Colorado State University Extension

Agriculture
Golden Plains Area Newsletter

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DECEMBER 2014

UPCOMING EVENTS

2014 Farm Bill Trainings

December 18, 2014
Yuma County Fairgrounds
Yuma, CO

2015 Tri-State Cow/Calf Symposium

January 7, 2015
Yuma County Fairgrounds
Yuma, CO

Farming Evolution 2015

February 12 & 13, 2015
Event Center, Phillips County Fairgrounds
Holyoke, CO

(See enclosed flyers for more information on these events)

To receive an e-mail notification of publication on-line for the Golden Plains Area Agricultural Newsletter call 970-332-4151 or e-mail coopext_yuma@mail.colostate.edu

LIVESTOCK

Corn Stalks

Chris Shelley, Golden Plains Area Livestock Extension Agent (chris.shelley@colostate.edu)

This year in Colorado, it is estimated that 960,000 acres of corn were harvested. Researchers have found that for every bushel of shelled corn harvested there are 50 pounds of residue left in the field. An acre yielding 180 bushels of corn would have 9,000 pounds of residue. Statewide cattle inventory is down, but Colorado still has approximately 2.5 million head, providing many opportunities to graze the residue. If the residue is grazed correctly, it eliminates the costs associated with harvesting and feeding other forages, and can be beneficial for both ranchers and farmers.

Grazing animals tend to congregate around water and mineral sources. To avoid sacrifice areas of compacted soil, move water and mineral sources if possible. Waiting until the soil is frozen to begin grazing will reduce soil compaction as well. However, the nutrient content of the residue decreases with time after harvest and it is recommended to graze as soon as possible. The normal freeze and thaw cycles in the spring can also reduce soil compaction after animals are removed.

Corn grain is often left in the field during harvest. It may be knocked off the stalk by wind or spilled as a truck makes or turn. Volunteer corn growth may rob yields from the next rotated crop. Cattle will preferentially search for corn grain first, reducing next year's "weed" problem and weed control. Make sure to assess how much corn is in the field prior to grazing. If unusually high amounts of corn have been left in the field, the high starch grain can cause acute acidosis in cattle. If this is the case, it is best to either restrict cattle from the whole field by rotational grazing or adapt cattle to the high corn diet by feeding corn before grazing the residue.

There are benefits to leaving the organic mass of a previous crop residue in the field. As the plant litter decays, it will add nutrients to the soil. However, it is common to see corn stalks and stubble from several years earlier. Grazing cattle in your field will speed up the process turning the plant material into a usable fertilizer, manure, which will be spread throughout the field.

It is important to note that corn stalks are not a high quality feed. Although there is corn grain left over in field, corn stalk residue contains about 65% Total Digestible Nutrients (TDN) and 7.5% Crude Protein. It will continue to decrease in quality from weathering and as grazing animals eat the more palatable parts of the plants first. It can be used to feed cattle during all stages of production but may require protein supplementation in specific scenarios.

Younger growing animals and cows in the third trimester of pregnancy may require supplementation. It is also recommended to supplement cows that are less than a body condition score five as they need to gain condition for calving and rebreeding. Cows with a body condition score of five or greater do not likely need additional supplementation during early to mid-pregnancy while grazing corn stalks.

Although corn stalks may meet the energy and protein needs of certain livestock, a mineral and salt package needs to be provided. Corn residue is likely to be deficient in several of the minerals and vitamins. For any corn stalk questions, consult with your county extension agent and/or nutritionist prior to grazing.

AGRONOMY

How Weed Resistance Develops

RF Meyer, Golden Plains Area Extension Agronomist (RF.meyer@colostate.edu)

Weed control has always been a critical challenge for crop producers because weeds compete with crops for light, water and nutrients. Herbicides used in modern agricultural systems enable farmers to manage most weeds across vast acreages, efficiently and up until current times, reliably.

However, weed adaptations can occur in response to herbicide use and other management decisions. Changes in weed populations begin when a small number of plants within a species, called a "biotype", have a distinct genetic makeup that allows them to tolerate a particular herbicide application. Multiple weed biotypes can and do exist in a single field.

As a grower continues to use a particular herbicide without any other herbicide modes of action, or does not use any other cultural practices, the resistant biotype continues to survive and produce seed. Subsequent populations of the resistant biotype will continue to increase until they are the dominant weed in the field.

Weed scientists cannot predict exactly which weed species will have biotypes resistant to certain herbicides. Prediction can be difficult due to complex biology and environmental interactions.

Scientists have found that there are particular weed characteristics that can facilitate development of herbicide resistance. These include:

- large amount of seeds produced per plant
- high levels of germination of those seeds
- several weed flushes per season
- high frequency of resistant genes within a weed population

Both company and university weed scientists have also identified specific common factors that are often present in areas where glyphosate resistance has developed. These factors are:

- limited or no crop rotation
- limited or no tillage practices
- a high dependency on glyphosate alone or a limited use of other herbicides
- reduced rates of glyphosate

Confusion about what is or is not weed resistance is common. Herbicides are not known to directly cause genetic mutations in weeds that lead to resistance. However, herbicide resistant biotypes may already exist in native weed populations. When an herbicide is applied over and over again, some of these biotypes survive, mature and produce seed. If a farmer relies on only one herbicide with the same mechanism of action, again, the percentage of the resistant biotypes in the population is likely to increase. This is referred to as herbicide selection pressure.

Strategies that address herbicide resistance issues include crop rotation and employing herbicides with multiple modes of action. Crop rotation includes exiting the corn-on-corn rotation. Wheat, sunflower, or soybeans are acceptable options for cropping choices. Keep in mind that with crop rotations, producers must also employ alternative herbicides to achieve acceptable resistant weed control. Recent plant testing in the area has identified Kochia as showing resistance to glyphosate applications in some fields.

Therefore, if glyphosate resistance Kochia is the issue, also employ either pre-emergent or post-emergent herbicides, which are not glyphosate type products that will control Kochia. Depending on the crop, numerous herbicides available that will continue to control this weed. However, the first step with Best Management Practices is to employ them.

As a result of employing Best Management Practices for resistant weeds, a number of things happen. Fields are cleaner, the herbicide usefulness will be extended and producers will be more profitable.

Source: © 2011 Monsanto Company

Grain Storage Tips

RF Meyer, Golden Plains Area Extension Agronomist (RF.meyer@colostate.edu)

Stored grain insects cannot live on extremely dry grain, however it is impractical to reduce grain moisture much below minimum moisture levels necessary for long-term storage. The safe storage moisture level for wheat is about 13%, corn 15%, and sunflower 10%. Insect activity and reproduction are favored by high grain moisture, especially when condensation and molds occur and fermentation raises the grain temperature. Spoilage and internal heating allow insects to remain active – even in winter.

Proper bin aeration can help manage grain temperature. Since insects are "cold-blooded," they are less active in lower temperatures. Maintaining "cool" grain can be particularly important in reducing insect reproduction. Condensation of moisture in the grain mass is prevented by slow cooling and gradual reduction of the difference between the grain temperature and the outside average air temperature.

Typical wheat harvest temperatures may produce a grain mass that starts off at 95º F or higher. In a 1994 study, Kansas entomologists found that proper aeration and cooling after harvest could eliminate insect damaged grain, in many cases.

Source: "Crop Watch," University of Nebraska

10 Tips to Matching the Right Variety to the Field

RF Meyer, Golden Plains Area Extension Agronomist (RF.meyer@colostate.edu)

1. Know the field's yield potential.
2. Choose high yielding varieties from test plot data.
3. Follow best pest management practices.
4. Follow practices that will get the best stands.
5. Adjust planting rates field by field
6. Apply correct fertilizers at best economical rates (soil test).
7. Till only when necessary.
8. Rotate crops.
9. Monitor a field's performance often.
10. Re-evaluate what worked and what didn't by field at season's end.

Kit Carson County Right to Farm and Ranch Policy

RF Meyer, Golden Plains Area Extension Agronomist (RF.meyer@colostate.edu)

Kit Carson County is a productive agricultural county in Colorado. Ranching, farming, animal feeding, and all other manner of agricultural activities and operations in Kit Carson County are integral and necessary elements of the continued vitality of the county's economy, culture, landscape and lifestyle. Kit Carson County specifically recognizes the importance of agricultural operations as necessary and worthy of recognition and protection. As a result, the County government has established the following policy.

Landowners, residents and visitors must be prepared to accept as normal the effects of agriculture and rural living. These may include noise from tractors, equipment, and aerial spraying, sometimes at night or in the early morning; dust from animal pens, field work, harvesting and gravel roads; odor from animal confinement operations, silage and manure; smoke from ditch burning; flies and mosquitoes; the use of pesticides and fertilizers, including aerial spraying; and movement of livestock or machinery on public roads.

Under the provisions of the State of Colorado's "Right to Farm" law (35-3.5-101 et seq.), an agricultural operation that employs methods or practices (BEST MANAGEMENT PRACTICES) that are commonly or reasonably associated with agricultural production shall not be found to be a public or private nuisance. Further, an agricultural operation that employs these methods or practices shall not be found to be a public or private nuisance as a result of change in ownership; nonpermanent cessation or interruption of farming; participation in any government sponsored agricultural program; employment of new technology; or a change in the type of agricultural product produced. An agricultural operation shall not be found to be a public or private nuisance if such operation was established prior to the commencement of the use of the area surrounding such agricultural operation for nonagricultural activities; employs methods or practices that are commonly or reasonably associated with agricultural production (BEST MANAGEMENT PRACTICES), and is not operated negligently.

Also, public services in a rural area are not at the same level as in an urban or suburban setting. Road maintenance may be at a lower level; county graveled roads, no matter how often they are bladed, will not provide the same kind of surface expected from a paved road; roads within subdivisions may be the private responsibility of the homeowners to maintain; mail delivery may be interrupted or not be as frequent; utility services may be nonexistent or subject to interruption; law enforcement, fire protection and ambulance service will have considerably longer response times due to the distance that must be traveled; fire protection and ambulance services is provided by volunteers who must leave their jobs and families to respond to emergencies; snow may not be removed from county roads for several days after a major snow storm; and snow removal from roads in subdivisions are of the lowest priority or may be the private responsibility of the homeowners. First priority for snow removal is school bus routes and mail routes.

All rural residents and property owners are encouraged to learn about their rights and responsibilities and to act as good neighbors and citizens of Kit Carson County. All owners of land, whether ranch or residential, have obligations and limitations under state law and county regulations with respect to maintenance of fences and irrigation ditches, use and access to irrigation water, controlling weeds, keeping livestock and pets under control, and using property in accordance with building, health, zoning, and land use regulations

RANGE MANAGEMENT

Rangeland Drought Forecast and Winter Range Conditions

Casey Matney, Range Extension Specialist (casey.matney@colostate.edu)

The newest seasonal drought outlook was just posted November 20, on the NOAA Climate Prediction Center website. Current estimates for Colorado over the next three months are optimistic for most of the state, but the southeast seems to be on a trajectory for drought to persist or intensify. Northeast Colorado appears to be spared, but just into the western edge of Nebraska drought is also likely to remain or intensify. For the next three months, ranchers and livestock producers north of I-70 on the eastern plains may not need to worry about soil moisture, but those in the areas south of I-70 should again be prepared for soil conditions that may not be favorable to cool season grass and forage growth early in the 2015 growing season. In the northeast Colorado, water year data and rangeland production for 2014 was near or above average, setting the stage for healthy range plants this fall/winter and a potentially good start to the 2015 growing season. Given this information, producers in the southeast may want to try to plan on having extra feed in the event the forecast is correct and spring ranges are in short supply of forage. In the northeast, producers may also want to have some extra feed on hand, just in case, since drought is predicted to remain in areas just to the east and to the south. Managers in the eastern plains should also try to make good use of any residual forage in pasture that remains following the 2014 grazing season. In many areas, growth of pasture grasses outpaced cattle consumption during 2014. Since there may be some stock-piled or standing pasture grasses going into 2015, make efficient use of them. However, remember that forage quality of these standing pasture grasses will predictably and gradually decline over the winter. Standing western wheatgrass in November will be of higher quality and testing near 5-6% crude protein, but by March, the same grasses will be less dense and testing out near 2% crude protein or less. In addition, as forage quality declines for pasture grasses over the winter, supplemental feeds having protein will become more important to offset the declining quality of pasture grasses. Lastly, try not to graze off all of the residual standing grasses in the pasture over the winter. Leave some standing biomass behind. This will help capture more snow and give your pasture a better chance at having higher soil moisture in the spring when plants start growing again.

HORTICULTURE

Fall Cold Snap

Linda Langelo, Horticulture Program Associate (linda.langelo@colostate.edu)

What will this artic cold do to our trees that still have green leaves which have not yet fallen? Those green leaves are still photosynthesizing and producing food. The water and food produced freezes in the leaf. The leaves die and become no use to the tree. Peter Raven, President of Missouri Botanic Garden, states, the leaves are kitchen staff

feeding the tree. At the end of the season, the tree releases the kitchen staff, but some hang on in warmer fall weather. The kitchen staff dies when freezing weather comes and is no use to help the tree. The limbs that the kitchen staff was hanging onto will also freeze, die, and not become any help to the tree next spring. In other words, a number of elms may freeze because they have not fully gone dormant. Some lindens have not yet lost their leaves and may suffer as well. This reminds us of a similar year dating back to 1991. The weather behaved in a similar fashion and devastated our Siberian Elms.

On October 26, 1991, the high was 62 degrees F and the low was 31 degrees F. Leaves during that time had not fully senesced. November 3, 1991 was the worst with a high of 34 degrees F and a low of -1 degrees F. Siberian Elms are hardy to zone 3 with temperatures of winter lows from minus 30 to minus 40 degrees F. These elms are native to Central Asia. Their best feature for us is their drought tolerance and that they are very adaptable. They are still a weedy tree that is fast growing and short-lived.

The key here is if the sap is still flowing which is indicated by the green leaves and the temperature drops suddenly, then it is highly likely that there will be some frozen leaves and stems. We live in zone 5b with expected winter lows of minus 10 to minus 15 degrees F. If the trees were completely dormant, they would fare better and see less winter damage next spring.

If the sap is still flowing, then we also run the risk of trees having sunscald. Sunscald is when the rays of the sun hit the south and/or west facing sides of the tree and warms an area under the bark. When the temperature drops to freezing or below at night, then the cells freeze and expand. It cracks the bark open which becomes an open wound. Tree wrap used on the tree can protect this from happening. Thinly barked trees are most susceptible. Aspen, birch, cottonwood, fruit trees, honey locust, mountain ash, maple and willow trees are all thin barked. Aspen, birch, mountain ash and willow do not do well in eastern Colorado. Why? Eastern Colorado is outside their native range and they do not fare well with our extreme weather shifts.

Trees that go into winter that are not properly hydrated can sustain root damage. If the roots sustain freeze damage, the trees will show signs of leaf scorch the next summer. Watering the trees with a deep-root feeder before the ground freezes will help alleviate the drought stress.

Watch the trees in the spring to see if the leaf buds swell. Check the tips of the limbs to see if they are flexible. There may be parts of the tree that are not damaged.

If we have a month or two in this winter when there is no snow cover, find a day when the temperature is above freezing and give the trees some water. Doing this in late morning or the middle of the day is best. Water out by the tree's drip line where the tree's absorption roots are located.

Increased Apple Production

Linda Langelo, Horticulture Program Associate (linda.langelo@colostate.edu)

Are you chilling? With this weather from Friday through this week, your apple, peach and pear trees love it. Chilling requirement for fruit trees is the number of hours with temperatures between 32 degrees F and 45 degrees F during their dormant period. However, if there are days during the winter months with temperatures 60 degrees F and above, those hours are subtracted from the overall chilling hours previously acquired.

The major factor that limits the increased production in a selection of apple varieties is the chilling requirement. Winter chilling requirements are necessary for these temperate fruit trees. The number of hours of winter chilling enables a breakdown of internal growth inhibitors. After the growth inhibitors are broken down, this allows for normal bloom and leaf emergence in the spring.

If chilling requirements are not met from year-to-year, this can put stress on these temperate fruit trees. During years when the chilling requirement is too low, it causes the tree to bloom too early in late winter or early spring. Then you can have additional damage to blooms with spring freezes and frost. With less blooms to be pollinated, then there are less apples.

Chilling requirements don't just count for the number of healthy blooms, but also the normal dormancy of leaf development. Both flower buds and leaf buds have chilling requirements. If chilling requirements are not met for leaf buds, then the apple tree will have late canopy development rather than a normal canopy development. Consecutive years of insufficient chilling requirements will kill apple trees.

Among all the fruit trees, apple trees have chilling hours that range from low chill varieties that take less than 400 hours to others that require up to 1,000. In northeastern Colorado, we have an average of 1400 chill hours available. With peach trees they have a chill requirement between 600 and 800 hours. Asian Pears have lower chill requirements between 400 and 500 hours while European Pears have higher chill requirements up to 800 hours.

Besides chill hours, giving the fruit trees adequate watering, pruning and fertilization helps keep them healthy as well. For more information and fact sheets on apple, pears and peaches, contact your local Extension Office.

Shot Hole Disease

Linda Langelo, Horticulture Program Associate (linda.langelo@colostate.edu)

Shot hole disease or Coryneum blight will occur on twigs and buds when spring weather is wet. This disease can occur on peach, nectarine and apricot trees. This disease can reoccur in these fruit trees, especially if the fruit trees have a history with the disease.

Watch for small, purplish black spots which first appear on the twigs and can be concentric. These spots will expand and their centers will be brown with small tiny dark brown spore-forming structures at the center. These spore-forming structures are called sporodochia. If you have a hand lens, they can be seen best with magnification.

Besides the twigs, the spots on the leaves can be very similar in nature. They are small spots starting out as purple and then developing a tan center which will fall out, hence the name "shot hole" disease. Sometimes, the spots may be surrounded by a light green or yellow margin.

It is important to note that this disease can winter over on twigs and buds. The lesions can continue to spread even at temperatures of 45 F, even though the optimal temperatures range from 70 F to 80 F. If there are periods of prolonged wetness in the fall and continuing to mid-winter, you need to be proactive and use a preventative spray. According to Colorado State University Extension, specialist Harold Larsen recommends fungicides such as Bravo containing chlorothalonil or copper-containing products such as Bordeaux mixture, Kocide or Fixed Copper can be used as a preventative.

Spraying a preventative, means just that. What is not already affected will be protected. A word of warning, copper-containing products should only be used when the leaves are off the trees and during fall is the best time. Follow the label for usage. The label is the law.

For those who have sprinkler systems where the water may come in contact with the trunk or lower limbs, this encourages the disease. The lower limbs of the tree will be where the moisture from a rain dries out last. This is an area where there can be the most infection from the disease. It is equally important to rake any fallen infected leaves or twigs so that irrigation or rain does not allow the spores to be spread back on the tree. The spores can be carried back to the tree by wind during a rain storm.

Care of Poinsettias

Linda Langelo, Horticulture Program Associate (linda.langelo@colostate.edu)

Once the mums of fall start to fade, we start thinking about Christmas and the plants of the season: Poinsettias. Once we purchase these plants, how do we keep them at their best? Think of that tomato plant that you babied all summer long. It does best in warm temperatures with consistent care for light and water. Why? The Poinsettia is native to Mexico where they live in well-drained soils with poor fertility. In nature, they dry out before the next watering. Regular fertilization is not something that the homeowner needs to do once they have purchased their plants. The grower needs to fertilize on a regular basis and stop 2 to 3 weeks before selling the plants. If the homeowner continues fertilization after their purchase then it will reduce the number and size of the flowers and create lanky growth.

In fact, once the plant's flowers called bracts fade and are gone, then the poinsettia needs a rest period. These bracts can last for several months. Once the flowers are gone, cut the dead bracts off leaving stems 4 to 6 inches in length leaving three leaves per stem. Right where the leaves join the stem is a leaf axil. This will produce new buds and give the poinsettia a nice shape for next year. Once that pruning is done, place it in a cool window with filtered light for two weeks. Continue to place the plant in more sun and begin watering again on a regular basis to harden the plant off in order to place it outside for the summer, if you want to have the poinsettia flower for next year.

When you do water a Poinsettia, you need to make sure that the water runs freely out of the pot. Check the water daily and water only when the surface of the soil is dry to the touch. Do not leave the soil dry too long. If the plant wilts, it will lose its leaves prematurely. If your home has low humidity and high light conditions, then it is best to check the soil frequently.

To give your poinsettia good light place it near a sunny window. All exposures are better than a north facing exposure. It simply will not get enough light and facing north may be colder as well.

The best temperature should be maintained at 65 to 70 degrees F during the day and slightly cooler at night. This will keep the poinsettia in bloom for a long time. Try to avoid the room temperature falling below 60 degrees F, your plant might become susceptible to root rot disease. Try to avoid any unnecessary drafts. Warmer or colder drafts can also cause leaves to drop prematurely.

For those of you who have last year's poinsettia and want to have it bloom again, this means placing the plant in darkness every day for 10 weeks. From 5 p.m. to 8 a.m. every day, place

your plant in total darkness. Do you have a closet floor you will not be using during those hours? Once you take it out at 8 a.m., then you can put the poinsettia in a sunny window. Do not stop watering your plant during this time.

Keep watering and fertilizing all the way through mid-December.

Let's face it, not everyone will have a place to do this. But if you do, try it. It can be fun for those who love to grow their own plants.

Care of Christmas Cactus

Linda Langelo, Horticulture Program Associate (linda.langelo@colostate.edu)

Love those Christmas Cactus? Want to keep them around for a long time? Here's how.
Let's start with the origin of the Christmas Cactus. In Latin America the Christmas Cactus grows in the rain forest native to jungles and it is widely found in the Rio de Janeiro mountains in Brazil. This means that these cacti are succulents and tropical plants that love high humidity in an understory or filtered light environment. They are within the cactus family. They are listed under *Epiphllanthus* and *Zygocactus*. Over time, they earned the name Christmas cactus because of their bloom period being during Christmas.
Based on their origin of growing under filtered light as epiphytes in the jungle, Christmas cactus does well in indirect light. If exposed to full-sun, they will burn. As an epiphyte, the plant attaches itself to the tree trunk without being parasitic and derives its nutrients and water from air and rain.

They can grow outside in the summer if they are placed under cool shaded place. These plants should be kept moist when producing buds and flowering. They do best in a slightly acidic soil. They require fertilization during the growing season from April through October. Using a 10-10-10 every two weeks is beneficial. After flowering is finished, they need a dormant period for about a month with no water and no fertilizer.

According to the Cactus and Succulent Society of New Mexico, they recommend the following potting medium for Christmas cactus: two parts peat moss, one part packaged potting soil, and one part sharp sand or perlite.

Unlike other indoor plants that bloom seasonally such as Poinsettias, their temperature requirements are slightly different. They prefer a daytime temperature of 70 or higher with a nighttime temperature of 50 to 65 degrees F.

The Christmas cactus and Easter cactus are often confused. With Christmas cactus the stem joints that are clawlike, while Easter cactus bears 1 ½-inch star-like blossoms at the stem joints and stem. The Christmas cactus, *Schlumbergera truncate*, has flowers in the three-inch range bearing long hooded tubular pink, reddish, white or multicolored flowers.

These plants are easily propagated. Their stems are flattened and jointed. Each segment is determined in length by the joints. Separating the segments at the joints and letting the segment dry out a little, then dipping them in rooting hormone, you can start another plant. You can also take several segments that are attached and follow the same procedure as aforementioned.

Good cultural care will keep your plants free of disease and insects. Basal stem rot occurs at the base of a stem and can be avoided by not overwatering. Mealy bugs and mites can be problems. Washing the plant in soapy water can help control them. Do not forget to use soapy water rinse especially when you are

taking the plant inside for the winter. Mealy bugs are attracted to new succulent growth. They like scale insects suck sap out of the stems. Spider mites will do the same. Systemic insecticides are helpful as preventatives.

What if your Christmas cactus does not bloom? As with Poinsettias, Christmas cactus need more than 12 hours of darkness every day. The shorter day length starting in September and October should allow the cactus to set flower buds. When they do set flower buds, these cacti will bloom through the winter months.

ADDITIONAL INFORMATION

Farming Evolution 2015

Farmers and Ranchers: When was the last time you felt enthusiastic about the lifeblood of your operation, the soil? "The Farming Evolution 2015" will be held at the Event Center on the fairgrounds in Holyoke, CO on February 12 & 13, 2015. There will be an exciting, informative and motivational two days with Gabe Brown and Ray Archuleta. Thursday's focus will be on farming while Friday will look at the ranching operation.

Gabe and his family are on the leading edge of unconventional farming and ranching ideas. "You need to work with nature," says Gabe. "You can't impose your will, because nature wins every time." It costs Gabe 78% less per acre of corn than the U.S. average. "That should be a powerful motivator to change farming practices towards healthier soil," says Gabe. "I like signing the back of checks a lot more than I do signing the front of them."

Ray is a Conservation Agronomist for the Natural Resources Conservation Service. His enthusiasm for soil is inspiring agricultural producers around the nation. Soil is more than a system to support plants physically. A healthy soil has a balance of nutrients (fuel) and an intricate biological network. Ray will help you decide if your "Soil Engine" has the fuel to fire on all eight cylinders. Ray does not just talk about these ideas; he shows them at work too. He will open each day with a soil stability test comparing soil from different tillage or grazing histories. Attendees will see how water filters through untilled and tilled soil. "Soils want to hold water and they want to filtrate," he explains. "Runoff is a symptom of poor soil function. Right now, we are not imitating nature. We are forcing it. The result is that water runs off. If you focus on the soil, it means more money in the producer's pocket."

Further information is in this newsletter. For more information call 970-854-2812 Ext. 3 or for complete agenda, lodging, and registration information can be found at www.farmingevolution2015.eventbrite.com Sponsoring the event is the Haxtun, Sedgwick, and Yuma County Conservation Districts and the Upper Republican Natural Resource District with support from The Colorado State Conservation Board, Phillips County Pheasants Forever, and the Soil and Water Conservation Society in Colorado and Nebraska.

Online Tools Help You Navigate the 2014 Farm Bill

Brent Young, Regional Agriculture & Business Management Specialist (brent.young@colostate.edu)

The Agricultural Act of 2014 provides farmers and ranchers with a unique opportunity to custom design the Title 1 Commodity Programs and Title 11 Crop Insurance Programs to meet the needs of their individual operations. Growers will be able to reallocate base acres, update program crop yields, choose between three different commodity programs, and consider the addition of a new supplemental crop insurance product.

In order to help producers navigate through this process and to arrive at the best decision for their particular operation, the USDA has awarded funding to two land grant university lead coalitions who have developed Internet based, nation-wide farm bill decision aids. These decision aids were developed solely to provide information so producers can better understand the economic implications of their choices under the 2014 Farm Bill.

One of the tools was developed by the National Coalition for Producer Education (NCPE)**,** led by the University of Illinois. This tool can be accessed on the Internet at the following URL: http://fsa.usapas.com/ . In order to use this tool you will need your Reported Crop History Summary (this document was sent to producers last August by the Farm Service Agency (FSA), replacement copies can be secured at your local FSA office)
and yield data for program crops from 2008-2012 (crop insurance data or elevator settlement sheets).

This decision tool is very user friendly and includes several online videos to help you input data and analyze the results. Most producers who operate one to three FSA farms with up to four covered commodities will find that this tool will meet their needs.

Producers who have more complex operations that include several FSA farms in different counties or states may find the second tool developed by National Association of Agriculture and Food Policy (NAAFP), led by Texas A&M University to be a better choice. This tool can be found online at https://usda.afpc.tamu.edu/ .

This tool requires producers to submit the same data as the NCPE version but has the capability of producing a more detailed analysis if planted acreage and yield data are entered for the ten year period from 2003-2013. In addition to helping produces make decisions regarding the 2014 Farm Bill, this tool will be available through 2018 to assist with annual crop insurance decisions.

To paraphrase an old television commercial “The Agricultural Act of 2014 is not your father’s Farm Bill”. The NCPE and NAAFP tools are available to help you navigate through the process.

AG MARKET PRICES

Dennis Kaan, Golden Plains Area Director

LIVESTOCK CASH PRICES — Week Ending 11/24/14

			Current[1]	One Month Ago[2]	One Year Ago[2]
Colorado Auction Feeder Cattle, Medium & Large Frame #1					
Steers,	500-550 lbs	/cwt	$289.00-305.00	$280.00-305.00	$257.00
Steers,	600-700 lbs	/cwt	$244.00-259.50	$251.00-266.50	$212.00-223.00
Heifers,	500-550 lbs	/cwt	$267.00-279.00	$250.00-281.00	$206.00-211.00
Heifers,	600-650 lbs	/cwt	$229.00-240.00	$238.00-249.00	$179.00-186.00
Colorado Weekly Weighted Average Direct Slaughter Cattle, FOB the Feedyard After 3-4% Shrink					
Live Basis Steer Sales	Hd Count	Wt Range	/cwt	/cwt	/cwt
Over 80% Choice	243	1,350-1,375	$173.00	$170.00	
65-80% Choice	275	1,475-1,522	$173.00-174.00	$170.00	$152.00-152.50
35-65% Choice	51	1,350-1,350	$174.00	$170.00	$151.00-152.00
0-35% Choice					
Live Basis Heifer Sales	Hd Count	Wt Range	/cwt	/cwt	/cwt
Over 80% Choice	47	1,300-1,300	$173.00	$170.00	$152.00
65-80% Choice	301	1,250-1,522	$172.00-174.00	$170.00	$152.00-152.50
35-65% Choice					$152.00
0-35% Choice					
Mountain Area and Western U.S. Direct Sheep Report, Medium and Large 1-2					
	Hd Count	Wt Range	/cwt	/cwt	/cwt
Feeder Lambs	980	100-105	$188.00	No Reports for Colorado	$207.00-210.00
Hogs, As of 11/18/13					
Base Market Hog, 200 lb. Carcass Basis, Plant Delivered					
0.9-1.1" Back-Fat, 6.0/2.0 Loin Area/Depth		/cwt	$75.00-88.00	$81.00-95.20	$116.00-134.00
Iowa –Minnesota Daily Negotiated Purchases 200 lb Carcass Basis					
1.0" Back-Fat, 6.0/2.0 Loin Area/Depth		/cwt	$75.00-86.00	$84.00-92.00	$116.00-135.50
Western Cornbelt Daily Negotiated Purchases 200 lb Carcass Basis					
1.0" Back-Fat, 6.0/2.0 Loin Area/Depth		/cwt	$75.00-86.00	$81.00-92.00	$116.00-135.50

LIVESTOCK FUTURES PRICES — 11/24/14

		Current[1]	One Month Ago[2]	One Year Ago[2]
Live Cattle – CME				
Dec	/cwt	$169.50	$166.90	$145.82
Feb	/cwt	$170.02	$166.55	$137.85
Apr	/cwt	$168.80	$164.77	$135.00
Jun	/cwt	$161.47	$154.40	$139.55
Feeder Cattle – CME				
Jan	/cwt	$233.35	$228.90	$179.20
Mar	/cwt	$231.45	$227.17	$179.60
Apr	/cwt	$231.70	$227.10	$180.70
May	/cwt	$231.62	$227.17	$180.00

[1] Commodity specifications apply to the current period only. Specifications may have been different for prior period listings.

[2] Prices reported for the one month ago and one year ago periods are taken from previous issues of this publication.

Source: U.S.D.A. Agricultural Marketing Service http://www.ams.usda.gov/AMSv1.0/lsmnpubs
Chicago Mercantile Exchange http://www.cmegroup.com/

CASH GRAIN PRICES — 11/24/14

		Current[1]	One Month Ago[2]	One Year Ago[2]
#1 HRW Wheat				
Fleming, Haxtun, Julesburg, Holyoke, Paoli, Amherst	/bu	$5.43-5.44	$5.18-5.21	$7.27-7.57
Yuma, Wray, Brush, Akron, Otis, Anton	/bu	$5.39-5.44	$5.20-5.29	$7.27-7.52
Burlington, Seibert, Flagler, Arriba, Genoa, Hugo	/bu	$5.59-5.79	$5.39-5.59	$7.60-7.72
#2 Yellow Corn				
Haxtun, Julesburg, Fleming, Holyoke, Paoli, Amherst	/bu	$3.33-3.48	$3.18-3.23	$4.51-4.56
Yuma, Wray, Brush, Otis, Anton	/bu	$3.41-3.55	$3.22-3.30	$4.58-4.76
Seibert, Arriba, Burlington, Flagler, Bethune, Stratton	/bu	$3.48-3.68	$3.23-3.38	$4.67-4.82
Northeast Colorado, Western Nebraska Beans				
Pinto Beans	/cwt	$24.00	$24.00	$32.00
Great Northern Beans	/cwt	Not Established	Not Established	$50.00
Light Red Kidney Beans	/cwt	$48.00	$48.00	$53.00
White Millet				
E Colorado / SW Nebraska	/cwt	$5.75-6.50 Mostly $6.00	$5.75-6.50	$8.00-9.00 Mostly $8.00
Sunflowers				
E Colorado / SW Nebraska	/cwt	$16.75-17.50	$17.00	$17.50-19.25

GRAIN FUTURES PRICES — 11/24/14

		Current[1]	One Month Ago[2]	One Year Ago[2]
Wheat, Kansas City Board of Trade				
Dec	/bu	$5.51	$5.17	$6.96
Mar	/bu	$5.58	$5.31	$7.01
May	/bu	$5.64	$5.38	$7.08
Jul	/bu	$5.69	$5.46	$7.19
Corn, Chicago Board of Trade				
Dec	/bu	$3.72	$3.53	$4.12
Mar	/bu	$3.85	$3.66	$4.21
May	/bu	$3.94	$3.75	$4.29
Jul	/bu	$4.01	$3.82	$4.37

CASH HAY PRICES — Week Ending 11/24/14

		Current[1]	One Month Ago[2]	One Year Ago[2]
Colorado Hay Report, Northeastern Areas				
Large Square Bales, FOB Stack				
Supreme Alfalfa, 180+ RFV (On Contract)	/ton	$230.00-250.00		$210.00-225.00
Premium Alfalfa, 150-180 RFV	/ton			
Good Alfalfa, 125-150 RFV Delivered	/ton	$170.00	$155.00	$185.00-200.00
Fair Alfalfa Delivered	/ton	$120.00		$160.00-180.00
Utility Alfalfa	/ton			$130.00
Premium Grass (Small Squares)	/ton	$250.00-275.00	$250.00-275.00	$300.00-350.00
Premium Grass (Small Squares)	/bale	$7.00-8.00	$7.00-8.00	$10.00-12.00
Straw (Large Squares)	/ton	$60.00		$65.00
Corn Stalks (Large Rounds)	/ton	$65.00-70.00		$65.00
Oats (Large Squares)	/ton			
Cane Hay (Large Rounds)	/ton			
Millet Hay (Large Squares)	/ton			

GOLDEN PLAINS AREA AGRICULTURAL NEWSLETTER