

Pueblo County Extension Agriculture Tribune



The Quarterly Pueblo County Extension Ag Newsletter



Winter Farming Series

By: Kristi Bartolo, Agronomy Agent, Pueblo County



Though the outdoor work of a farmer slows down during the winter months and tractors and equipment are resting in the barn, though the fields lay quiet, tilled and waiting for spring, farmers themselves are still busy with planning, preparing and learning. Through the winter months, Agronomy Agent Kristi Bartolo provided farmers with an educational series of programs. Topics included Crop Diseases, Soil Health, Technology in Agriculture and a discussion of the proposed Agricultural Water Rule and On-Farm Food Safety, among other topics.

Crop disease can lead to major yield losses and devastation for a farming operation. Farmers must be able to recognize signs and symptoms before disease takes over a field. With the help of the Pueblo County Extension Office, farmers can have a better understanding of crop disease and how to manage and prevent it through the classes and site visits provided. The Food Modernization Act requires farms of certain sizes to follow food safety protocols to ensure the community is receiving healthy and safe produce. Farmers can stay informed and up to date on Food Safety information through Extension classes. Technology can aid Pueblo County farmers with various tasks on the farm and even improve production. The use of robotics and mechanical means can drastically reduce the need for Agricultural employees in the face of the new Agricultural Labor Laws passed last year.

Continued On Page 2

Meet the Ag Team!

Kristi Bartolo - Agronomy Agent
Email: bartolok@pueblounty.us

Beth De Lair - Agriculture & Natural Resource Coordinator
Email: delairb@pueblounty.us

Scan to access the digital
version of this newsletter.



**Look inside
to view our
highlighted
community
partners!**



Continued from Page 1

The topics discussed in the presentations mentioned above gave farmers new and relevant information and allowed them the opportunity to come together and discuss emerging agricultural issues. Most of the presentations were delivered in-person throughout Pueblo County with an online option for those who could not attend. Some presentations were uploaded to the Pueblo County Extension YouTube page. As more information becomes available on these topics, presentations will be updated to meet the needs of the area farmers so they will be able to continue to grow and succeed on their farms.

Weather Stations and Agriculture

By: Kristi Bartolo, Agronomy Agent, Pueblo County

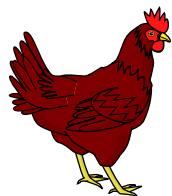


As most farmers are keenly aware, weather plays a critical role in farming and agricultural production. Weather can be the hinge on which a farmer has a successful year or a failed crop. It seems to be common sense, though, weather being the determining factor... so how do farmers and agricultural producers work with the weather they have been given in a growing season and throughout the entire year? In the winter the plea for enough snowpack in the mountains is sent towards the sky. In the summer, a similar plea is made to send much needed rain on crops that are withering. In the past ten years, weather patterns have been shifting and becoming more sporadic and extreme. The once bearable hailstorms have turned into a deluge of destruction capable of wiping crops out completely, leaving the farmer with nothing. Drought seems to be the new normal as less rain falls each year. Pueblo, CO only receives an average precipitation of 13 inches per year and will see that number decline. This is certainly not enough to grow successful crops without irrigation supplementation.

Though weather can be harsh and its ability to destroy always present, farmers can use their creativity and their meteorological prowess to overcome what the weather brings. The use of locally positioned weather stations can help farmers understand the weather better and so infer what their crops are needing. Often, the locally based weather stations are equipped with pyranometers (to measure sun radiation) and atmometers (to measure evapotranspiration). These two instruments can guide a farmer in the knowledge of cloudy or sunny days.

More sun usually means higher rates of photosynthesis and thus higher production. Evapotranspiration data can help a farmer better understand how much and when a crop is needing to be irrigated. This leads to more efficient and effective irrigation methods that can conserve water, especially in the face of continual drought. Over the course of the 2021/2022 winter season, Pueblo has experienced incredibly strong winds. Early spring has arrived and the weather seems to be continuing with the windy trend. Weather stations can provide wind speed and direction information. This can help a farmer know when it is a good time to get into a field to plow or not. Windy days increase the loss of topsoil. Also, pesticides should be used on calm days to avoid drift and spray getting on unintended crops. New seedlings are susceptible to high winds, having wind data from a weather station, and farmers may choose to plant on certain days to give the starts a better chance of establishing.

Farmers have always had to be prepared to deal with weather and it is even more critical now than ever. They will have to consider all the risks of drought and bad weather coupled with the hope for rain and good weather. With the snowpack being below average, farmers will have to make some tough decisions this year regarding which crops they can grow successfully with little water. Be sure to head out to the farms this coming growing season to support local farms and help the farmers make their productions more resilient despite constantly crazy weather.



Highly Pathogenic Avian Influenza (HPAI)



Information from the USDA & CO. Dept. of Agriculture

The Highly Pathogenic Avian Influenza disease is making its way across the United States in 2022. The United States Department of Agriculture lists HPAI as, “a serious disease and requires rapid response because it is highly contagious and often fatal to chickens. APHIS works with its federal, state, local and industry partners to quickly mobilize a response to any HPAI findings. The goal is to quickly contain and eradicate the disease, protecting our poultry industry, and in turn, the American consumer.” (Aphis USDA). The USDA Aphis department hasn’t detected HPAI in wild birds in the United States since 2016 but in January of 2022 the disease was confirmed to be reappearing in South Carolina in a Wild American wigeon. From there the disease has spread to the west side of the United States and as of March 30th, 2022, the state closest to Colorado reporting the disease in domesticated flocks was Wyoming.

Symptoms of HPAI include the following:

- Sudden death without clinical signs
- Lack of energy and appetite
- Decreased egg production or soft-shelled or misshapen eggs
- Swelling of head, comb, eyelid, wattles, and hocks
- Purple discoloration of wattles, comb, and legs
- Nasal discharge, coughing and sneezing
- Incoordination
- Diarrhea



The best way to protect your flock is to practice biosecurity measures and to keep your birds separated from wild birds. The USDA has put together a program called Defend the Flock that has various tools and resources to help all poultry producers create a biosecurity program that works best for their operation.

You can check out all those resources by clicking here:

<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/defend-the-flock-program/defend-the-flock-program>

If you suspect that you have infected birds, you need to immediately call any of the numbers listed below. Early detection is key.

Who to Call?

- CDA State Veterinarian’s Office
 - 303-869-9130
 - Veterinarian on call 24/7
- CSU Avian Health Team
 - 970-297-4008
 - Not answered nights/weekends
- USDA Healthy Bird Hotline
 - 866-536-7593



Additional resources regarding the HPAI disease can be found using the various links below that will take you to various USDA and CDA websites.

- **USDA Highly Pathogenic Avian Influenza Information Website:** <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/avian-influenza/defend-the-flock-hpai>
- **Poultry Biosecurity Website:** <https://poultrybiosecurity.org/>
- **HPAI USDA Detection:** <https://ag.colorado.gov/press-release/hpai-detected-in-midwest-colorado-poultry-operations-should-prepare-by-increasing>

Pueblo Ag Expo 2022 Review

By: Beth De Lair, Pueblo County Ag & Natural Resources Coordinator

In March of 2022, the Pueblo County Agriculture Expo had its inaugural debut. This event was targeted at a variety of agriculture clients from both big and small production operations. The objective of the event was to get people talking about what sustainability really means in agriculture and what programs are out there to help managers reach those goals. With those objectives in mind, the event had a speaker line-up of agriculture specialists from Colorado State University Extension, staff from the Colorado Department of Agriculture, the Noxious Weed Coordinator from Pueblo County, and a Soil Conservationist from the Natural Resources Conservation Service (NRCS). The speakers touched on topics such as the use and price of pesticides and fertilizers, co-existing with wolves in Colorado, energy grants available through the Colorado Department of Agriculture, and restoring native grasses in your rangeland pastures. All the speakers have a background in agriculture and a deep passion for making sure managers have the tools and resources to help them adjust to the upcoming challenges of drought, price increases, supply limitations and so much more.

In between speaker sessions we also had various agriculture-centered organizations that set up informational booths for registered participants to walk through and browse other helpful programs. We had the Natural Resources Conservation Service, Farm Service Agency, Farm Bureau, Pueblo Food Project, Colorado Department of Agriculture, Colorado Fruit and Vegetable Growers Association, and Colorado Proud. Participants enjoyed getting to engage with personnel from these amazing booths and we look forward to bringing these partners and many others to the 2023 event. At the end of the event, participants were able to get a delicious beef meal that was catered by Cinfully Delicious and left time for networking for both clients and speakers. We received positive feedback from the evaluations both during and after the event. We look forward to growing this event next year and will be looking to encourage all of you to purchase a ticket and head on down to the Colorado State Fairgrounds in 2023 for the next Pueblo County Agriculture Expo.



Hydroponics: A tool for everyone

By: Beth De Lair, Agriculture & Natural Resource Coordinator, Pueblo County

The issue of feeding a growing population is not a new concept but finding different ways to achieve that goal has created some niche markets for a new type of agriculturist. That new type has been thriving in urban areas that reference back to the original homesteading traditions but with a twist. Hydroponics, both big and small, is changing how the community faces issues with food deserts in many of the low social-economic sectors of the area that are trying to find new ways to grow food.

Hydroponics is a way of growing food that eliminates the need for soil and instead allows growth to take place using water. You can use various containers that may not always work the best for traditional gardening in ways that can promote healthy plant growth using water and light. This allows anybody with any natural sunlight or grow lights to be able to grow fresh vegetables, herbs, flowers, and to some extent fruit. When faced with a limited budget and a food desert, families that sit on or below the poverty line have little to no access to fresh vegetables, fruit, or herbs. Meaning their overall nutritional diet is lacking in critical components that can lead to various health issues. Using this alternative method of production, people can change the way they create meals and how they plan to survive in a world where everything is increasing in price and space is only getting less and less by the day. With hydroponics, you can be as intense as your budget and schedule allow you to be. You can have simple low-cost methods such as utilizing mason jars with water, foil on the outside, and a sunny windowsill to buying larger container units to grow tons of food.

The biggest problem you run into with hydroponics is the issue of bacteria and algae growth that can stunt or kill your plants. However, by using additional methods like liquid grapefruit extract (you can purchase from local stores) you can easily combat these issues. Almost every type of microgreen and herb does extremely well in hydroponic systems and larger vegetables such as tomatoes, kale, cabbage, spinach, and even beets have been thriving in these systems. If you are running short on space inside or outside and want to grow your own food, hydroponics could be the solution for you! Feel free to give the Pueblo County Extension office a call regarding this topic at 719-583-6566 to get you started with some beginner-friendly setups. The photos below of basil, spearmint, and Coleus show how some of the Pueblo County Extension Ag team members are growing their various plants in hydroponic systems.



Community Partner Highlights

McHarg Park & Fulton Heights



Pueblo County has some great facilities for the community. The CSU Extension Pueblo County Office held some of the Winter Farming Series presentations at McHarg Park and Fulton Heights Community Centers. The Recreation Division of Pueblo County is responsible for maintaining these recreation facilities, including McHarg Park and Fulton Heights Community Centers as well as the newly acquired Pueblo County Gym at the site of the former El Pueblo Boys Ranch. Through the Senior Resource Development Agency (SRDA), both facilities provide congregate meals on Mondays, Wednesdays and Fridays from 10:00 a.m. to 1:00 p.m. Fitness classes are also provided prior to the meals served. McHarg Park also provides summer and after-school activities for children ages 5 - 18 years old. There is round-the-clock supervision from Boys & Girls Club staff members; they provide nutritional snacks, educational classes, and transportation to and from activities throughout Pueblo. If you are interested in reserving Fulton Heights Community Center for your event, please call 719-583-4997 or visit the office between normal center hours.

Palmer Land Conservancy

Since 1977, Palmer Land Conservancy has worked with individuals, private and public partners, and various communities to protect land forever including 20 of your favorite public parks and open spaces, important working farms and ranches, and iconic scenic views. We passionately promote the conservation and enjoyment of our region's most important natural assets that define why we love Colorado: its natural beauty, locally grown food, and outdoor recreation. Palmer's conservation work throughout southern Colorado over the last 45 years spans 19 counties representing over 1 million people. We celebrate with you all that we've been able to protect for today, tomorrow and future generations.

Website: <https://www.palmerland.org/>



Fuel & Iron Project

Fuel & Iron seeks to forge a bridge between Pueblo's industrial past and a future which honors the city's diverse population and bountiful agriculture. By creating a platform for restaurant incubation, adding downtown housing, and developing a unique amenity, Fuel & Iron will catalyze the economic vitality of downtown Pueblo and the city as a whole. At its completion, the Fuel & Iron Project will contain a food hall, urban farm, incubator commissary kitchen, events space, performing arts space, childcare center, and 52 units of workforce housing in Pueblo, in addition to a satellite bar in Denver and an apprenticeship program for aspiring food entrepreneurs.

Website: <https://www.fuelandironpueblo.com/>



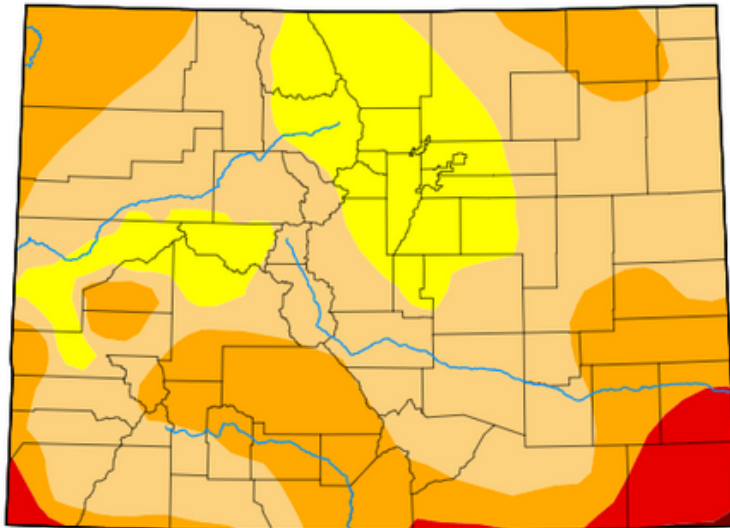
Colorado Drought Monitor Map

Colorado

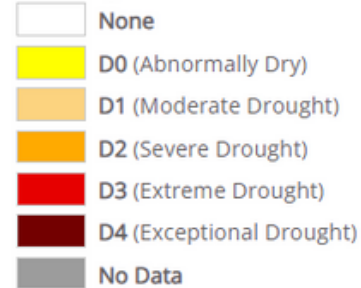
[Home](#) > Colorado

Map released: Thurs. April 7, 2022

Data valid: April 5, 2022 at 8 a.m. EDT



Intensity



Authors

United States and Puerto Rico Author(s):

Deborah Bathke, National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s):

Brad Rippey, U.S. Department of Agriculture

Website: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CO>

New!



ARKANSAS RIVER BASIN
WATER FORUM

April 28 – 29, 2022

Salida Steamplant

Risk and Resilience in the Arkansas River Basin

Register using this link:

<https://www.eventbrite.com/e/arkansas-river-basin-water-forum-is-returning-to-salida-for-our-26th-event-tickets-244037922997>

Upcoming Events

April Dates

- **April 21st, 2022**
 - Virtual Goat and Sheep Extension Class, El Paso County Extension
- **April 28th-29th, 2022**
 - Arkansas Basin Water Forum, Salida
- **April 28th, 2022**
 - 2022 Progressive Agriculture Safety Days, Monte Vista

May Dates

- **May 4th, 2022**
 - Colorado Weed Management Training
- **May 10th, 2022**
 - Online Poultry Production Webinar
- **May 27th, 2022**
 - Water Round Table Meeting #2
 - Location: 701 Court St. @ 6:00 PM

June Dates

- **June 9th-14th, 2022**
 - Wheat field days - CSU Research
- **June 21st, 2022**
 - Fuel & Iron Food Hall Pop up Series @ Bingo Burger
- **June 28th, 2022**
 - Online Poultry Production Webinar

Connect with Us!



SUBSCRIBE



<https://www.facebook.com/PuebloAg>



<https://www.youtube.com/channel/UCi0dsYcfX1glbHQWPit8WDQ>



<https://pueblo.extension.colostate.edu/>



Office Address: 701 Court St., Pueblo, CO 81003

Phone: 719-583-6566



PUEBLO COUNTY
COLORADO STATE UNIVERSITY
EXTENSION

Extension programs are available to all without discrimination.
Colorado State University Extension, U.S. Department of Agriculture
and Colorado counties cooperating.