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SEPTEMBER 2015

2015 Colorado Film Tour

THE GREAT DIVIDE

A film by Havey Productions

The Destiny of the West Is Written in the Headwaters of Colorado

Tour Presented by:

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**To receive an e-mail notification of publication on-line for the
Golden Plains Area Agricultural Newsletter call 970-332-4151
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LIVESTOCK

BUILDING BETTER COWS

September 29, 2015

Phillips County Event Center
Holyoke, CO

University researchers and industry specialists will address the challenges of how to **Select the Right Heifers and Keep Them in the Herd**. A buffet dinner will begin at 5:30 pm after which the program will start promptly at 6:00.

To RSVP or for more information, contact:

Northeast Feed (970)854-2174 or **Rick Haynes** (970)520-2004

Featuring:

Dr. Rick Funston

Reproductive Physiologist
West Central Research & Extension Center
University of Nebraska

Nancy Grathwohl Heter

Cattle Genetic Specialist
Zoetis

Jay Hill

Beef Specialist
Select Sires MidAmerica

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Topics:

Heifer Development
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DNA Selection of Beef
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Nutritional Challenges of
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AGRONOMY

Saving Wheat Seed

R.F. Meyer, Golden Plains Area Agronomy Agent (rf.meyer@colostate.edu)

Throughout the ages, farmers have planted wheat seed saved from their previous crop. When making seed wheat decisions, they selected the best quality seed from the highest yielding varieties.

With the advent of hybrid crops like corn, farmers discovered that they did not get the advantage of hybrid vigor when they saved their corn seed, the ensuing crop was not uniform, and yields were poor. It was quickly learned they needed to buy new seed each year of these hybrid crops to maximize yields. This annual purchase of hybrid seed commercialized the corn seed business and resulted in enormous investment into research and development for improved corn hybrids. Consequently, technology in corn has benefitted farmers tremendously. When it comes to hybrid corn, it just didn't make sense to save your corn seed any more.

With the passage of the US Plant Variety Protection Act in 1970, congress encouraged private investment into development of new plant varieties. An important component of this act was the farmer's right to save seed. Section 113 of the act states, "It shall not infringe any right hereunder for a person to save seed produced by the person from seed obtained, or descended from seed obtained, by authority of the owner of the variety for seeding purposes and use such saved seed in the production of a crop for use on the farm of the person ..."

Simply stated, if a farmer purchases Certified wheat seed they may keep seed grown from that seed for planting on his farm. However, if a farmer buys non-certified wheat seed of a PVPA protected variety from someone else, it is likely that not only is the purchase of that seed in violation of the Act, but saving seed of subsequent production is also a violation.

The most recent restrictions to saving seed are those imposed by patented traits and sales contracts. In most cases, farmers are prohibited by patent laws from saving seed of varieties with patented traits like Roundup® resistance in soybean and Clearfield® in wheat. This is usually reinforced through a contract that is signed at the point of purchase. Even if traits are not patented, saving seed may be prohibited as part of the sales contract.

The consequences of planting illegal seed can be substantial. The owner of the variety could go as far as filing a lawsuit asking for the destruction of the crop. There could also be monetary awards and attorney fees. If state or federal officials get involved, fines could be imposed.

Ignorance of the law is no excuse. As a best management practice, farmers should know what variety they are planting. If they can't show that they purchased Certified seed, they will need to investigate further before they save any production for planting. If they did purchase Certified seed, they should read the label and sales contracts to see if there are any restrictions on saving seed.

Should anyone have specific questions regarding saving wheat varieties for planting contact the Colorado State Seed Department at 970-491-6202.

With the recent private investment and inclusion of proprietary genetic traits into wheat variety development, time will tell if producers can save future seed. On the bright side, the value that seed Certification brings to seed wheat performance and convenience along with the improvements in yield

and quality offered by new varieties may make saving your own seed an economically unattractive choice.

Source: Daryl Strouts, President, Kansas Wheat Alliance – December 2010 Wheat Farmer Newsletter

Seed Treatments Strongly Recommended for the Wheat Crop

R.F. Meyer, Golden Plains Area Agronomy Agent (rf.meyer@colostate.edu)

As the wheat planting season approaches, it is recommended that growers treat seed with a fungicide before planting. Seed treatments control seed-transmitted diseases that lower yield and grain quality. These diseases include common bunt (also known as stinking smut) and loose smut.

The fungi that causes these two diseases infect seed or seedlings and grow within the plant until heading, at which time they invade the developing kernels and replace them with fungal spores. Common bunt in particular can lead to 100% loss because grain elevators usually will not accept common bunted grain.

Another group of seed-transmitted diseases causes root and crown rots and seedling blights. The fungi that cause these diseases infect grain during the heading and grain maturation stages. If grain affected by these fungi is not treated with a fungicide and is used as seed, severe root and crown rots and seedling blights can occur. Together with soil-borne fungi that cause damping off, damage can result in uneven stands, bare patches in wheat fields and lower grain quality and yields.

Benefits of Treating Wheat Seed Before Planting

- A good stand establishment and healthy and vigorous seedlings optimize the opportunity for high yields.
- Diseases such as common bunt that lower grain quality and can lead to 100% loss are controlled.
- Root and crown rot diseases, seedling blights, and damping off, which result in uneven stands and bare patches in fields, are controlled.
- Treating seed with a fungicide-insecticide combo can reduce fall infections by insect-transmitted diseases such as the aphid-transmitted barley yellow dwarf virus.
- If systemic fungicides are used to treat seed, additional protection from fall foliar diseases is provided.

Treating Seed

It is best to buy certified treated seed or use commercial seed conditioner to clean and treat seed. Seed treated on-farm should be cleaned before treatment. Seed treatment equipment that attaches to trucks are available. These treatment devices treat seed as it is augured into drills, minimizing left over treated seed. Thorough coverage maximizes effectiveness of the seed treatment.

Due to the increased prevalence of seed-transmitted diseases this year, it is highly recommended that certified, treated seed be planted for next season's crop. If farmer-saved or bin-run seed must be used, it should be thoroughly cleaned and treated with a fungicide before planting.

*Sources: Stephen Wegulo, Nebraska's Extension Wheat Plant Pathologist
Bruce Bosley, Colorado State University (retired)*

Wheat Planting

R.F. Meyer, Golden Plains Area Agronomy Agent (rf.meyer@colostate.edu)

The first step to planning for a new wheat crop is observation of last year's crop. Observing different fields, attending wheat field days and reading about varieties will provide you with information to look at the newer wheat varieties and find varieties that fit your farming operation.

As you plan ahead, there are several things you can use as a guide that can affect your wheat yields: planting date; seeding rate; and seed size.

* **Planting Date.** Wheat has a wide window for optimum planting dates across Colorado. In this part of the world, we like to start planning early to mid-September with September 10 being optimum most years.

Many producers favor early planting to ensure good stand establishment. However, early planting can also increase the risk of Hessian fly infestations, wheat streak mosaic and barley yellow dwarf. Waiting until later will greatly reduce these problems. Early planted wheat is also more likely to have excessive fall growth that uses valuable soil moisture.

Wheat planted too late may have a higher risk of winterkill, poor fall growth and tillering, which can lead to increased wind erosion. Delaying planting dates past the optimum time can reduce yields, too. Studies at Garden City, KS show a 22 percent reduction in yield by delaying the planting date from October 1 to November 1, and another 18 percent by delaying to December 1.

As the planting date is delayed past the optimum, the seeding rate should be increased to compensate for the reduced tillering potential.

* **Seeding Rate.** Seeding rates vary across the state. For our dryland plantings 30 to 60 pounds per acre is common, with most using 45 to 60 pounds per acre (500,000 seeds per acre is optimum). Seeding rates in Colorado have been increasing the past 10 years, possibly because more semi-dwarf varieties are being planted.

Wheat plants can adjust to low plant populations by increased tillering. However, some varieties respond to increased seeding rates more than others do. For example, from a study in Western Kansas, Tam 107 responded to higher seeding rates while Larned did not.

As planting dates are delayed, seeding rates should be increased. In recent studies at Hutchinson and in Northwest Kansas, high seeding rates were necessary to maximize yields when wheat was planted late. Medium seeding rates (in the recommended range) resulted in maximum yields at normal planting dates but not from later planting dates. Therefore, when planting later than October 1, increase seeding rates.

* **Seed Size.** Large seed has been noted to increase wheat grain yields in Kansas. Large seed increases vigor, tillering and fall forage production compared to small seed.

However, increased grain yields cannot be guaranteed every year or with every variety when planting large seed. For example, there were no differences in yield between light- and heavy-test weight seed of Karl, which has excellent tillering capability. Varieties that tiller well can compensate for small seed size.

In mid-fall weather, the effect of large seed may be reduced because seedlings from small seed have more time to tiller and become established. Also, when planting by volume (as many of us do), more

seeds per acre will be planted when using small seed, which may negate the effect of large seed. Although the large seed does not necessarily result in higher grain yields every year, large seed is good insurance and may show yield advantage under adverse growing conditions.

Source: KSU

Yellow Corn

R.F. Meyer, Golden Plains Area Agronomy Agent (rf.meyer@colostate.edu)

Yellow corn plants this time of year are revealing a production issue that could be addressed with management strategies. Yellow corn plants are typically an indication of a fertility shortage. Whole plants that turn yellow may be short of nitrogen fertilizer. Other symptoms include firing bottom leaves, short corn plants and much reduced yield. Nitrogen is a mobile nutrient and can be leached from the soil, preventing corn roots from reaching the fertilizer. Corn plants notice this lack of nitrogen and plants turn yellow as a response. When this occurs early in the growing season, a post emergent application of nitrogen will address this issue.

In addition, a lack of some micro-nutrients can cause other yellowing effects to corn plants. Corn leaves with yellow streaks can be a symptom of micro-nutrient deficiencies such as iron or zinc. Soils that have high pH levels can make this situation worse, as high pH soils can actually “tie up” some micro-nutrients.

Although there are exceptions, usually adding fertility after tasseling produces very few yield advantages. Therefore, when nutrient deficiencies exist, early fertilizing is best.

Soil testing is recommended for both nitrogen and micro-nutrients. Soil tests will reveal nutrient deficiencies which can then be addressed by field. Once soil test results are in hand, a solid fertility management plan will address nutrient shortfalls.

CSU Crops Testing Program Wheat Results

R.F. Meyer, Golden Plains Area Agronomy Agent (rf.meyer@colostate.edu)

Dennis Kaan, Golden Plains Area Director (dennis.kaan@colostate.edu)

Wheat variety performance trials, and collaborative on-farm testing, represent the final stages of a wheat breeding and testing program where promising experimental lines are tested under an increasingly broad range of environmental conditions. Colorado State University annually conducts a large number of performance trials, which serve to guide producer variety decisions and to assist our breeding program to more reliably select and advance the most promising lines toward release as new varieties. Promising varieties from seed companies and from other states are also tested alongside Colorado varieties under variable conditions in the CSU trials.

Results from the 2015 Winter Wheat Variety Performance Trials and Collaborative On-Farm Testing trials can be found on the World Wide Web at www.csucrops.com. Click on the 2015 Results link for wheat to find trial result information as well as the 2015 Making Better Decisions Technical Report for

wheat. Ron Meyer and Dennis Kaan contributed the following growing season summaries in the technical report.

Growing Conditions in the Central High Plains of Colorado - Ron Meyer

With the 2015 wheat harvest complete, a look back at the wheat growing season can be characterized as one of extremes. The extreme variances in both air temperatures and precipitation made the wheat growing season more than challenging. In September of 2014 conditions were dry early but quickly improved for planting operations. Beneficial moisture created good conditions for crop establishment. From October through March, winter precipitation totals were only 86% of normal. A challenge for the 2015 crop was widely fluctuating air temperatures. A long, warm fall was abruptly changed on November 13 when the low air temperature recorded at Burlington was -8.5°F. This temperature swing caused winter damage to some wheat fields. February was almost as brutal as on February 7 the high temperature at Burlington was 78°F but by February 23rd the low temperature was -5°F.

Precipitation recorded from April through May was well above normal. The Burlington area received 192% of normal amounts for the two months. Sixteen days of precipitation in May made for both good wheat growing conditions and disease-promoting environments. The wet weather was perfect for stripe rust. This fungal disease arrives from the south on strong wind currents. New stripe rust races are continually evolving and varieties that are resistant one year can be totally susceptible in another year. The best strategy for control is to pay attention to updates on stripe rust development in the southern Plains and, if conditions warrant, be ready to apply fungicides, which many producers did. The farmers who treated fields were rewarded with excellent yields – some dryland fields yielded 102 bu/ac and an average of 70 bu/ac was not uncommon. Long term average dryland wheat yield in the Burlington area is 33 bu/ac.

The 2014-15 wheat growing season will be remembered as challenging but one of the better yielding years on record.

General Growing Conditions in the North Central High Plains of Colorado - Dennis Kaan

The fall of 2014 saw plenty of moisture and good growing conditions. Producers who started planting in early September planted into good soil moisture conditions. Heavy rain storms occurred in middle of September, causing localized flooding and soil crusting. As a result, some producers had to replant acreages. The remainder of September and October were seasonable. The week of November 10 saw a decline in temperature from seasonal conditions to below zero temperatures. The dramatic change in temperatures caused freeze damage and winter kill conditions. After this initial surge of cold air, temperatures returned to normal averages for the remainder of the winter. Northeast Colorado also experienced normal precipitation for the winter months.

At the first of May, an above average precipitation pattern began that produced rainfall amounts equal to average monthly totals. The above average precipitation was accompanied by cooler temperatures, slowing plant growth. The above average precipitation and cool temperatures allowed many different plant diseases to spread rapidly throughout Northeast Colorado in the month of May. Many producers had to apply fungicides to maintain favorable yield potential. June and July returned to seasonal precipitation and temperature conditions. Harvest did not begin in earnest until the second week in July in Northeast Colorado. Some producers are working to finish wheat harvest at the first of August.

The 2015 Collaborative On-Farm Test Variety Performance Results are included in the table on the following page.

2015 Collaborative On-Farm Test (COFT) Variety Performance Results

2015 Varieties^a

County/Nearest Town	Denali		WB-Grainfield		Byrd		Sunshine		Snowmass		Brawl CL Plus		COFT Average	
	Yield ^b	Test Weight												
	bu/ac	lb/bu												
Adams/Bennett N	47.7	62.3	48.2	62.5	46.2	61.2	47.8	61.0	40.4	61.5	35.2	64.5	44.2	62.2
Adams/Prospect Valley	47.4	59.6	49.5	59.5	49.4	57.4	59.1	57.6	50.7	59.2	36.8	56.2	48.8	58.3
Arapahoe/Deer Trail	16.6	53.4	14.6	53.5	21.9	53.5	17.1	54.5	18.6	52.5	18.7	54.0	17.9	53.6
Baca/Pritchett	59.3	64.4	54.2	63.7	65.2	62.6	61.5	62.6	53.5	62.6	54.3	63.2	58.0	63.2
Baca/Vilas	57.1	60.9	43.4	58.3	48.4	60.5	52.3	59.4	51.3	60.5	49.1	60.3	50.3	60.0
Bent/Lamar	31.2	60.2	25.3	60.8	27.5	59.0	29.5	60.1	31.7	58.3	22.2	60.0	27.9	59.7
Cheyenne/Cheyenne Wells	21.1	58.1	19.5	57.1	24.8	58.2	20.8	57.2	25.8	57.4	16.2	55.9	21.3	57.3
Crowley/Olney Springs	35.9	58.6	24.4	57.8	27.2	59.0	32.6	58.3	39.8	58.7	27.1	58.4	31.2	58.5
Kit Carson/Bethune	43.4	52.6	41.2	60.5	41.4	57.8	40.6	56.6	32.2	63.0	44.8	56.1	40.6	57.8
Kit Carson/Bethune N	68.7	58.3	56.8	59.3	64.2	58.5	58.0	56.2	67.2	61.1	58.6	57.8	62.3	58.5
Kit Carson/Burlington N	85.4	61.4	100.6	63.0	88.6	61.0	89.3	62.8	75.8	62.4	83.9	59.0	87.3	61.6
Lincoln/Arriba	64.4	60.9	60.8	59.4	47.5	54.8	49.3	57.5	42.7	51.9	28.9	54.9	48.9	56.6
Morgan/Orchard	78.3	59.6	69.1	59.6	77.1	59.4	62.6	59.7	72.2	59.4	59.5	59.0	69.8	59.5
Otero/Manzanola	46.0	57.1	42.8	55.9	58.3	58.1	57.8	58.2	56.4	57.2	51.3	57.4	52.1	57.3
Phillips/Haxtun	87.8	60.0	79.1	61.0	85.0	61.0	89.0	60.5	64.9	60.0	72.9	60.0	79.8	60.4
Prowers/Lamar S	29.5	57.1	26.7	57.8	32.6	58.2	26.8	58.2	31.7	58.2	27.9	57.4	29.2	57.8
Washington/Akron	48.1	55.0	45.7	57.0	32.1	53.0	35.3	56.0	26.0	51.0	21.6	53.0	34.8	54.2
Washington/Akron S	58.2	55.0	77.3	59.0	58.9	57.0	55.9	57.0	57.9	55.0	46.3	58.0	59.1	56.8
Washington/Central	65.2	-	67.0	-	61.1	-	68.6	-	50.7	-	46.5	-	59.9	-
Weld/Keenesburg	75.3	58.3	89.6	59.7	68.0	58.7	72.2	59.5	66.0	56.5	55.0	60.3	71.0	58.8
Weld/New Raymer SE	60.0	58.7	57.2	58.5	69.0	59.5	58.0	58.8	57.5	58.8	68.7	57.6	61.7	58.7
Weld/New Raymer SW	106.5	60.5	98.3	61.0	104.8	60.5	97.2	60.0	96.0	60.0	64.8	60.0	94.6	60.3
Weld/Roggen	83.4	60.0	78.1	58.8	73.2	59.4	65.3	58.3	69.5	57.7	52.6	57.5	70.4	58.6
Yuma/Yuma	55.6	61.8	57.6	60.9	49.9	59.3	48.5	60.4	41.9	60.8	46.5	61.9	50.0	60.9
Average	57.2	58.9	55.3	59.3	55.1	58.6	54.0	58.7	50.9	58.4	45.4	58.4	53.0	58.7

Yield Significance^c

Test Weight Significance^c

LSD ($P < 0.30$) for yield = 2

bu/ac

LSD ($P < 0.30$) for test weight = 0.4

lb/bu

^aVarieties are ranked left to right by highest average yield.

^bAll yields are corrected to 12% moisture.

^cYield and test weight significance: varieties with different letters have yields or test weights that are significantly different from one another.

Preventing Wheat Streak Mosaic Virus

R.F. Meyer, Golden Plains Area Agronomy Agent (rf.meyer@colostate.edu)

Wheat Streak Mosaic Virus is a viral disease that attacks wheat, oats and barley plants. Based on observations, the 2015 wheat crop experienced tremendously high levels of Wheat Streak Mosaic Virus levels. First documented in 1922, the disease has been present for a long time and is only transmitted by a vector, namely an insect called the Wheat Curl Mite. Therefore, control strategies include managing this insect vector.

Wheat Streak Mosaic Virus symptoms include a yellow “mosaic” pattern on wheat leaves and sometimes stunted wheat plants. Normally these symptoms show up in wheat plants during the spring, but may also be present in the fall. Long, warm fall temperatures can enable the Wheat Curl Mite to remain active late in the season. In the spring as air temperatures rise, symptoms become more apparent. Often times, High Plains Virus is also present when Wheat Streak Mosaic virus is present.

A key factor in wheat virus outbreaks has been over-summering hosts, which harbor the Wheat Curl Mite. These hosts can include wheat fields, volunteer wheat, pasture wheat grasses, and even cornfields. However, volunteer wheat is the number one “green bridge” contributing to Wheat Streak Virus outbreaks. When volunteer wheat is left growing late in the summer, Wheat Curl mites jump from volunteer wheat to newly planted emerged wheat and the “green bridge” is complete, with newly emerged wheat plants now infected with the virus. Once wheat plants are infected with a virus, there are no control measures. Wheat Curl mites are not winged, but glide with winds to new wheat fields. Normal gliding distance appears to be less than 1 mile.

Prevention is the key to best management when it comes to Wheat Streak Mosaic Virus. Once the crop is infected, nothing can be done to fix the issue. **Controlling volunteer wheat is the most important management strategy.** Volunteer wheat must be controlled with either tillage or herbicides a minimum of 10 days prior to newly planted wheat emerging. This 10 day period breaks the “green bridge” as Wheat Curl Mites cannot survive on dead wheat plants.



Other strategies include planting wheat varieties that can tolerate Wheat Streak Mosaic Virus better. Varieties in this class include Clara, Mace, RonL, T163, and Tam 112. On the other hand, susceptible varieties include Hatcher, Brawl CL Plus, and others. Popular wheat varieties, such as CSU’s Byrd, not mentioned above fall under the moderately susceptible category. Another strategy includes planting wheat later in the season. As weather cools, the mites become less active. Strategies employed to reduce the likelihood of Wheat Streak Mosaic Virus infections will pay dividends in the form of increased yields.

Wheat Streak Mosaic Virus in Wheat. Source: Stephen Wegulo, G. Hein, R. Klein, R. French. University of Nebraska publication EC 1871.

HORTICULTURE

Is This Happening With Your Trees?

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

This is typical damage caused by iron deficiency in many trees when the midrib and leaf veins remain green and between the veins the leaf structure is yellowing. It is always best to test your soil before you plant the tree you want to plant in your landscape. There are some trees which are very sensitive to changes in pH. Once the pH of the soil gets to be between 7.2 and 7.5, the tree roots have difficulty absorbing iron. The iron is abundant in the soil, but combines with oxygen, hydroxide and carbonite ions which are not water-soluble and the roots cannot absorb these. Iron chlorosis is a complex problem and there are many reasons which contribute other than pH. These can be soil compaction, wet or dry soils and where plastic mulch is used. Any of those conditions restrictions air movement in the soil. Cool soil temperatures are another contributing factor to iron deficiency. The following is a short list of trees/shrubs either highly or moderately susceptible according to Utah State University Extension:

Red Maple	Bumald spiraea	Aspen (does not do well on the plains)
Silver Maple	Birch	Mountain-ash (does not do well on the plains)
Amur Maple	Cherry	
Pin oak	Peach	

The solution is to apply chelated iron and/or ferrous sulfate. The ferrous sulfate may have a slower response rate than chelated iron. Both have variable results. As I stated before, the best solution is to test your soil pH before planting the tree.

Trees that can moderately tolerate pH changes are Ash, Boxelder, Catalpa, Kentucky Coffeetree, Cottonwoods, Poplars, Hackberry, Hawthorn, Honey locust, Linden Norway and Canyon Maples, Elms and most Oaks. One of the best trees that are not pH sensitive is a Tatarian Maple, *Acer tataricum*.

Iron plays two major roles in plants which are stated as follows:

- 1) Iron is a component of proteins and enzymes used during photosynthesis
- 2) Iron is used in respiration to break down stored food reserves releasing energy for the plant

If a plant cannot sufficiently create or release its own sugars and starches, then the plant will die because it cannot feed itself. Be sure to match your soil pH with the tree's pH range.



Falling Leaves

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

Are the leaves on your trees starting to fall early? Do you have a tree in your landscape which normally does not have a chlorotic condition, but does this year? There are several reasons. Let me list them for you in order of occurrence as follows:

- November cold snap
- Warm periods in the winter
- Stress of a spring freeze
- Energy to releaf after a freeze
- Excess rainfall which pushes oxygen out of the soil

The last environmental issue of excess rainfall has caused a lot of chlorotic conditions in trees that normally do not have this condition. In the long run, trees are not producing the new cambium cells that they need. The cambium layer of the tree is new wood or the annual rings. Within this new wood are the vascular structure, xylem and phloem. Phloem is located on an outer ring closest to the bark and in time becomes bark. In the meantime, phloem transports food to the root system. Xylem transports water and nutrients to the leaves and is found deeper into the tree. Xylem is the sapwood of a tree.

There is no single tree species singled out this season. There are a number of different deciduous trees affected such as crabapple, red maple, ash, elms, pears, willow, aspen, cottonwoods and plums. There are many conifers showing chlorotic needles because of the lack of oxygen in the soil.

To add to this, the cooler temperatures at night which dip down to below 55°F make the chlorophyll in the leaves unstable. The chlorophyll is the substance that masks all the other pigmentation in the leaves such as yellow, orange or red.

We will have to wait and see what happens through this winter and into next spring. Don't be surprised if a number of these trees do not make it through into spring.





This spirea has oedema. This what is called is not caused by a bacterium or virus and is not transmittable. This is a plant physiological response due to a number of factors such as water, fertilization, light and temperature. This oedema is referred to as intumescences which are small, bump-like protrusions on the surface of leaves, petioles and stems. Oedema and intumescences are used interchangeably. *Picture by Bob Hammon.*



Looking on the outside of the open cut you will see a light green attachment which is called mistletoe. This is a parasitic plant where it derives all nutrients from the host plant. This is dwarf mistletoe and when it develops seed the seed is released at 60mph and sticks to any surface it strikes. There are no specific conditions necessary for developing an infection. There are very host specific types of mistletoe such as Juniper Mistletoe, *Phoradendron juniperinum subsp. juniperium*. Pruning the infected branches helps to reduce the spread. Trees with pre-existing conditions such as drought stress, age or disease can be killed if heavily infected with mistletoe.

BUSINESS MANAGEMENT

ARC/PLC Participation Rates Nationally and in Colorado

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

The fourth and final phase of sign-up to participate in the 2014 Farm Bill Title 1 programs is now underway. Producers have until September 30th to stop by their local USDA Farm Service Agency office and enroll in the Title 1 program they selected during the election period. With this final phase underway, now would be an appropriate time to look at the decisions producers have made regarding the Agricultural Act of 2014.

Crop producers were given the option to reallocate base acres under the provisions of the 2014 Farm Bill. Acres planted to program crops in 2009 through 2012 were used to determine possible reallocation percentages. In most cases producers chose the allocation (current or reallocation) that would result in the largest share of program crops associated with greater program payments. Nationally, US crop producers increased corn base acres by 12.8 million acres, soybean base acres increased by 4.7 million acres, and wheat base acres decreased by 9.9 million acres.

In addition to reallocating base acres, the Agricultural Act of 2014 allowed producers an opportunity to update counter-cyclical yields on program crops. In many cases producers had not updated yields since the early 1980's. Nationwide yields of corn, soybeans and wheat increased by 30% over the counter-cyclical yields.

Agricultural producers were required to select between Price Loss Coverage (PLC), Agriculture Risk Coverage-County (ARC-CO), and Agriculture Risk Coverage-Individual (ARC-IC). Nationally, 96% of soybean producers, 91% of corn producers, and 66% of wheat producers chose ARC-CO. Colorado producers selected the ARC-CO at lower rates than national trends. In Colorado, soybean, corn, and wheat producers selected ARC-CO by 68%, 65% and 32% respectively.

Program enrollment for the 2014 and 15 crop years is currently underway is scheduled to end on September 30th. Producers will be required to enroll their FSA farms (sign a contract) every year during the life of the Agricultural Act of 2014.



AG MARKET PRICES

Dennis Kaan, Golden Plains Area Director

LIVESTOCK CASH PRICES			Week Ending 8/21/15		
			Current ¹	One Month Ago ²	One Year Ago ²
Colorado Auction Feeder Cattle, Medium & Large Frame #1					
Steers,	500-550 lbs	/cwt	No Report	No Report	No Report
Steers,	600-700 lbs	/cwt	No Report	No Report	No Report
Heifers,	500-550 lbs	/cwt	No Report	No Report	No Report
Heifers,	600-650 lbs	/cwt	No Report	No Report	No Report
Colorado Weekly Weighted Average Direct Slaughter Cattle, FOB the Feedyard After 3-4% Shrink					
<u>Live Basis Steer Sales</u>	Hd Count	Wt Range	/cwt	/cwt	/cwt
Over 80% Choice					
65-80% Choice	629	1,376-1,625	\$151.00-153.00	\$146.00-148.00	\$155.00
35-65% Choice	2,148	1,450-1,525	\$151.00-153.00	\$148.00-148.00	\$153.00-155.00
0-35% Choice					
<u>Live Basis Heifer Sales</u>	Hd Count	Wt Range	/cwt	/cwt	
Over 80% Choice					
65-80% Choice	210	1,266	\$151.00		\$155.00
35-65% Choice	522	1,375-1,400	\$153.00	\$148.00	\$154.00-155.00
0-35% Choice					
Mountain Area and Western U.S. Direct Sheep Report, Medium and Large 1-2					
	Hd Count	Wt Range	/cwt	/cwt	
Feeder Lambs	9,000	110-120	\$164.00	\$183.00	\$190.00
				\$169.00-173.00	\$165.00-182.25
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		\$66.00-74.50	\$65.00-76.75	\$86.00-97.95
Iowa –Minnesota Daily Negotiated Purchases 200 lb Carcass Basis					
1.0" Back-Fat, 6.0/2.0 Loin Area/Depth	/cwt		\$66.00-76.50	\$71.08-76.75	\$90.00-96.00
Western Cornbelt Daily Negotiated Purchases 200 lb Carcass Basis					
1.0" Back-Fat, 6.0/2.0 Loin Area/Depth	/cwt		\$66.00-74.50	\$71.08-76.75	\$90.00-96.00
LIVESTOCK FUTURES PRICES			8/21/15		
Live Cattle – CME			Current ¹	One Month Ago ²	One Year Ago ²
Aug		/cwt	\$144.85	\$143.25	\$152.45
Oct		/cwt	\$143.70	\$144.12	\$148.02
Dec		/cwt	\$146.05	\$147.05	\$150.90
Feb		/cwt	\$145.87	\$147.65	\$152.00
Feeder Cattle – CME					
Aug		/cwt	\$211.37	\$209.67	\$217.35
Sep		/cwt	\$202.32	\$207.55	\$212.90
Oct		/cwt	\$199.47	\$205.92	\$211.35
Nov		/cwt	\$197.35	\$204.97	\$209.75

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/lsmpubs>

Chicago Mercantile Exchange

<http://www.cmegroup.com/>

CASH GRAIN PRICES**8/21/15**

		Current ¹	One Month Ago ²	One Year Ago ²
#1 HRW Wheat				
Fleming, Haxtun, Julesburg, Holyoke, Paoli, Amherst	/bu	\$4.06-4.16	\$4.42-4.52	\$5.62-5.64
Yuma, Wray, Brush, Akron, Otis, Anton	/bu	\$4.16-4.26	\$4.52-4.57	\$5.64-5.74
Burlington, Seibert, Flagler, Arriba, Genoa, Hugo	/bu	\$4.16-4.31	\$4.49-4.67	\$5.74-5.94
#2 Yellow Corn				
Haxtun, Julesburg, Fleming, Holyoke, Paoli, Amherst	/bu	\$3.39-3.81	\$3.66-3.83	\$3.53-3.81
Yuma, Wray, Brush, Otis, Anton Seibert, Arriba, Burlington, Flagler, Bethune, Stratton	/bu	\$3.41-3.76 \$3.36-3.44	\$3.73-4.00 \$3.68-3.76	\$3.71-3.86 \$3.86
Northeast Colorado, Western Nebraska Beans				
Pinto Beans	/cwt	\$20.00	Not Established	Not Established
Great Northern Beans	/cwt	Not Established	Not Established	Not Established
Light Red Kidney Beans	/cwt	Not Established	\$48.00	Not Established
White Millet				
E Colorado / SW Nebraska	/cwt	\$6.00-7.00 Mostly \$6.00-6.25	\$6.00-7.00 Mostly \$6.75-7.00	\$6.50-7.00 Mostly \$6.75
Sunflowers				
E Colorado / SW Nebraska	/cwt	\$20.00-21.00	\$20.00	\$16.00-17.00

GRAIN FUTURES PRICES**8/21/15**

		Current ¹	One Month Ago ²	One Year Ago ²
Wheat, Kansas City Board of Trade				
Sep	/bu	\$4.97	\$5.11	\$5.43
Dec	/bu	\$5.01	\$5.19	\$5.55
Mar	/bu	\$5.05	\$5.27	\$5.74
May	/bu	\$5.07	\$5.31	\$5.84
Corn, Chicago Board of Trade				
Sep	/bu	\$3.65	\$3.92	\$3.60
Dec	/bu	\$3.76	\$4.02	\$3.67
Mar	/bu	\$3.88	\$4.12	\$3.80
May	/bu	\$3.94	\$4.18	\$3.88

CASH HAY PRICES**Week Ending 8/21/15**

		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			
Premium Alfalfa, 150-180 RFV	/ton	\$170.00		\$200.00-230.00
Good Alfalfa, 125-150 RFV Delivered	/ton		\$115.00	\$130.00-140.00
Fair Alfalfa Delivered	/ton			
Utility Alfalfa	/ton	\$95.00	\$70.00	\$100.00-115.00
Premium Grass (Large Squares)	/ton			\$250.00-275.00
Premium Grass (Small Squares)	/bale	\$7.00	\$7.00	\$7.00-8.00
Straw (Large Squares)	/ton		\$50.00-55.00	\$55.00-85.00
Corn Stalks (Large Squares)	/ton			
Oats (Large Squares)	/ton			
Cane Hay (Large Rounds)	/ton			
Millet Hay (Large Squares)	/ton			

GOLDEN PLAINS AREA AGRICULTURAL NEWSLETTER

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Building Better Cows Flyer
Saving Wheat Seed
Seed Treatments Strongly Recommended for the Wheat Crop
Wheat Planting
Yellow Corn
CSU Crops Testing Program Wheat Results
Preventing Wheat Streak Mosaic Virus
Is This Happening With Your Trees?
Falling Leaves
The Rare and the Unusual
ARC/PLC Participation Rates Nationally and in Colorado
Ag Market Prices