

# AGRICULTURE

## Golden Plains Area Newsletter

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## January/March 2024

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[Web Site: http://goldenplains.extension.colostate.edu](http://goldenplains.extension.colostate.edu)  
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**GOLDEN PLAINS AREA**  
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Extension programs are available to all without discrimination.

# AG BUSINESS

## **EPIC Version 2 Now Available Brent Young, Regional ABM Specialist**

To assist producers in developing accurate enterprise budgets and whole farm/ranch cash flow statements, the CSU Extension Agriculture & Business Management (ABM) Team has developed the Excel based decision aid known as Enterprise Profitability and Input Control (EPIC). The original version of EPIC allowed producers to develop up to five crop budgets and one cow-calf budget. The 2024 version 2 is now available and in addition to allowing up to five crop budgets, three livestock budgets (breeding, feeding, and grazing) are now accessible.

As with the original version, overhead expenses are recorded and allocated to each enterprise to determine fully accurate costs of production. A separate spreadsheet allows crop producers to build up to four chemical applications per crop including the application rate and cost of each chemical.

All the budget information and overhead costs are recorded in the whole farm/ranch cash flow statement. Producers can also enter non-farm/ranch income and expense items into the cash flow statement. One advantage of utilizing an Excel based template is the opportunity to develop an infinite number of “what-if” scenarios. EPIC is housed on the ABM website and can be accessed at <https://abm.extension.colostate.edu/decision-tools/>

The 2024 production year is shaping up to be a particularly challenging year for farmers and ranchers as they look to manage tight operating margins. The stage is being set for a squeeze to already paper-thin margins from both sides of the equation as input prices rise and commodity prices soften.

There are several strategies that producers can employ to manage a margin squeeze of the magnitude expected in 2024. One strategy involves the development of accurate enterprise budgets.

Accurate enterprise budgets contain both fixed and variable costs. Fixed (overhead) costs are those expenses that are paid regardless of the type or level of production such as land payments, taxes, insurance, etc. Variable costs on the other hand include those expenses that vary based on the crop or type of livestock produced and the amount of production. Examples of variable cost are seed, fertilizer, feed, etc.

Most farmers and ranchers have a good understanding of their variable cost and can quote within a few cents their variable cost of production. Including their overhead (fixed) cost can be more difficult and requires the ability to accurately allocate those costs to each enterprise. Enterprise budgets that do not account for both variable and fixed costs can result in the calculation of cost of production estimates that are too low and encourage the acceptance of market prices that are not profitable.

A second strategy seeks to control input prices. Inflation rates not seen during the last 40 years have resulted in agricultural input prices at historic levels and placed profit margins on the defensive. Many producers are scrambling to lock in rates for fertilizer, fuel, and chemicals before prices increase. Another technique that may offer some promise is to match fertilizer rates with yields that are more economical.

In addition to rising input prices, growers are also facing increasing interest rates for operating capital. When the cost of borrowing operating capital increases, cash flow management and monitoring becomes essential. Cash flow management involves altering the timing of input purchases and when the sales of commodities take place to reduce the need to draw on an operating line of credit to reduce the outstanding balance and the amount of interest paid. Monitoring cash flow requires a producer to compare planned with actual expenditures to make spending adjustments.

Managing input prices in 2024 will provide many challenges for farmers and ranchers, Hopefully EPIC will be a valuable management tool for producers moving forward. If you have questions about this topic or any other agricultural business management issue, please feel free to contact me at 970-580-2204 or by email at [brent.young@colostate.edu](mailto:brent.young@colostate.edu) .

## AGRONOMY

### **Weed Management in Grazed Crop Residue Fields Catie Green, Area Agronomy Specialist**

Cattle turned out to graze various kinds of crop residue fields are a common sight when travelling around the Northeastern corner of Colorado these days, a testament to the benefit of grazing for both the farmer and the beef cattle producer. This practice can be a good way for a farmer to diversify their operation as well as add value to the residue left on the field. Another addition to the pro column for the farmer is the natural addition of nutrients and organic matter to the soil from the manure left behind and, if done properly, incorporated into the soil for you by the animal's hooves. One concern that should be on the farmer's radar with residue grazing is weed management in grazed fields. However, if managed correctly, the spread of weeds can be easily mitigated.

When cattle are first brought to the field there is a risk of them bringing weed seeds with them, mostly in their digestive tract. Although the ruminant digestive system of the cow might harm the viability of some seeds, we cannot depend on it to kill all of the weed seeds before they hit the ground. According to the University of Nebraska at Lincoln, grass and soft-coated broadleaf seeds are more easily destroyed by digestion than hard coated seeds – which includes problematic pigweed varieties. Another way weed seeds may be brought into the field is through hay from an outside source. The seeds can enter the field directly from supplemental feeding, or again, through the digestive tract of the animal after it has consumed that hay.

Mitigation strategies to keep these weed seeds from becoming a problem next growing season include early field scouting and selective feed placement. When supplemental feed is needed the farmer should choose an isolated area of the field for the feed to be laid out every time. This area should be in a place that is easily accessible for scouting and spraying in the early spring. This should keep weed seeds that are coming directly from the feed in one small area of the field, which should allow management strategies to remain on a smaller scale.

# 2024 Private Pesticide Applicator Recertification Opportunities

7 core credit continuing education units.



Date	Location	Contact for more information
<b>Feb 22</b>	<b>Akron</b>	Kat Caswell: kat.caswell@colostate.edu (970) 400-2095
<b>Feb 23</b>	<b>Greeley</b>	
<b>Mar 18</b>	<b>Julesburg</b>	Catie Green: catie.green@colostate.edu (970) 474-3479
<b>Mar 19</b>	<b>Burlington</b>	Ron Meyer: rfmeier@colostate.edu (719) 346-5571
<b>Apr 2</b>	<b>Lamar</b>	Michaela Mattes: michaela.mattes@colostate.edu (719) 336-7734

To Register, enter "Private Pesticide Recertification" at EventBrite.com.

May also register on phone and at the door.

Pre-registration preferred.

**Admission Fee:**

**\$60**

\*All training opportunities will have a Zoom option if you are unable to meet in person.



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<https://agsci.colostate.edu/cepep/>



COLORADO ENVIRONMENTAL  
PESTICIDE EDUCATION PROGRAM

## FARMING EVOLUTIONS 2024 COMING TO HOLYOKE CO THIS FEBRUARY Julie Elliott, Farming Evolutions Coordinator

Make plans now to attend the 10<sup>th</sup> annual Farming Evolution event February 21 & 22, 2024, in Holyoke, CO. There will be a close look at the fascinating information about the world of soil microbes and plants. Also, on the topic list are wheat stem sawfly, grazing cover crops plus much more. As always, there will be several producers sharing their insights and experiences.

Dr. James White will give an intriguing presentation about the plant/microbe relationships. Microbes don't just make nutrients available; they are physically consumed by plant roots! Then they are transported through the plant to specific cells which pull the needed nutrients. Plants even 'farm' needed microorganisms. Be prepared to set aside long held beliefs about how plants and soils interact! Dr. White is Professor of Plant Biology at Rutgers University. In 2023, he was ranked among the top Plant Science researchers in the nation.

What is the difference between climate and weather? Dannele Peck will explain this and why it matters. She'll then address how one uses economic realities to make decisions about regenerative practices. How can soil health practices be evaluated from an economic perspective when planning to be resilient to climate and weather events? Dannele is an Economist and Director of the Northern Plains Climate Hub (NPCH).

What cover crop species are best for grazing beef cattle and how often should cattle be rotated? Mary Drownoski from Nebraska Extension will cover these questions and more. She is a part of a team evaluating Economical Systems for Integrated Crop and Livestock Production in Nebraska. Her focus is on the use of crop residues and cover crop forage for backgrounding calves and feeding beef cows. Anyone growing wheat on the plains has heard of the wheat stem sawfly. CSU's Adam Osterholzer is

one of the principle investigators of this pest. He will give an overview of the wheat stem sawfly biology and current management techniques. An emphasis will be placed upon how this pest and its associated management impacts on soil health.

When he wants to find out what will work on a given field, South Dakota farmer Rick Bieber tries to take his cues from the natural world. In 33 years of no-tilling and 25 years of cover cropping, the soil organic matter has gone from 1.2% to 3.5%. Hailed as one of the world's best soil farmers, Rick will give a dynamic and engaging talk. He'll encourage attendees to be better soil stewards and more profitable.

Many farmers in the area have heard of the FARMS project. The Farmers Advancing Regenerative Management Systems is led by the Colorado Conservation Tillage Association. Meagan Schipanski will present an overview of the data gathered across working farms in the project. Meagan is the lead FARMS researcher at Colorado State University. Cooperating FARMS producers Curt Sayles (dryland) and Joel Grosbach (irrigated) will share their experiences with regenerative farming. More information about the FARMS project can be found at <https://farmsproject.org>.

Back by popular demand is Clinton Wilson, Director of Rocky Mountain Farmers Union's Ag Well. Clint asks thought provoking questions. Why does healthy soil matter? Can't you just pump some synthetic fertilizer on it, till it a bit more, work it a bit harder, give it a little coffee, pull it up by the bootstraps and.....? What if we see ourselves as one of the 4, 5, 6, or maybe 7 principles of soil health? If we want our soil to be healthy and well, what if it starts with healthy farmers? What if we take what the soil has taught us and apply it to ourselves? And what if there is one more principle that the soil is trying to teach us, that might just make all the difference?!

Logan and Brianna Pribbeno moved back to Logan's family's ranch in 2012. Moving from California's Silicon Valley to the High Plains of western Nebraska came with its own set of adjustments. Since they've moved back, they've focused on getting the most out of every acre. To achieve the goal, they use Management-Intensive Grazing and graze annual forage crops. Logan will share his journey to integrate livestock on the farm ground.

Registration by Feb. 9, 2024, is \$50 for both days, \$40 for one day. Fees increase by \$10 after Feb. 9. Lunch, refreshments, and handouts are included. Learn more and register for Farming Evolution 2024 at [www.farmingevolutions.com](http://www.farmingevolutions.com). Note the 's' behind evolution, added to reflect the many ways farming is changing and to facilitate creating our own website.

Farming Evolutions 2024 is being hosted and sponsored by the Haxtun, Morgan, Yuma, and West Greeley Conservation Districts, and the Upper Republican Natural Resource District. Support by Arrow Seeds, the Colorado State Conservation Board, Colorado Association of Conservation Districts and the Natural Resources Conservation Service keeps this event low-cost

# LIVESTOCK



## **Cold Weather Cow Feeding** **Travis Taylor, Area Livestock Specialist**

I bought my first Angus heifer when I was twelve years old, and the breeder left me with the wisdom that “it’s the eye of the Scotsman that fattens the calf.” It has proven to be true that a breeder can usually look at the herd and tell if the herd is in good shape. Body condition score (BCS) systems are built on this philosophy. When I was a young kid a weather report may have proven less than accurate. Today, I can pull weather information up on my phone anytime for up to ten days, and it has a higher degree of accuracy. What do these two items have in common? They allow us to better manage cold stress when feeding the cow herd.

The recent Christmas storm in the Golden Plains Area, brought cold, snow and wind. This brought with it an increase in energy required for cows to maintain body condition. It has been determined that for each single degree below freezing a cow needs an additional one percent increase in diet energy to maintain herself (1° = 1% TDN). Factors like hair coat, wind chill, and wet weather can change a cow’s critical temperature. With a wet hair coat and standing in the wind a cow’s energy requirement can increase to more than she can possibly consume on native range or lower quality roughage such as a corn stalk residue field. Supplemental feeding a higher quality forage can help meet her increased energy demands. Additionally, if the cold stress is short, supplemental feed two to three days after a weather event can help rebuild any emergency stores that a cow may have utilized. For extended events a pound of corn can be fed daily for every 10 degrees below critical temperature. Such corn feeding should be done carefully, and comes with its own problems of delivering the corn and at risk of changing the rumen microbe population.

January thru March in the Golden Plains Area find many cows that are in the final trimester or shortly post calving. The effects of sustained cold stress on the cow in this period can have compounded negative effects on calving, calf health, lactation and rebreeding. Producers should utilize weather reports with purposeful supplemental feeding strategies to help cows meet their energy requirements when possible.

### References:

<https://enewsletters.k-state.edu/beeftips/2023/12/18/cold-stress-in-cattle/>

<https://beef.unl.edu/preparing-cow-herd-cold-weather>

<https://www.extension.iastate.edu/smallfarms/caring-cows-cold>

## **Beef Quality Assurance Certification** **Travis Taylor, Area Livestock Specialist**

The national Beef Quality Assurance (BQA) certification is not new to cattlemen, in fact it has been in existence since 1987. The first National Beef Quality Audit was conducted in 1991 with the most recent completed in 2022. “The nationally coordinated and state implemented BQA program focuses on all segments of the beef industry, including focused training for transporters as well as self-assessments for cow/calf, stocker and feeder operations,” says Colorado BQA coordinator Libby Bigler. “Now more than ever, consumers show concern for issues pertaining to animal welfare and environmental

sustainability, and the BQA program is committed to addressing such topics in order for the cattle industry to continue meeting ever-changing consumer expectations.” Those expectations have surfaced most recently appearing as requirements by major beef processors like Tyson and Cargill asking suppliers in feed yards and livestock transporters to be BQA certified. Cargill requires 90 percent of their cattle to be sourced from BQA certified feeders, and hauled by individuals with a Beef Quality Assurance Transport (BQAT) certification. Likewise, Tyson requires 100 percent of cattle sourced from BQA yards, and as of January 1, 2020 all cattle delivered to plants to be hauled by individuals with BQAT certification.

Although such certifications means additional requirements, it may currently be financially beneficial in cattle marketing. A Colorado State University study titled “Effect of Mentioning BQA in Lot Descriptions of Beef Calves and Feeder Cattle Sold Through Video-based Auctions on Sale Price.” discovered a \$16.80 per head premium result for cattle that listed BQA in the lot description. The study data was collected in partnership with Western Video Market, and based on sale prices of 8,815 lots of both steers and heifers sold in nine western states between 2010 and 2017. It is important to remember that data represents sales prior to the previously mentioned requirements by beef processors, and the current upturn in the markets. Just as importantly, the National BQA Program has been developed by cattlemen for cattlemen and is primarily funded by the Beef Checkoff. A science based BQA program that is developed by actual beef industry producers, and one that is recognized by both processors and consumers, has immeasurable benefit. Such a program clearly speaks to the dedication United States beef producers have toward their transparency in delivering a safe and exceptional quality product to consumers.

Since BQA inception, many producers have been certified, while others have adopted BQA practices by picking them up from neighbors or local veterinarians. However, the Colorado State University study emphasized how important it is to be able to transfer BQA certification information from seller to buyer when a transaction is made. Being able to provide buyers with a certification number is quickly becoming integral for producers, feeders, and truckers who deliver cattle to processors. Certifications can be obtained by attending an in person training or online. The certifications are valid for three years before recertification is required. Training material is updated yearly, but major revision occur every five years after information is received from the most current National Beef Quality Audit. The recertification process helps producers reinforce their existing best management practices while keeping up to date on new practices and procedures. To get your BQA certification as a producer or transporter go online to [www.cobqa.org](http://www.cobqa.org) or contact your local Colorado State University Extension Office.

## **HORTICULTURE**

### **Top Five Performing Flowering Plant Selections for Northeast Colorado By CMG, Gina Eastin provided by Linda Langelo, Area Horticulture Specialist**

Want to get a gift for the family gardener? You can order in advance for the spring. Here are a few recommendations from an experienced gardener and a Colorado Master Gardener in Yuma County.

Living in the sandhills of Northeast Colorado sounds like a challenging place to grow colorful and hearty flowers but be assured there are a multitude of options. These options will beautify many a drab space in your yard.

1. Meadow Blazing Star, *Liatris ligulistylis*

- Soil types are vast from loam, rocky, sandy, and alkaline soils.
- Handles sun and partial sun with moderate watering.
- The plant height is from 1.5' – 3' with a width of 1.5.
- Flowering season is later from August – September but will not disappoint with lavender, pink, and purple flowers.
- Great for pollinators including the Monarch butterfly along with other butterfly species and hummingbirds.

References:

Plant Select - smart plant choices | Plant Select

Meadow Blazing Star - *Liatris ligulistylis* | Prairie Nursery

2. Winecup, *Callirhoe involucrate*

- Well-drained clay, loam, or sandy soils.
- Sun to partial sun with moderate to xeric watering needs.
- This plant is 8 – 12" in height with 48-60 inches in width.
- This plant will flower from April to a hard frost and comes in pink, maroon, or reddish-purple and has a cup-shaped bloom that opens in the morning and closes at night.
- Good for pollination.

References:

Plant Select - smart plant choices | Plant Select

Winecup | Central Texas Gardener

3. Prairie Lode Sundrops, *Calylophus serrulatus* "Prairie Lode"

- A member of the evening primrose family but is a day-flowering species.
- Clay, loam, and sandy soils.
- Sun to Partial Sun with moderate to xeric watering needs.
- Plant will reach 6" – 8" in height and 12" – 16" in width.
- Flowers from May to September and is a vibrant yellow.

References:

Plant Select - smart plant choices | Plant Select

*Oenothera pilosella* Prairie Sundrops | Prairie Moon Nursery

4. Mongolian Snowflakes, *Clematis heapetala*

- This shrub plant is an herbaceous clematis variety that has six-petaled ivory-colored flowers
- Blooms from May throughout the summer.
- Plant will reach 2 – 3 feet high and 2 – 3 feet in width.
- Sun to partial sun with moderate to xeric watering needs.
- Soil types include clay, loam, or sandy soils.

References:

Plant Select - smart plant choices | Plant Select

Mongolian Snowflakes, *Clematis* | High Country Gardens

5. Indigo Blue Dragonhead, *Dracocephalum ruyschiana*

- This herbaceous perennial plant is very tolerant of a wide range of soil types.



- The dark blue flowers will be a great accent flower blooming in early summer.
- Sun to partial sun with moderate to low watering.
- Height is 14"- 16" with a width of 10"- 12".

References:

Plant Select - smart plant choices | Plant Select

Plant Profile for *Dracocephalum peregrinum* 'Blue Dragon' - Dragonhead Perennial (perennials.com)

## **Holiday Cactus and Care**

### **Linda Langelo, Area Horticulture Specialist**

#### Part 1: Holiday Cactus

Thanksgiving or Christmas cactus or Easter Cactus? Which is which? There are subtle differences in the margins of the leaves. One feature that stands out with Easter Cactus is their flowers represent more of a star shape -the petals are thinner and there are more of them. Naturally, they bloom in the spring but start producing buds in February. Thanksgiving Cactus will bloom one month before Christmas Cactus.

Notice the Thanksgiving Cactus has broad segmented leaves with serrated edges on both sides - 2-4 that come to points. It is called the Claw Cactus or Crab Claw Cactus. The second picture from the diagram with the up-close claw/pointed leaf and the first photo with a flower close-up.

The Christmas Cactus has leaves with edges that have small indentations or scallops that never come to a point because they indent into the leaf and are considered smooth edges. The third photo is with the rose-colored blossom.

Finally, Easter Cactus has very slight indentations or scallops on their leaves but has subtle hairs at the end of each leaf. The last photo is with the star-shaped pink blossoms.

#### Part 2: Holiday Care

Holiday Cactus Care starts first with understanding the origin of these plants. A small group of about 6 to 9 species under the genus *Schlumbergera* originate from the rainforest of Brazil. They can grow to be sizeable shrubs with very woody bases in nature. Their life expectancy can range to almost 100 years old. *Schlumbergera* includes Thanksgiving and Christmas Cactus. They commonly bloom from November to January. With that said, they can be tricked or forced into blooming by regulating the day length and temperature, or what is called thermo-photoperiodic. Both are important requirements for flowering to occur. These plants are often called short-day plants. This means that periods of less daylight and more hours of that trigger the formation of buds. Your cactus requires in-direct bright light.

The second is cooler temperatures which happens as fall approaches. The acceptable temperature range that these cacti need is between 50 to 65 degrees Fahrenheit. This is not to say that if the temperature drops to the 40s it will not survive, it can. However, the 40's is not the ideal temperature. If you keep your home heated at 68 degrees Fahrenheit, then you can still have blossoms for 7 to 8 weeks. If the temperature is 70 degrees Fahrenheit or a little higher, you may not have blossoms for as long. Do not put your cactus near space heaters, fireplaces, or wood stoves. You do not want the soil to dry out too quickly - even moisture is the key.

These rainforest plants are epiphytic. They live on other plants. Their roots take in moisture from the air and humidity. Orchids do the same. After the cactus flowers cut back on the watering, do not let the leaves shrivel. While flowering keep the soil evenly moist but well-drained. Not always an easy task. If the plants are in a plastic pot, just remember that plastic does not breathe, but clay pots do and will dry out faster.

