people a bad name on small acreages.

So I need to buy hay for supplemental feed. Younger horses and high performance horses do well on alfalfa hay or grass mixes. Non-active mature horses do well on grass or grass/legume mixes. Feeding only straight alfalfa to the idle mature horse will cause obesity and digestive problems. I choose second cuttings rather than first cuttings of hay because they are higher in protein. Hay must be mold and dust free, and have minimal weeds.

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Feeding Your Horse continued from page 12

If you want your horse to be as happy and healthy as Diesel is, follow these simple tips. Feed an active horse a small amount of grain. Graze your pasture according to the Take-Half, Leave-Half principle. And supplement your horse's forage diet with minerals and hay.

If you'd like more information about keeping your horse healthy, check out the CSU Equine Science website at

<http://equinescience.colostate.edu/>



Small Acreage Seminar

June 5, 2010 (8:30-Noon)
Golden, CO

A free seminar for small acreage landowners will include presentations on Beekeeping, Forest Land Management, Sustainable Landscapes, Biological Control of Bindweed, Alternative Energy Resources, and Homestead Planning. Lots of time for questions. Seminar will be at the Jefferson County Fairgrounds Extension meeting room. RSVP to Jennifer Cook, jennifer.cook@colostate.edu or 303-659-7004 ext.3

Effective Forest Management Webinar

June 10, 2010 (Noon-12:30)

A webinar is a web-based seminar that is transmitted over the Web and can be viewed from any

computer with internet access.

Free!

Learn how to manage for forest health, wildlife, recreation, watershed protection, fire, weeds, insects, and diseases.

Presenter: Jonas Feinstein, NRCS State Forester

To register contact Jennifer Cook at Jennifer.cook@colostate.edu or call 303-659-7004 ext.3

Bindweed Mite Workshop

June 11, 2010 (2:00-3:15 pm)
Littleton, CO

Learn about how bindweed mites can help control bindweed on your property. One bag of bindweed infested with bindweed mites will be given to each participant. Presented by Arapahoe County CSU Extension, 5814 S. Datura Street, Littleton. Registration required by June 9. Call 303-730-1920 or email mspille@co.arapahoe.co.us

Biological Control of Bindweed Workshop

June 12, 2010 (8:30 am to 12:00pm)
Brighton, CO

Agenda – Bindweed Mites

8:30 a.m. Registration – Coffee & Donuts

9:00 a.m. Management methods for field bindweed

9:30 a.m. Determine if bio-control agents will work on your property

10:00 a.m. How to release bio-control agents on your bindweed (we will be going outside so dress appropriately)

11:00 a.m. Evaluation of program

11:15 a.m. One bag of bindweed infested with mites will be given to participants at the end of the program.

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Registration

Cost \$20/person; and \$10 for each additional person from same address.

Advanced Registration Deadline: June 11, 2010.

Call 303-637-8100.

At the Door Registration cost is \$25 per person

Location

CSU Extension /Adams County Parks Administration Building

Meeting room on the main floor

Adams County Regional Park/Fairgrounds, Brighton, CO 9755 Henderson Road

Small Acreage Weed ID and Control Workshop

June 23, 2010 (6-8pm)

Longmont, CO

This workshop is designed for small acreage landowners (owning 1-100 acres) to help individuals develop a

weed management plan. Identifying the weed species is the first step in weed management. You are encouraged to BRING YOUR WEED SAMPLES to the seminar for proper identification.

Once a weed is identified, the 4 weed control strategies (cultural, biological, mechanical and chemical) can be tailored to your situation. Participants will also learn about state and county weed laws.

To learn more about the workshop, and for registration information call Boulder Extension 303-678-6238.

Integrated Weed Management Webinar

July 8, 2010 (Noon-12:30)

A webinar is a web-based seminar that is transmitted over the Web and can be viewed from any computer with internet access.

Free!

Learn sustainable weed management strategies based on understanding the natural processes and mechanisms that direct vegetation change.

Presenter: Ryan Edwards, CSU Graduate Student

To register contact Jennifer Cook at

Jennifer.cook@colostate.edu or call 303-659-7004 ext.3

Understanding Weeds Webinar

August 16, 2010 (Noon-12:30)

A webinar is a web-based seminar that is transmitted over the Web and can be viewed from any computer with internet access.

Free!

Understand weed life cycles and growing preferences. Common weeds and appropriate control options will be discussed.

Presenter: Sharon Bokan, CSU Extension Small Acreage Coordinator

To register contact Jennifer Cook at

Jennifer.cook@colostate.edu or call 303-659-7004 ext.3



the date! Look for more details on the events page of the Small Acreage Management website, www.ext.colostate.edu/sam
Contact jennifer.cook@colostate.edu

Small Acreage Weed ID and Control Workshop

August 25, 2010 (6-8pm)
Longmont, CO

The workshop is designed for small acreage landowners (owning 1-100 acres) to help individuals develop a weed management plan. Identifying the weed species is the first step in weed management. You are encouraged to BRING YOUR WEED SAMPLES to the seminar for proper identification. Once a weed is identified, the 4 weed control strategies (cultural, biological, mechanical and chemical) can be tailored to your situation. Participants will also learn about state and county weed laws.

To learn more about the workshop, and for registration information, call Boulder Extension at 303-678-6238.

Small Acreage Workshop

September 11, 2010 (10-4)
Fort Collins, CO

Topics will include weed id and management, manure management, pasture establishment, backyard chickens, poisonous plants, and more. Many outdoor hands-on presentations. Location: The Ranch at the Larimer County Fairgrounds. Save



To keep updated on event listings, visit the **CSU Small Acreage Management website** www.ext.colostate.edu/sam/

Topics Include: Events, Frequently Asked Questions, Animals, Composting, Energy, Fencing, Organic Growing, Pasture/Range, Soil, Trees and Woodlands, Water, Weeds, Wildlife, Windbreaks and Living Snow Fences



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