

# Southern Colorado Ag News

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## Welcome Spring!

Spring is here. For awhile I thought it might evade us, but as I write this it is a beautiful, warm day outside. I hope your muddy corrals and fields are drying out and everyone is ready for spring work.

Thank you to those who sent in your postcards! We had a great response and I now have a better idea of the program topics you are interested in learning about. Many people are interested in livestock, weed control, small acreage management and rangeland monitoring.

Make sure you sign up for the Small Acreage Management workshop by April 9. The workshop will be held on Saturday, April 17. Many of the topics people wrote on their postcards will be included in this event.



In June you can learn about rangeland monitoring. This will be a great time to examine your grazing regime or get tips on how to improve your management.

We have contacted our lucky winners and awarded them with the prize of a gift certificate to Big R. Thank you and congratulations!

As always, if you have any questions or program requests feel free to let me know!

Best wishes,

*Emily Lockard*

Emily Lockard  
Extension Agent  
Range and Natural Resources

Emily Lockard is the Extension Agent for Range and Natural Resources Management in the Colorado State University Extension Pueblo County office.

## Soil and Soil Testing

By Emily Lockard

Most of us think of soil as an after thought, but maybe we should take a closer look. If we do think of our soil health, we may look at its relationship to plant growth. While plant growth is very important, healthy soil can do so much more for us and our surrounding environment.

Soil has five important functions: Soil helps to catch, hold and control rain, snowmelt, and irrigation. Soil also helps to act as a filter for water as it collects materials/nutrients dissolved in water. Soil helps catch potential pollutants by either filtering, buffering, degrading, immobilizing, or detoxifying organic and inorganic materials, reducing pollutants or breaking them down to prevent them from reaching our aquifers and water bodies. Soils support plant and animal life as we know it. Soils cycle nutrients such as carbon, nitrogen, and phosphorus by storing, transforming, and cycling nutrients. Soil also supports structures such as buildings as well as plant roots structures.

If you think about the five important functions of water, the next step is to think about what you can do to improve your soil's ability to function properly. Here are a few tips and things to think about for each function:

Soil water management– reduce water erosion by establishing vegetation

Organic matter and soil nutrients– having established vegetation is the best way to build organic matter, but you can also add organic matter with compost, fertilizer, or mulch as needed to meet your production goals

Soil compaction– plants' roots need room to grow, but when the soil is too compacted it can restrict plant root growth which will inhibit the plant's above ground growth. Soil compaction can be reduced by minimizing traffic, or high impact grazing, especially when the soil is wet.

A soil test won't necessarily tell you if your soil is compacted or if you have severe water erosion, but a soil test can help you determine what nutrients your soil is lacking or in excess and help you determine your soil type. The information from a soil test is a good first step in creating a plan to improve or maintain your soil health and land productivity. The CSU Soil, Water, and Plant Testing Lab on the campus of CSU Fort Collins can do a variety of soil tests. For the forms you will need to submit a sample go to <http://www.soiltestinglab.colostate.edu> and there are also independent labs that do soil testing.



Soil Probe

How to take soil sample:

You can use a soil probe, but a shovel or garden spade also works. Remove vegetation and litter from the soil surface. It is usually recommended that you take about 6 inches for a soil sample. If you use a shovel or spade to take a soil sample you will take about a 1/2 inch core from the slice you get from your shovel.

Take about 5 samples from small areas. If you have different treatments for different fields or garden plots, it is recommended that you submit them as different samples so you can see the results of your different treatments. If you are testing large acreages, you can submit up to 80 acres as a single sample if the area has had similar treatments, but you may want to sample in 40-acre units. For each area you should take about 15-20 samples. You can then combine your individual samples from each area and submit it as one sample to

## Soil and Soil Testing *continued*

the lab. This means that if you have 120 acres you should have a total of at least three 40-acre areas that you sample. From each 40-acre area you should take at least 15 soil samples. You can then thoroughly mix the 15 soil samples and place them in a plastic bag to be submitted to a lab.

What do soil tests normally test for?

Organic matter, pH, salts, nutrients (nitrogen, phosphorous, potassium) and micronutrients (Copper, iron, manganese, and zinc). Additional tests can be done and other specific sampling methods may be best for different types of tests.

For more information on the CSU Soil, Water, and Plant Testing Lab call (970) 491-5061.

## Calf Scours

John Maas, DVM, MS

Diplomate, ACVN & ACVIM

Veterinarian Medicine Extension

School of Veterinary Medicine, University of California, Davis

**What causes calf scours?** As new calves arrive, so does the threat of the common condition known as "calf scours" or neonatal calf diarrhea. Infectious agents such as viruses and bacteria cause this condition. These agents have the common property of causing a **net loss** of water and electrolytes from the calf's body via the gut. This causes potentially life-threatening dehydration and electrolyte imbalances that can result in death. The main infectious organisms that can cause diarrhea in beef calves are: Rota virus, Corona virus, *Cryptosporidium parvum*, and *E. coli* (K99 enterotoxigenic form).

The first three on the list usually cause diarrhea at 7 to 21 days of age, while the common *E. coli* strains cause diarrhea within the first few days of life. The diarrhea is the result of a combination of factors including: (1) dose (number) of organisms the calf is exposed to, (2) calf immunity (colostrum), and (3) stress on the calf. The number of organisms in the calf's environment is a result of sanitation or the lack of sanitation, i.e., mud, manure, and other cattle. The immunity of the calf is dependent on the quality and quantity of colostrum that the calf received from the cow. Calves that do not receive adequate colostrum are much more susceptible to disease and are at much greater risk of dying from the resulting diarrhea that occurs. Stressful conditions (low milk production by underfed cows, bad weather, crowding) further increase the risk of diarrhea in young calves. The balance of all these factors determine if disease occurs and the severity of disease.

**When should I treat the calf?** Calves running around the pasture with their tails in the air, bucking and kicking with yellow or white diarrhea may not need treatment. The main indications for treatment are (1) general disposition, (2) appetite, (3) dehydration, and (4) body temperature. If the calf is weak, depressed, or reluctant to move, these are all indications that something is wrong. If the calf is not eating, the cow's udder will be distended and this is a sign of trouble also. Dehydration can be evaluated easily by pulling up the skin on the side of the neck or shoulder. In a normal calf, the skin snaps back into position quickly. In a dehydrated calf, the skin remains "tented" for a period of time—the longer it remains "tented" the worse the dehydration. Also, as dehydration worsens, the eyeballs sink back away from the eyelids—this is a bad sign and fluids are indicated immediately. Normal body temperature (measured with a rectal thermometer) is 100.5° F to 102.5° F. Body



## Calf Scours *continued*

temperatures less than 100° F or greater than 102.5° F are a sign of problems and treatment should be started.

**What are the recommended treatments?** The main treatment is fluid therapy. Secondary treatments are antibiotics and nursing care. Because the main problem in scouring calves is loss of body fluid and electrolytes, the primary treatment must be aimed at restoring the water balance. The calves are thirsty, but they are too sick to drink. Therefore, the first line of treatment is **oral electrolyte solutions**. There are a number of excellent commercial products on the market for treatment of calf scours. All of these products contain glucose or a similar material, sodium chloride (table salt), and other electrolytes. The glucose and sodium allow the animal to absorb the water they need from their digestive tract. **Giving straight water does not work.** Usually 2 liters (just over 2 quarts) of the oral fluid solution is given 1 to 3 times per day to the sick calf. Consult with your veterinarian regarding the appropriate oral electrolyte product for your operation. **Always follow the label mixing instructions**—do not add too much powder to the solution as this may kill the calf and unnecessarily add to the cost of treatment. Antibiotics are often given to scouring calves even though antibiotics do not kill most of the calf scours agents. Due to damage in the gut of scouring calves, bacteria will "leak" into the blood stream of these calves and cause further problems. Antibiotics are of value for this reason. Again, consult with your veterinarian regarding the correct choice of antibiotics to give. Many of the antibiotics are not labeled for calf scours and thus require a prescription from your veterinarian and an extended withdrawal time. Avoid the use of injectable gentamicin or kanamycin. Tissue residues from these drugs can persist for up to one year and can cause problems in the packing plant. Long acting tetracyclines can cause some kidney damage in dehydrated calves and should be avoided. Baytril® is not labeled for scouring calves and should



not be used. In addition to fluids and antibiotics, nursing care may be essential for the calves to recover. Shelter from the wind, heat lamps, etc., can be very helpful. However, this requires some type of facility and may result in a contaminated environment and increased spread of the germs that cause calf scours. Additionally, the problem of separating the cow and calf has to be solved. **When treating sick calves, always treat them after you have attended to all the normal calves.** This will decrease the spread

of germs from the sick calves to the younger healthy calves. Also, keep all your treatment equipment clean—including your hands and clothes, as you can easily transmit these agents.

**When do I need additional help?** If your treatment methods are not working, contact your veterinarian immediately for additional help. If more than 5% of your calves are scouring and require treatment, you need help. If death loss is greater than 2% due to calf scours, contact your veterinarian.

## Emergency Food and Water Recommendations for Livestock

Adapted from Clemson Cooperative Extension,  
[http://www.clemson.edu/extension/ep/food\\_water\\_req.html](http://www.clemson.edu/extension/ep/food_water_req.html)

While we should always be prepared for emergencies we should also be aware of the basic requirements of our livestock as we start getting warmer weather and as we approach fire season. Water should ALWAYS be provided to all animals. Animals (except birds), like people, can go extended periods of time without food, but can only last a couple of days at the most without water. The values below are approximate per adult animal per day and may vary

## Emergency Food and Water Recommendations for Livestock continued

greatly with temperature, workload, stress and disease. Sources of feed should be identified before a disaster.

In general most herbivorous animals are going to eat approximately 1-2% of their body weight in some form of "roughage." Roughage is hay or hay-like products (pellets, cubes, hay, etc.) In an emergency grain products ("concentrates") need not be given, but can be helpful in some cases.

### Disaster Food Schedule

SPECIES	>WATER (Summer/ Winter)	>FOOD (Type)	>FEED (Quantity)	FEED (Frequency)
<b>Beef Cattle</b>	5-15 Gallons	alfalfa &/or oat	15-30 lbs	Daily
<b>Dairy Cattle</b>	5-30 Gallons	alfalfa	15-40 lbs	Daily
<b>Horses</b>	5-15 Gallons	alfalfa &/or oat	8-15 lbs	2x Daily
<b>Pigs</b>	1-2 Gallons	pig pellets/mixed grains	1-7 lbs (depending on weight of pig)	once or twice daily
<b>Llamas</b>	2-5 Gallons	alfalfa &/or oat hay	2-4 lbs	2x Daily
<b>Sheep</b>	1-2 Gallons	alfalfa	2-5lbs	Daily
<b>Goats</b>	1-2 Gallons	alfalfa &/or oat hay	1-5 lbs	Daily

## Know a Native— Got Grama?

### Blue Grama, *Bouteloua gracilis*

- Blue grama is the State Grass of Colorado.
- Perennial—Lives more than two years.
- Native—Occurred in North America before settlement by Europeans.
- Warm season grass—grows during the warmer portion of the year, starts growing in May or June and flowers June to October.
- Good forage quality for all classes of livestock and wildlife, quality is highest when it is green, but it keeps much of its value when dry.
  - Fresh, early vegetative 41% dry matter and 5.4% protein
  - Fresh, mature 63.4% dry matter and 4.1% protein (*Jurgens, 2002*)
- Good for fall and winter grazing.
- Clump forming, hardy grass.
- Shade intolerant.
- Grows up to 9,500 ft.
- Found on open plains, mesas, foothills, and woodlands.
- Grows in all soil textures, but most abundant in sandy or gravelly soils. Not found in wet or poorly drained soils.



USDA-NRCS PLANTS Database / Hitchcock, A.S. (rev. A. Chase). 1950. *Manual of the grasses of the United States*. USDA Miscellaneous Publication No. 200. Washington, DC.

## Small Acreage Management

### Workshop

Saturday, April 17, 2010

9:00 a.m. – 4:00 p.m.  
Pueblo County Conference Room  
1001 North Santa Fe Ave.  
Pueblo, CO 81003

#### Learn about:

- Management plans, goal setting, and your local resources!
- Grazing management and plant growth!
- Noxious weed ID and control!
- Revegetation and restoration!
- Livestock feeding, shelter, and behavior!

Colorado  
State  
University

Extension

Call CSU Extension Pueblo County at (719) 583-6566  
by April 9 to register (includes lunch)  
\$10 per person—\$15 per couple, additional \$5 after April 9

## Building Farmers and Ranchers Program

2010

Pueblo County

### Building Farmers and Ranchers Program

Building Capacity - Building Community



#### **Farmers and Ranchers Teaching Farmers and Ranchers**

The Colorado Building Farmers program builds farm community and farmer capacity through classroom and experiential learning for beginning farmers (0 – 10 yrs exp). The Farm and Ranch Track is a series of 8 evening classes designed to help New Farmers and Ranchers explore farming and ranching as a business and provide Intermediate and Experienced Farmers and Ranchers with tools and ideas to refine and enhance their business management, production, and marketing skills.

**This program is intended for those persons with experience who are serious about starting, expanding, or enhancing their farm or ranch operation in the coming year through conventional or alternative markets.**

Applications Due August 31, 2010

Classes Every Monday Beginning October 25, 2010 to December 13, 2010

All Classes held at Pueblo County Extension Office, 701 Court St., Suite C

For more information or questions call Emily Lockard (719) 583-6566

Check the Pueblo County Website for more info soon

**<http://pueblo.colostate.edu>**

## 2010 Yard and Garden Classes



### 2010 Yard and Garden Class Schedule

Class cost for the public ranges from \$15 to \$20 and is listed below.

Cost for active Colorado Master Gardeners is \$5 per class



DAY	DATE	TIME	CLASS TOPIC	LOCATION	Public Price
Tues.	April 13	various	Trough Making Part 1 of 2	Fine Arts Bldg, Fairgrounds	\$20 for both
Tues.	April 20	various	Trough Making Part 2 of 2	Fine Arts Bldg, Fairgrounds	
Tues.	Sept. 14	6-9 p.m.	Preparing for Spring	County Conference Room	\$15
Tues.	October 5	6-9 p.m.	How Green is Your Compost?	County Conference Room	\$15

Registration is due at least a week before each class

Please contact CSU Extension at (719)583-6566 for registration forms and more information

## Native Plant Master™ Program



### Native Plant Master Courses

Distinguishing native plants from noxious weeds is just one of the skills that participants learn in the award-winning Native Plant Master™ Program, sponsored by Colorado State University Extension. Participants also learn about native wildflowers, shrubs and trees.

For more information, call 719-583-6566 or visit <http://pueblo.colostate.edu>. Applications due April 23, 2010

## Noxious Weed Control

### NOXIOUS WEED CONTROL PLAN

- 50% Cost Share (up to \$1,000) is available to property owners who apply and are afflicted with a species of weed listed on the Colorado Noxious Weed A or B List.
- Turkey Creek Conservation District highlights their role in Pueblo County's Noxious Weed Control Program.
- User friendly method of making this cost share an easy reality for landowners.

Contact Turkey Creek Conservation District at:

call: 719-543-8386 ext. 116

email: [info@puebloweeds.com](mailto:info@puebloweeds.com)

website: [www.puebloweeds.com](http://www.puebloweeds.com)

## Upcoming Events

### **April**

#### **Small Acreage Management Workshop (Register by April 9th!)**

**April 17, 2010, 9 a.m. – 4 p.m.**

Pueblo County Conference Room, 1001 N. Santa Fe Ave.

Learn about:

- Management plans, goal setting, and your local resources!
- Grazing management and plant growth!
- Noxious weed ID and control!
- Revegetation and restoration!
- Livestock feeding, shelter, and behavior!

Lunch Included! \$10 per person / \$15 couple

**Contact:** CSU Extension office to register (719)583-6566

#### **Seedling Tree Pick up**

**April 23** (Can be rescheduled due to bad weather)

Colorado State Fair Grounds

Contact: CSU Extension (719)583-6566



### **June**

#### **Rangeland Monitoring Workshop**

June 2, 2010

Walsenburg, CO

**Contact:** CSU Extension Las Animas County (719)846-6881



### **August/ October**

#### **Building Farmer and Rancher Program**

**Applications Due August 31, 2010** Space is limited so turn in your application ASAP!

**Classes Start October 25, 2010**

**Location:** Pueblo County Extension Office, 701 Court St., Suite C

Download an application from our website <http://pueblo.colostate.edu>

**Contact:** Emily Lockard (719) 583-6566



#### **Monthly meetings:**

Pueblo County Stockmen's Association Meets the first Thursday of each month at Mesa Vet Clinic at 7:30 p.m.

Turkey Creek Conservation District meets the 2nd Tuesday of every month Time: 2:30 p.m.  
Location: 200 S. Santa Fe Ave. 4th floor Call: (719) 543-8386 Ext. 3 for details

South Pueblo Conservation District meets the 3rd Thursday of every month Time: 7:30 p.m.  
Location: 200 S. Santa Fe Ave. 4th floor Call: (719) 543-8386 Ext. 3 for details