



Southern Colorado Ag and Range Newsletter

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Ag Agent Greeting

The last three months seem to have flown by again. Other than one week of cold, the weather has been overly nice this fall. Although it has allowed for nicer conditions to get outside work accomplished, some moisture would be greatly appreciated by most of us. I have seen several long range forecasts for the coming months and the only thing I can say is—maybe one of them is right. I believe that it is possible to find a forecast for any scenario you want to see and all seem to have a good reason to back it. Let’s just hope we can get some decent moisture this winter and have a productive year.



Most of my time the last three months has been spent at meetings and classes. From these events I have gathered a great wealth of information that I hope to share with you in the upcoming year. We have several classes already planned for next year, including Direct Marketing of Livestock, as well as a two evening courses on bee keeping. I am also trying to get something put together on planting and caring for trees to go along with the seedling tree sales from the Colorado State Forest Service (see pg 3 for details). And, watch for program information about weed management, rangeland management and water.

The Ag Advisory Committee is organized and has met a few times this year. I would like to thank those who are part of it for their time and support to CSU Extension/Pueblo County. The members are: John Shue, Debbie Rose, Dan Hobbs, Betsy Brown, Mike Hill, Carol Elkins and Robert Barr. We will be meeting periodically throughout the year to discuss issues and programming needs of the county.

I wish you all a happy holiday season and a prosperous New Year. As always if you have a question, idea, or just want to chat, feel free to contact me. I am always looking for new ideas and want to tailor our program for the needs of the county.

Office Hours:
Monday—Friday 8 a.m.—5 p.m.
(excluding holidays)

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Find us on Facebook

www.facebook.com/CSUExtensionPueblo

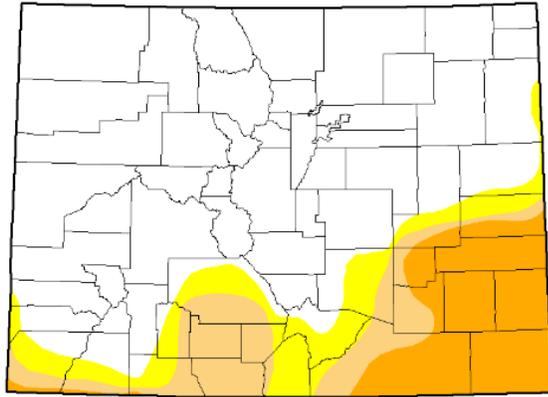
All articles written by Tom Laca unless otherwise indicated.

U.S. Drought Monitor Colorado

December 16, 2014
(Released Thursday December 18, 2014)
Valid 7 a.m. EST

Statistics type: Traditional (D0-D4, D1-D4, etc.) Categorical (D0, D1, etc.)

Drought Condition (Percent Area):



Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2014-12-16	69.87	30.13	21.26	12.26	0.00	0.00
Last Week	2014-12-09	69.87	30.13	21.26	12.26	0.00	0.00
3 Months Ago	2014-09-16	63.98	36.02	25.12	15.56	2.67	0.00
Start of Calendar Year	2013-12-31	32.04	67.96	22.33	13.56	4.01	1.47
Start of Water Year	2014-09-30	68.96	31.04	22.94	13.82	2.31	0.00
One Year Ago	2013-12-17	32.04	67.96	20.95	12.50	4.01	1.47

Population Affected by Drought: **158,702**

[View More Statistics](#)

Intensity:

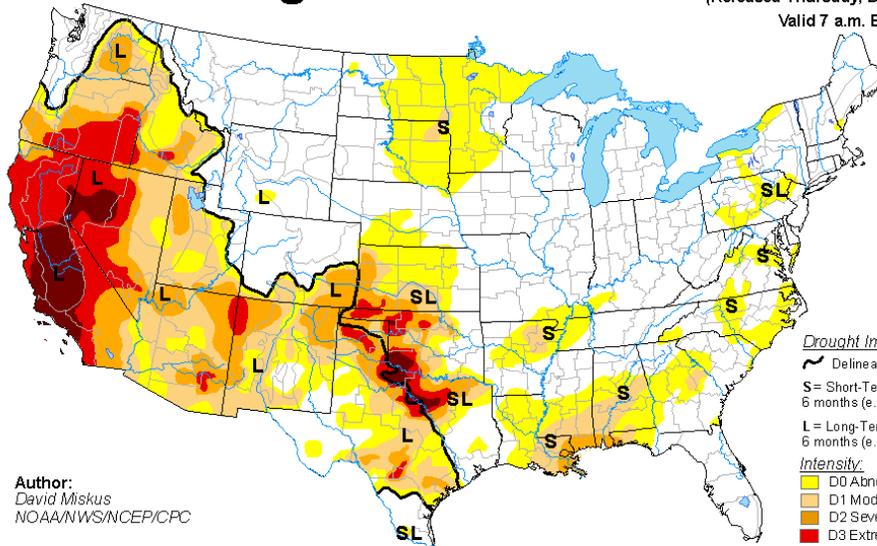
- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought

For more details and maps go to:

http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

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Author:
David Miskus
NOAA/NWS/NCEP/CPC

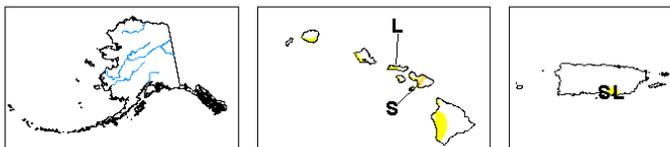
Drought Impact Types:

- Delineates dominant impacts
- S** = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L** = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>

This map is updated weekly and can be viewed at <http://droughtmonitor.unl.edu/>

From this website, if you are viewing the US map, click on the state of Colorado to view a more detailed map.

CSU Extension-Pueblo County has seedling trees for sale in cooperation with the Colorado State Forest Service (CSFS) Nursery. Applications will be taken until April 7 with delivery scheduled for May 1, 2015 at the Colorado State Fairgrounds. This year the nursery has new species in addition to their wide variety of trees and shrubs and are sold on a first come, first served basis, so order early. No plant purchased from the CSFS may be resold. Before ordering you can check the inventory at: <http://csfs.colostate.edu/nursery/inventory.aspx>.



The only program qualification is that the seedlings be used for conservation practices only. If you have purchased trees from us in the past, you should have received an application in the mail. Applications are also available through our website at <http://www.coopext.colostate.edu/Pueblo/nat/seedling.shtml> or by contacting CSU Extension – Pueblo County at 583-6566.

Know a Native—Slender Wheatgrass, *Elymus trachycaulus*

Facts:

- Native, Cool season, Perennial
- Moderately drought tolerant
- Fibrous roots occasionally producing short rhizomes
- Erect, tufted bunchgrass
- Grows 24-30 inches tall
- Stems have reddish to purplish tinge at the base
- Palatable and nutritious for livestock
- Moderate tolerance to alkali and saline soils
- Fast growing grass which can quickly establish on critical sites
- Utilized in many seed mixes as an early ground cover
- Early seral species used widely for revegetation



Sources: CSU Extension of Gunnison County and Iowa State University

Noxious Weed Control Plan

- 50% **Cost Share** 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 719-543-8386 ext. 116 or email: info@puebloweeds.com

website: www.puebloweeds.com

Severe wind and cold can cause significant problems for livestock and their owners. Evidence of such problems—the blizzard that struck South Dakota on October 4-5 of 2013. The wind, snow, and cold resulted in major cattle loss. The storm caught many by surprise and the loss was estimated to be approximately 5% of the region's cattle herd. As an example in Colorado, the blizzard of 2006-2007 caused damage to livestock herds as well as buildings and fences.

What to Expect

- Drifting snow can cause damage to fences and buildings.
- Water sources and stock tanks can become damaged or compromised.
- Accumulations of snow can prevent vehicle access to feed/animals.
- Accumulations of snow can bury or trap cattle, especially young animals, and prevent them from reaching shelter or feed.
- Snow will cause winter range or pasture to become inaccessible for grazing and more difficult to navigate as snow accumulates.
- Ice storms will make pasture or winter range forage inaccessible, more so than snow alone.
- If present, rangeland shrubs may be more accessible for livestock and be higher in protein than grasses.
- Extremities that become wet or are normally damp are particularly subject to frostbite and freezing during sub-zero weather. Livestock may lose or have damaged ears and/or tails.



Shelter

- Before or immediately at the onset of a blizzard or ice storm, move animals to feed and shelter promptly.
- In short duration and small snow storms, landscape topographic features such as ravines, canyons, draws, and windbreaks may be sufficient protection from elements for livestock
- In larger snow storms and longer duration storms, landscape topographic features such as ravines, canyons, draws, and windbreaks may become inundated by snow and trap livestock.
- Young/smaller animals are at greater risk of becoming buried by snow.
- Young/smaller animals are more at risk to cold temperatures.
- Shelters, sheds, or windbreaks are necessary to protect livestock from winter storms.
- Cold temperatures without wind are usually not enough to affect the performance of animals receiving full feed.
- A 20 mph wind is roughly equivalent to a 30° F drop in temperature.
- Under extreme winter storm conditions, simple shelters alone will not be 100% effective in protecting livestock.
- Always plan on snow being accompanied by wind when planning your livestock protective areas.
- Trees that have no leaves during winter are relatively ineffective windbreaks. Evergreen trees such as fir, pine, and juniper are much effective types of trees for windbreaks.
- Plan and know where snow will drift under different wind conditions so that you can make appropriate plans of how to clear gates, shelter openings, barn doors, and roads when snow begins to accumulate.
- Low ceiling sheds with an open front often provide excellent shelters for livestock. Open front sheds should have slot openings located along the eaves of the back of the shelter. Slot openings will allow enough ventilation and airflow through the shed to prevent snow from swirling and accumulating in abundance in front of the shed. Slot size along the eave should be 1-2 inches in size for every 10 feet of building width. Ridge vents are recommended.

Feed

- Having abundant and accessible feed will help animals maintain body temperature and survive cold temperatures.
- Livestock need extra feed in severe and prolonged cold weather in order to keep up body heat and maintain body condition.
- As wind and the wind chill factor increases, abundant feed alone will not be enough to keep animals warm.
- Make sure stored winter feed is of good nutrient quality for the type of livestock you are feeding.
- Make sure you have enough stored winter feed to meet the demands of your livestock for the winter, with plenty to last you in case of prolonged winter storms.
- If a storm lasts for more than 2 days, emergency feeding methods may be required. Pelleted cake or cake concentrates are examples of emergency feeds.
- Be prepared if cold weather or power outages cause mechanized feeders to become inoperable.

Water

- Regularly check water tanks.
- Make sure water is clean, free of ice, and in adequate supply.
- Make sure you have portable watering equipment or a way to maintain water for your livestock in case of extreme cold and ice.
- If feasible, use heaters in water tanks to provide livestock with adequate water.

Extra Care

- Make sure your insurance policies adequately protect you in case you suffer losses due to extreme winter weather.
 - Make sure you have tools, rope, blankets, lights, and a portable generator with extension cords and fuel ready to use in case of emergency.
 - Make sure tractors and vehicles are maintained and protected so that they will be ready to use in extreme cold weather and snow/ice.
 - Make sure you have bedding available to be deployed so that you can create a warm and protected place to keep livestock off ice and mud so that they can stay dry.
 - Livestock will often move away from the force of an oncoming storm, unless they are moving toward shelter that is well known to them.
 - Animal survival instincts may affect your ability to herd or move livestock during extreme conditions.
 - Make sure animals are in good body condition and vaccinated. Livestock that are larger and in good body condition can handle winter weather and extreme conditions better than smaller or weaker animals.
- If you have questions about how to care for you livestock in severe winter weather or how to prepare, contact your local Extension office. More information can be found at <http://www.ext.colostate.edu>

For the complete article please see <http://www.ext.colostate.edu/pubs/ag/cold-weather.html>.

Information Sources:

[Caring for Livestock Before Disaster](#)

[Caring for Livestock During Disaster](#)

[The Extension Agent's Handbook for Emergency Preparation](#)



Livestock producers have many options for feeding their animals. This article will share some basic information about one of these options, non-protein nitrogen (**NPN**). There are several compounds that fall into the NPN category. The three that are most commonly recognized by producers are urea, biuret, and ammonia.

It is important to understand some principles associated with feeding NPN. First, monogastric animals (swine & poultry) are not going to be able to utilize NPN in the diet. It is the ruminant animals (cattle, sheep, & goats) that will be able to benefit from the inclusion of NPN in their feed ration. Ruminal fermentation breaks NPN compounds down into ammonia. Some of this ammonia will be absorbed into the blood stream, while other ammonia will be acted upon by the bacteria and protozoa that are in the rumen. These microbes will combine the urea with products from carbohydrate metabolism. This forms amino acids; the building blocks of protein. This protein, along with the microbes that created it, will be digested at a later point in the digestive tract. This is how the ruminant animal is able to utilize NPN in the diet.

Secondly, all NPN is not the same. I'll use urea as an example. We generally accept that crude protein is 16% nitrogen. Urea is considered to be 46.7% nitrogen. Therefore, one pound of pure urea would have a protein equivalent of 292% or the same as 2.92 pounds of protein. However, feed grade urea can have a variety of additives to assist with ease of handling and storage. These can lower the protein equivalent. Most feed grade urea will be 281% protein equivalent, but several levels are on the market. So know what you are feeding and adjust the ration appropriately. The feeder also needs to consider the digestibility of the NPN that he/she feeds. Ammonia is more digestible than urea, which is more digestible than biuret. Slowing digestibility can decrease utilization. However, it can also protect the animal from toxicity issues, as NPN can be very dangerous to the animal if feeding management is not followed correctly.



Third, there are situations when feeding NPN is not advised. Light calves weighing less than 450 pounds need a true protein in their diet, not non-protein nitrogen. Livestock on a diet that is high in forage/low in digestible energy do not utilize NPN well. When the ration is not going to be available to the animal all of the time, NPN should be avoided, as abrupt changes in rumen NPN availability can lower utilization. Non-protein nitrogen should never be top dressed on feed. Non-protein nitrogen compounds are considered low in palatability, and can further lower the palatability of already non-tasty rations. Raw whole soybeans (stubble included) contain the enzyme urease, which can break down urea into instantly available ammonia. This can be deadly to livestock. So feeding NPN together with raw soybeans or soybean stubble is not advised.

Fourth, toxicity problems can be a problem when feeding NPN. Strong feeding management principles usually prevent this. Yet, feed mixing problems, calculation errors, and overeating on the animal's part may occur. Monitor animals on a NPN diet for uneasiness, tremors, excessive salivation, rapid breathing, incoordination, tetany, bloat, & death. These symptoms will generally occur in the order listed. If you observe these happening, you should contact

Continued page 7

Non-Protein Nitrogen continued from page 6

your veterinarian. If the vet will be a significantly long time in arriving, you may want to ask them if you can drench the animal with vinegar as an emergency treatment.

Finally, keep in mind that NPN can come from more than just a chemical substrate. Many plants have NPN naturally occurring within them. As an example, total nitrogen of corn silage can be 50% NPN and alfalfa can derive as much as 20% of its nitrogen from NPN sources. If you wish to discuss this subject further, you can contact the author or your local Extension office.



Growing Resources
Cultivating Success

**Conference Schedule:****Morning**

- 8:00—8:30: Registration
- 8:30—9:00: Opening Remarks
- 9:00—9:40: Keynote Address
- 10:00—11:00: Worker Protection Standards Proposed Rule Changes
- 11:10—12:10: Rollout of CFVGA Strategic Plan

Afternoon

- 1:00—1:50: breakout options
 1. Grower/Buyer Networking
 2. Facilitated round table discussions
 3. Visit with Exhibitors
- 2:00—3:00: Food Safety
- 3:10—4:10: Getting the Most Out of Social Media Marketing
- 4:10—5:30: Conference Evaluation & Annual Member Business Meeting
- 6:00—On your own

CFVGA is excited to host our first annual conference Wednesday, February 25, 2015 at the Renaissance Hotel in Denver. This daylong event precedes the Governor's Forum on Colorado Agriculture Thursday, February 26 at the same hotel. Your conference planning team has designed an excellent conference for you. These folks include: Robert Sakata, Amy Kunugi, Bruce Talbott, Steve Cochenour, Aaron Perry, Martha Sullins, Mike Bartolo and Adrian Card. We invite all commercial produce growers in Colorado to attend!

Who should attend?

- Commercial fruit and vegetable growers throughout Colorado of all scales, marketing channels and production practices.
- Those interested in commercial fruit and vegetable production in Colorado including exhibitors, media, policy enthusiasts, students, and wellness organizations.

Registration**Register Online Now at CFVGA.org**

Early registration ends January 26.

Members, non-members and students, please register online at cfvga.org. Student rate is limited to 20 students (high school, community college, and university students are eligible).

For those who would like to attend the 24th Annual Governor's Forum on Colorado Agriculture, scheduled for February 26, please visit www.governorsagforum.com to register.

Stay on Site

Make your hotel reservations at the Renaissance by February 4, 2015 for the "Fruit and Vegetable Growers" block rate of \$124 (Book online: <http://bit.ly/1tnfiKg>.) Please attribute reservations made after February 4 to the same "Fruit and Vegetable Growers" group when making reservations. Consider staying for the Governor's Forum on Colorado Agriculture (for more information, please visit: www.governorsagforum.com).



Newsletter Update—If you know of someone who would like to receive our quarterly newsletter, please contact Carolyn at 583-6574 or valdez@co.pueblo.co.us.

December24 at Noon, 25-26—Holiday, *Office Closed***January**

13—Ag Advisory Committee Meeting, 12—1:15 p.m., CSU Extension office (CSUE)
 13—Direct Marketing of Livestock, 6-9 p.m., CSUE
 16—World Cultures through Food Class, 5:30-8 p.m., \$20/person includes dinner, deadline
 January 9th, call 719-583-6566 for details, CSUE
 21—Community Forest Steward Training Deadline, CSUE

February

Community Forest Steward Training, Mon & Tues evenings, Feb. 2—Mar 3, 6-9 p.m.,
 \$80/person see <http://pueblo.colostate.edu/hor/hort.shtml> for details.
 11 & 25—A to Z of Bees,

March

10—Pesticide Applicator Recertification Course, details TBA

Monthly meetings:

Pueblo County Stockmen's Association meets the first Thursday of each month at Mesa Vet Clinic at 7 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. 116 for details.

South Pueblo Conservation District meets the 3rd Thursday of every month, Time: 6:00 p.m.
 Location: 200 S. Santa Fe Ave., 4th floor, Call: (719) 543-8386 Ext. 3 for details.

A to Z of BEES

Date: Wednesdays,
 February 11 & 25
 Time: 6-9 p.m.
 Place: CSU Extension/Pueblo County
 Cost: \$20/person, \$30/Couple
 Paid registration due by February 4th.



Topics covered:

- Housing and equipment, safety gear
- Management and care of bees
- Food sources

Brought to you by the Agriculture and Horticulture program areas of CSU Extension/Pueblo County.
 Call 719-583-6566 for more information.



Extension programs are available to all without discrimination.

**Direct Marketing
of Livestock**

DATE: Tuesday, January 13, 2015
 TIME: 6-9 p.m.
 PLACE: CSU Extension-Pueblo County
 701 Court St., Ste C., Pueblo
 COST: \$10/per person, \$15/couple sharing materials
 Register with cash or check only by
 Monday, January 12, 2015.
 CSU Extension—Pueblo County,
 701 Court St., Suite C, Pueblo, CO 81003
 Sorry no credit or debit cards accepted.

Learn about:

- Marketing your livestock for local production
- Processors
- Marketing regulations

Refreshments provided.

Call (719) 583-6566 with questions.

This program is funded by Pueblo County through
 your Colorado State University Education office.



<http://www.colostate.edu/pueblo/extension/>

Extension programs are available to all without discrimination. If you have a disability for which you need an accommodation, please
 notify CSU Extension at 719-583-6566 at least five (5) business days in advance of the event. Colorado State University Extension,
 U.S. Department of Agriculture and Colorado Wildlife Cooperative