



Boulder County Small Acreage Management

Fall 2008

<http://www.extension.colostate.edu/boulder/AG/smallacreage.shtml>

In this edition:

- Why you should volunteer for SAM– p. 2
- Native versus Introduced species for Grass Pastures– p. 2
- Fall Reseeding – p. 3
- Living with Wildlife on Small Acreages, Part 1– p. 6

Sharon Bokan

Sharon Bokan
Small Acreage Coordinator
CSU Extension, Boulder County

SAM Email Listserve

If you are receiving this newsletter for the first time and are not subscribed to the boco_small_acreage@colostate.edu listserv, you may request subscription on the SAM website (linked in header above). This quarterly e-newsletter and other timely info will be distributed via this email listserv.

Subscribers may use the listserv also as a SAM info gathering mechanism. For example, you may inquire about who is available in the area supply hay, to perform swathing/baling, etc.

The listserv is not a marketplace, however. Because it is hosted on the CSU server, **NO COMMERCIAL EMAILS ARE ALLOWED. DO NOT ATTEMPT TO SELL ANYTHING VIA THE LISTSERV – THANKS.** Use the newsletter ad section for these purposes.

Currently, there are 171 subscribers to the listserv.

From the SAM Coordinator

Small Acreage Management Volunteer Program for 2009

Boulder County Extension will again be offering the Small Acreage Volunteer (SAM) training in February 2009. Volunteers receive training in weed identification and management, grazing and pasture management. Applicants must be 18 years old. Previous small acreage management experience is desirable but not required.

Volunteers will answer client questions from a voice mailbox, identify weeds and other tasks as identified and are required to return 24 hours of service. The cost for training is \$95, which includes training, extensive resource manual, lunch and a copy of the 9th Edition of “Weeds of the West” (if you already own a copy, training is only \$60). Arrangements can be made for 2 payments.

Application deadline is January 19, 2009

Please stop by the Extension Office or see the link above for an application.

Why should you volunteer for SAM?

By Linda Garcia, SAM Volunteer

The Small Acre Management (SAM) program has been invaluable for me. I volunteered and here is why.

I was totally in the dark about how to take care of my own property. I called the SAM coordinator, Adrian Card, for advice on how to manage an acreage that was being taken over by weeds during the construction of my new house. Don't get me wrong, I have a lot of experience in gardening, gardening design, raising veggies, flowers, you name it; but 7 acres of field grass. OH MY!

Adrian came out and walked the fields with me. He explained the process of how to get the grass back to health in light of all the disturbance from building, and the drought that we all have experienced the past few years. I hadn't really taken care of the property in the previous years and I actually had allowed a neighbor to graze her horses on the property for a while. I did not live out there then. The horses did a lot of damage due to the drought and the fact that no one was monitoring their grazing practices. Adrian came up with a plan that included weeding, mechanically and spraying for weeds, re-seeding the areas that had been disturbed. And Adrian gave me a lot of information on what it takes to support grazing animals on grass pasture.

Adrian sent me information about the SAM program and volunteering for it. I actually jumped at the chance. I have learned so much about my own property and about what the county/state can offer for small acre owners. The information that I gained was invaluable. I am in a much better position to manage my own property.

As a SAM volunteer, I was on the phone lines, answering questions about problems that other landowners were experiencing. I had a lot of backup in case a question stumps you. There is a great web site with tons of information, and

other SAM volunteers who help you with answering questions for the clients.

Taking care of the land, erosion control, growing a beautiful crop of grass, information and where to find it, meeting wonderful people who want agriculture to make it in today's world; that is what SAM is about. Think about, why wouldn't you volunteer?



2008 SAM Weed identification training

Native versus Introduced Species for Grass Pastures

By Sharon Bokan, Small Acreage Coordinator and Joe Brummer, Associate Professor, Soil and Crop Sciences, CSU

If you are in the process of planting or renovating a pasture you may be debating whether to go with introduced or native grass species. You may be wondering what is a native and what is an introduced grass and what's the difference. Natives are grass species that were growing here prior to settlement and include buffalograss, Rocky Mountain and sheep fescue, slender and western wheatgrass, sand and little bluestems, sand drop seed, blue and sideoats grama, yellow indiangrass, prairie junegrass, and needlegrasses. Introduced species were brought in from other areas of the United States or the world and include smooth brome, Kentucky bluegrass, meadow and tall fescue, orchardgrass, timothy and several wheatgrasses.

Native grass pastures on the eastern plains are characterized by both bunch and sodforming

grasses. Bunchgrasses form clumps that get larger as they grow through the production of numerous tillers on a given plant. Sodforming grasses reproduce by sending out rhizomes (underground stems) and stolons (aboveground stems) from which new tillers arise. The greater the precipitation, the denser the sod that is formed when the pasture contains sodforming grasses. Because of low precipitation, most native grass pastures on the eastern plains will not be as dense as some irrigated pastures with introduced species. Even pastures of introduced sodforming grasses will contain bare areas when grown under dryland conditions.



Native grass mix, newly established

You may be concerned that this will allow weeds to establish in the “bare” areas. However, once well established, the grasses will send roots into those areas that out compete and prevent most weeds from establishing in those areas. The advantage of planting native species is that they are adapted to our soils, climate, and precipitation. Native grasses are normally slower to establish, but once established, they can weather the climatic variations, especially drought. One of the main disadvantages with natives versus introduced is their slower establishment. This means that you will need to do weed control over a longer time period. Some native grasses have a higher level of dormancy built into them as part of their survival mechanism. It can take several years before all the seed originally planted actually germinates.

Introduced species are grasses brought in from other areas of the United States or the world that grow well here. Several of them are sodformers,

which means that they spread by the root system (rhizomes or stolons) and form a dense mat of grass. Introduced species usually germinate and establish quicker and seed prices are generally significantly lower compared to native species seed prices. Since several are sodformers, they will give you a more solid, full look to your pasture, especially under irrigation. Smooth brome is the dominant introduced species in this area. It is a sodformer and can be aggressive. Over the years, it can out compete and crowd out other grasses in you pasture so that all you have is a smooth brome monoculture.



Established Smooth Brome pasture

As far as which is better nutritionally, you are not going to see a significant difference. Nutrition values can vary with climatic and soil conditions. The main difference will be in the potential long-term survival. Introduced species tend to produce more forage/year than natives, but also tend to be shorter lived. The limited research available indicates that nitrogen levels (crude protein) may be lower in the introduced species, especially at maturity. There has been some research comparing native and introduced species in areas beyond nutrition. There is evidence that native species have a higher below ground-to-above ground ratio of plant material than introduced grasses (a larger and deeper root system). This makes sense in that they are adapted to our soils and climate so they have developed sufficient root systems to survive drought and cold temperatures. Some of these studies also indicate that native grasses collect and store higher levels of carbon in the soil, reducing it in the atmosphere, which is good for

the environment. Studies are continuing to determine the effects of native versus introduced grasses on the local environment and the soil.

Since there is limited research information available, whether to choose native or introduced grasses for seeding is ultimately up to you, the landowner, and your goals. What do you want from the land – high forage production, drought hardiness, or just a “natural landscape”?

References:

http://ars.usda.gov/research/publications/publications.htm?seq_no_115=191446

“Aboveground productivity and root-shoot allocation differ between native and introduced grass species”, Wilsey, Brian J. and Polley, H. Wayne

“Coexistence of Native and Introduced Perennial Grasses following Simultaneous Seeding” Waldron, Blair L., Monaco, Thomas A., Jensen, Kevin B., Harrison, R. Deane, Palazzo, Antonio J., and Kulbeth, James D. Agronomy Journal, May 13, 2005

Fall Reseeding (timing, soil prep, methods)

By Kim Wolinski, SAM Volunteer

Looking over the county, our beautiful countryside makes one feel lucky to live here. Seeing horses, cattle, sheep, goats, llamas, alpacas and bison is fun and a great hobby or business. What we are looking at are lots of acres of pastures that take time and thought to keep healthy and vibrant for the livestock to feed, hang out! and create a longtime joy for the small acreage owner.

Good, healthy pastures are important for your livestock and grazing issues, but many more things too, including

- Conservation Needs
- Erosion Control
- Wildlife Habitat
- Establishment and Management of Plants Important to Our Land/Cultures

- Wildfire and Drought
- Air Quality

So, being a good steward of your land and taking care of pastures all year long is a big responsibility, and revegetating a pasture in Colorado can be challenging; with our drastic changes in temperatures, precipitation and weather along with the varying topography and soils.

Drought and grazing recovery does not happen overnight on even the most carefully tended properties. Staying on top of reseeding pastures throughout the year; while using managed grazing will make for a great pasture for years to come.

Simply tossing seed upon the ground will not produce good pasture. For success, the seed must be planted properly, and at the right time of year. The following are items to consider when planting and reestablishing vegetative cover on your property. Grass establishment is a process – not a single act – and may take multiple years for the final desired results.

Fall, Dormant Reseeding

Late fall, prior to the ground freezing is a good time to consider reseeding for our high plains and high mountain climate. This is commonly known as dormant seeding. Seed the grass from mid-November to mid-April depending on the elevation. **The key is to make sure the soil won't warm up and cause the seeds to germinate right before winter hits.** Dormant seeding will allow the seeds to sit in the soil while collecting winter snow moisture and spring rain. When the soil warms in the spring the seeds are there with moisture and ready to grow.

Planting Window based on Elevation

General Seeding Date Recommendations from the Natural Resources Conservation Service, <http://www.nrcs.usda.gov/>

SEEDING

DATES Non-irrigated plantings Elevation (in feet)	COOL SEASON PLANTS Dormant to Spring	WARM SEASON PLANTS Dormant to Spring
3,900 - 6,200 - PLAINS	Nov. 15 to Apr. 30	Nov. 15 to May 15
5,500 - 7,200 - FOOTHILLS	Oct. 15 to May 15	Oct. 15 to May 31
7,000 - 14,433 - MOUNTAINS	Oct. 15 to Apr. 30	Oct. 1 to Apr. 30

Reseeding Checklist

Resource links are given below for more in depth guidelines as well.

1) Weed Control and Plan for Control

Prior to planting any seed, the first step should be weed control. Weeds must be identified and a plan for control implemented. The plan may include spraying, light tillage, hand pulling or digging and planting a cover crop. Be aware of potential replant intervals from herbicide applications that will delay reseeded.

2) Species Selection

You will be looking for “cool-season” grasses, to be planted now with the major portion of its growth in early spring and early fall. Other considerations include irrigation, drought tolerant species are not as palatable, nor productive but are the only realistic option when sufficient irrigation water is not available. Another factor to consider is tolerance to salinity and standing water if these conditions exist. If the site is free of these constraints, consider palatability and yield. Herbicides can kill some seed if weed treatments are needed after establishment, check before treating. (See Resources links for seed selections below).

Some choices are:

FORAGE GRASSES: Cool-season grasses, like Smooth Brome, western or crested wheatgrass

3) Seed Bed Preparation

This includes a soil test so that you know what if anything you need to add to the soil prior to planting such as nitrogen applications or adding organic matter to the soil. Now is the time to correct any topography, drainage, or soil compaction issues.

4) Planting Depth

a) Drill Seeding

Most grass species including native seed establish most successfully if they are “drilled” into the soil about 1/4 to 3/8 inches deep on medium to fine textured soils. For sandy soils, plant at 1/2 to 3/4 inches deep. You will need a grass drill not a grain drill to plant grass seed. A grain drill will plant the seed too deep and it will not germinate.

Examples: Planting Depths

Wheat/barley/oats/rye: 1-2”

Sorghum/millet: 1/2-3/4”

Ryegrass: 1/2”

b) Broadcast Seeding and Hydraulic Seeding

If drill seeding is not possible, broadcast seeding may be accomplished by hand or mechanically with hand-held or vehicle-mounted spreaders. Seed is broadcast onto a prepared, roughened seedbed, followed by raking, dragging or rolling to cover as much of the seed as possible with about 1/4 to 3/8 inch of soil. Some seed will remain visible and will not germinate. Since broadcast seeding is not as efficient, higher pounds per acre planting rates are required often double the drilled rate. Hydraulic seeding, applying seed in a stream of water and mulch, is another possibility.

5) Temporary Cover Crops

In some instances, it is necessary to plant a cover crop. If you have a severe weed problem or are unable to plant in a given year, a cover crop can be used to gain control on the weeds and provide protective stubble to plant into.

Some choices are:

GRAINS: Barley, Triticale, and Winter Rye

Winter Rye



6) Grazing

New seedlings should be protected from grazing and trampling until the plants are established enough so that grazing animals will not pull them up.

Resources:

For more in depth information on each of the above topics, go to

<http://www.extension.colostate.edu/boulder/AG/smallacreagepasture.shtml> , click on *Grass Seed Planting Tips*, and *Forage Plants for the Northern Front Range*.

For the complete Cool and Warm plants chart on this information, go to

<http://www.extension.colostate.edu/boulder/AG/smallacreagepasture.shtml> , click on *Seeding Dates for Boulder County*

For Seeding Charts and seed choices, see -

<http://www.avseeds.com/ResourcesLinks/Resources/default.aspx> , click on the *Farm Products Seeding Chart* and a nice long list of options, click on their *Pasture & Reclamation Seeding Chart*

We have great Seed Companies for Pasture/Prairie/Range in our area. See each for seed choices and more, they'll be happy to help you anytime.

- Arkansas Valley Seed Solutions, Longmont, CO, 970-535-4481
www.avseeds.com
- Pawnee Buttes Seed, Inc.,

Greeley, CO, 800-782-5947

www.pawneebuttesseed.com -

See online *Guide to Grasses*

- Sharp Brothers Seed Company, Greeley, CO, 970-356-4710
www.sharpseed.com
- Wind River Seed, Manderson, WY, 307-568-3364
www.windriverseed.com

Living with Wildlife on Small Acreages Part 1 of 2, Large and Medium Mammals By Sharon Bokan, Small Acreage Coordinator

When people move to a small acreage for a “quieter rural” lifestyle, they may not realize the number of uninvited guests they may have. Small acreages come with the wildlife that’s living on the land or is attracted by what is being grown. Whether you live in the city, plains, foothills or mountains, wildlife is an issue. Development in the past chased the wildlife away. Over the years, the wildlife has adjusted to our traffic and activities and is now coming back to prior habitats. We will look at various species and what attracts them and what the homeowner can do to reduce unwanted human/wildlife interaction.

Deer and Elk

Deer and elk browse on vegetation and rub their antlers on trees and shrubs. The first defense is to plant plants that are least desirable for browsing. This is no guarantee that they won’t browse on any plant but it is a place to start. (See Fact sheet 6.520 Preventing Deer Damage for a list of plants). If deer are hungry enough, they may still eat any plants. The second defense is exclusion. Fencing can protect gardens and young plants from browsing. Although not very attractive, fencing keeps the deer from reaching the plants. The final option is repellants. From research, the best repellants for both deer and elk are Hot Sauce (100X), Deer Away and coyote urine. These repellants will only work for a little while and must be

reapplied periodically (see label) or after precipitation.

Bears

Bears are omnivores, which means they eat both vegetative material and animal flesh. Their sense of smell is their main way of locating food, so that is the best way to not attract them. Clean your grill thoroughly and store it inside, keep pet food locked up when not feeding pets, hang bird feeders between trees and not on the deck. If you have fruit trees, clean up the dropped fruit, do not put fruit, melons, etc. in compost piles. Keep trash containers locked up or confined in such a way as to prevent access. If you live in an area with significant bear activity, keep all foods and other items that smell (i.e. Soaps, air fresheners) behind closed sturdy doors and windows with bars or grates. Keep car windows closed. Remove tree limbs that allow access to upper decks and windows. Put a talk radio show on when you leave. As with deer and elk, consider what you plant on your property, trees and shrubs that produce fruit may attract bears.

If you end up with a bear in your yard, do not attempt on your own to chase it. Contact the Colorado Division of Wildlife (Denver area 303-291-1192, Fort Collins 303-484-2836) or your local police or sheriff's department. Bears can be active anytime of the day but tend to rest during the day and be more active at dawn and dusk. If you encounter a bear do not run remain calm and slowly back away. If attacked, fight back with a black bear (not so with a grizzly). Do not look directly at the bear as they may see this as a threat.

Mountain Lions

Mountain lions are most active from dawn to dusk. Their preferred prey is deer but they will also eat small mammals, livestock and pets. Since they hunt their prey by stalking remove areas where they can hide. Discouraging deer and other potential prey can reduce mountain lion activity. Don't feed deer, elk or other wildlife. Plan landscaping to avoid potential hiding places for mountain lions. Make it tough for them to approach you unseen. Keep

children's play areas in the open and consider fencing in these areas. Keep pets and livestock enclosed at night, install lights for areas you need to access at night. Do not feed pets outside and store garbage securely. If you encounter a mountain lion do not run, slowly back away, do anything you can to appear larger (open a coat if you have one), talk to the lion, pick small children up to keep them from running, if attacked, fight back. If you encounter problems, contact the CDOW, police or sheriff.

Coyotes and foxes

Coyotes main food supply comes from small mammals (mainly rabbits, mice, prairie dogs, gophers), young livestock and domestic fowl, pets and when needed plants. They adjust their diet based on what is available. Coyotes are normally nocturnal (most active at night) but may be diurnal (active day or night). Coyotes are quite adaptive to changing environments and may be found not only in open space by also in towns and cities. Keep young livestock, fowl and pets in enclosed spaces, don't leave pet food or garbage accessible; do not allow dogs to run loose. If you encounter a coyote use a loud, strong voice to frighten the coyote, if the coyote approaches use sticks or stones to frighten them

Foxes tend to be nocturnal but may be seen during the day. Like coyotes, they will eat many things such as mice, bird eggs, rabbits, insects and native fruits although they may attack even larger animals. They stalk their prey so they require cover like mountain lions. Keep all potential food sources: grills, garbage cans, pet foods and bird feeders secure. As with mountain lions, plan landscaping so that they do not have hiding places.

Raccoons and skunks

Raccoons like bears, coyotes and foxes eat both plants and animals including crayfish, fish, frogs, insects, mice, rabbits, young birds and eggs in addition to grains, nuts, fruit and berries. They are mainly nocturnal. Like bears, coyotes and foxes, keep food sources out their reach, prevent damage to crops such as grapes and corn by excluding raccoons with hot wire fencing, use of

hot sauce or wrapping corn ears with reinforced filament tape. Use of a radio (tuned to talk radio station), motion activated light or motion activated sprinklers (Scarecrow), electronic pest control devices can also be tried. These devices should be alternated and used together for maximum effect. Prevent raccoons from accessing the house by a cap over the chimney and pruning tree limbs back away from the roof. Pet doors allow easy access to food and shelter, so you may want to reconsider having one. If you get a mother raccoon in your attic with babies it's best to wait until she leaves with her young ones on their own and then close up their access points.

The same advice and information applies for skunks. If you have a skunk under a porch, make a ball out of an old sock, tie a string around it leaving a retrieval tail and soak it in ammonia. Toss the soaked sock ball into the hole. Cover the hole lightly, recovering as needed until the skunk no longer uncovers the hole. To prevent a skunk or other undesirable animal from entering the hole, dig on either side of the hole and place hardware cloth in the hole and backfill.

Part 2 contains small mammals and reptiles and will be in the Winter 2009 newsletter.

References:

“Living with Wildlife in Bear Country” (3-98), Colorado Division of Wildlife

“Preventing Deer Damage” (3/01), CSU Fact Sheet 6.520, C. E. Swift, M. K. Gross

“Reducing Property Damage by Elk”, S. Werner, L. Childers, K. Demarest, Colorado Division of Wildlife

“Living with Wildlife in Lion Country”, Colorado Division of Wildlife

“Living with Wildlife in Coyote Country”, Colorado Division of Wildlife

“Foxes”, R. Phillips, Denver Wildlife Research Center; R. Schmidt, U.S. department of Fisheries and Wildlife

“Raccoons”, “Prevention and Control of Wildlife Damage”, E. Boggess

“Coping with Skunks”, W. F. Andelt, S. N. Hopper, CSU Extension Fact sheet 6.500

**Place your SAM related
classified ad or print
advertisement here!**

Classified Advertising Rates are as follows:

SAM Volunteer: 20 cents/word

4-H Member/Leader: 20 cents/word

General Public, Individual: 25 cents/word
General Public, Business/Show: 30 cents/ word

Print Ad Rates are as follows:

Quarter Page Ad: \$50.00

Half Page Ad: \$80.00

Full Page Ad: \$100.00

Email Adrian Card for more details

acard@co.boulder.co.us