

Colorado State University

Extension

Golden Plains Area Agricultural Newsletter

SEPTEMBER 2011

<http://goldenplains.colostate.edu>

Ron Meyer
Area Agronomy Extension Agent
Burlington Office
(719)346-5571 ext. 302

Joel Schneekloth
Northeast Region Water
Resource Specialist, Central
Great Plains Research Station,
Akron (970)345-0508

Dennis Kaan
Golden Plains Area Director, Regional
Agricultural & Business Management
Economist, Akron Office (970)345-2287

Assefa Gebre-Amlak
Regional Crop Protection, Pest Management
Specialist
Greeley Office (970)304-6535

John Deering
Regional Agricultural & Business
Management Specialist
Akron Office (970)345-2287

Alan Helm
Area Agronomy/Weed
Management Agent
Julesburg Office (970)474-3479

Casey Matney
Rangeland Management Extension
Specialist
Regional Engagement Center
Sterling Office (970)522-7207

Linda Langelo
Horticulture Program Associate
Holyoke Office (970)854-3616

Michael Fisher
Area Livestock Extension Agent
Wray Office (970)332-4151

Managing Tough Times: How Can Your Family Be More Resilient?

More information in this newsletter

September 13, 2011 – Akron – Washington County Courthouse Annex

October 5, 2011 – Holyoke – Ortner Room
970-345-2287

Lunch with Dr. Kevin Pond, CSU Animal Science Chair

More information in this newsletter

September 21, 2011 – Club at Indian Hills – Yuma
970-332-4151

The Range Beef Cow Symposium XXII

Flyer in this newsletter

November 29, 30 and December 1 – Scotts Bluff County
Fairgrounds Events Center - Mitchell, NE – 308-632-1245

A few months ago, retired Gen. Wesley Clark, former Supreme Allied Commander of NATO, called upon our political leaders to “hold the thin green line.” He was referring to the 210,000 remaining full-time farmers and ranchers in America, and the need to strengthen instead of weaken this force that protects our food and fiber supply and national security.

If 210,000 sounds like a big number to you, he said, consider this: more people walk through Wal-Mart’s doors every 21 minutes to buy food and clothes, then there are people producing the food and fiber to stock the shelves

LIVESTOCK

Canola Meal As A Feedstuff

Michael Fisher, Area Livestock Extension Agent, Golden Plains Area



Photo 1: Blooming Canola. Credit: Ron Meyer

As you traveled through the Golden Plains Area earlier this summer, you may have noticed a yellow flowering crop in a few locations. A handful of producers, as well as some of our Extension team have been looking at irrigated winter canola as a potential crop for the area. Canola is considered a high value crop that requires less water than corn. So there is a hope that it might have potential here with the goal of reducing the amount of water needed to raise a crop.

Canola seed is about 42% oil and this is extracted to produce either edible vegetable oil or biofuels. The remaining canola meal can be used as a protein source for animals. Canadian livestock producers and researchers have done extensive work feeding canola meal to swine, poultry, and both beef and dairy cattle. Their research would suggest the following nutritive qualities for canola meal:

Canola Meal Nutrient Composition

Crude Protein (%)	36.0
Rumen Bypass Protein (%)	35.0
Oil (%)	3.5
Acid Detergent Fiber (%)	16.8
Neutral Detergent Fiber (%)	20.7
Total Digestible Nutrients (%)	63.0
Calcium (%)	0.62
Phosphorus (%)	1.06
Net Energy Maintenance (kcal/kg)	1690
Net Energy Gain (kcal/kg)	1130
Net Energy Lactation (kcal/kg)	1580

Some producers may be hesitant to feed canola meal, as it contains some elements that are traditionally considered anti-nutrients. The most significant of these are glucosinolates. These have grown a poor reputation among those who have fed mustard and traditional rapeseed byproducts. Glucosinolates both create a bitter taste and form a toxic substance called aglucones which react upon various animal organs at the molecular level. Genetic selection in canola breeding programs has developed canola varieties that have glucosinolate levels that are well below hazardous thresholds.

Canola can also contain tannins at 1.5% to 3.0%. Some plants with these tannin levels may present a palatability issue and can interfere with protein digestibility. In many canola varieties, this does not appear to be the case.

Sinapine is another item to be aware of if feeding canola meal, particularly if feeding it to poultry. Canola meal can have sinapine levels ranging from 0.6% to 1.8%. This can sometimes lead to a "fishy flavor" in eggs. It can also have a bitter taste and is traditionally considered to have a potential impact on gain. However, research by Qiao & Classen (2003) suggested that the

sinapine in diets may improve both protein digestibility and energy metabolism. Finally, much of the phosphorous that is found in canola meal is bound to phytic acid. Therefore, a nutrient analysis may show high phosphorous levels, while actual bioavailability may be very low for monogastric animals, like swine and poultry.

Canola meal can be an excellent feedstuff, but you do need to understand the product and how to manage it. As more canola is raised in the Golden Plains Area, you may want to consider this feed resource in your own operation.

Management Tips For Limiting Goat & Sheep Parasite Problems

*Dr. David Van Metre, Veterinary Extension Specialist & Associate Professor
College of Veterinary Medicine & Biomedical Sciences, Clinical Sciences*

What are some of the ways that farm management can be changed to limit parasite problems in a goat herd or sheep flock?

1. Don't feed hay or grain on the ground. Instead, feed from racks or feeders and keep these clean. The goal is to limit fecal contamination of feed. Goats have a tendency to want to climb into or on top of feeders, so these may need to be covered or modified to prevent them from stepping in or defecating into the feed. Rake up spilled feed and discard, compost or fed to horses, pigs, or poultry. Similarly, clean water troughs and bowls regularly to limit transmission of parasites through fecal - contaminated water.

2. Don't overgraze pastures. If your animals are allowed to graze pasture, move the animals to new pasture (or use an electric fence to section the pasture) every seven to 10

days, particularly during the height of the growing season where warmer temperatures and moisture is maintained. Once a pasture has been grazed, mow it short (2 inches or less) and remove the clipped forage. Exposure to sunlight for three to four weeks will kill many of the remaining parasite larvae, making the pasture safer for sheep and goats to return to graze. Alternatively, you can move horses or poultry onto the pasture – when these other animals ingest parasite larvae from sheep and goats, the larvae are not able to mature and will die without causing harm to the “new” animal that ingests them. The sheep and goats can be returned to this pasture in about four to six weeks, provided that the alternate animals have disrupted the fecal pellets left by the sheep and goats (poultry) or grazed the grass down extensively (horses). Goats do very well if allowed to “browse” - that is, eat the

leaves and stems of shrubs and tall weeds at shoulder height to the goat. The parasites shed in feces will not contaminate the plants at this height off of the ground because the eggs and larvae will be on the ground or on short plants nearer the ground level. Pastures intended for grazing can be cultivated with certain plants that show promise in helping to control parasites in sheep and goats. These plants – such as *Sericea lespedeza* and birdsfoot trefoil - contain compounds called condensed tannins, which appear to suppress egg production by certain gastrointestinal helminths.

There is new evidence to suggest that certain parasites from sheep and goats can be transmitted to cattle, and vice versa.

3. Avoid overcrowding – Because most gastrointestinal helminthes are transmitted directly from one host to

another, many parasitism problems arise from overstocking, or simply having too many animals on a given section of land. Overcrowding contributes to added stress on the animals as well as added competition among the animals held in small confined areas. This is particularly true when sheep and goats are grazing small pastures.

4. Use deworming medicine (called anthelmintics) wisely. Your veterinarian can test the feces of your sheep and goats to determine the level of parasitism present in your animals, and he or she can then custom design a deworming strategy to fit

your situation. There is no single schedule for deworming treatments that fits all of the needs of all farms and ranches. To avoid treating your animals when they don't need it, and to avoid delaying treatment until animal health is compromised, consult with your veterinarian on how best to use these medicines. Haphazard use of deworming medicines can induce anthelmintic (dewormer) resistance of the parasites, and the medicines may permanently lose their efficacy to kill the gastrointestinal parasites found in sheep flocks and goat herds. Loss of anthelmintic efficacy

becomes especially important if these drugs are over-used.

5. Avoid malnutrition. Sheep and goats are far more capable of coping with gastrointestinal parasites if their nutritional needs are met. Feeding adequate amounts of protein to these animals is particularly important. Your veterinarian can help you to design a nutritional program that best fits your animals' needs. Combining the judicious use of anthelmintics, adequate nutrition, and good flock/herd management will greatly diminish the negative effects of gastrointestinal parasites in your sheep and goats.

PRRS Study To Be Released

Michael Fisher, Area Livestock Extension Agent, Golden Plains Area

Those of you in the pork business know that Porcine Reproductive and Respiratory Syndrome (PRRS) is a significant problem for swine production. The costs related to this are immense and a recent Iowa State University study has calculated the dollar value of PRRS related losses.

Research Veterinarian Derald Holtkamp and Ag Economist Jim Kliebenstein surveyed both swine producers and veterinarians throughout the US late in 2010. Their results indicate that \$641 million in costs to the US pork industry can be directly contributed to PRRS annually. That is a daily cost of \$1.8 million. The researchers further broke this value down to a per sow basis,

nationwide, for a value of \$114.71 per sow per year. Those are some shocking numbers.

The study also suggested that veterinary and producer biosecurity measures that aim to protect healthy animals from PRRS cost the swine industry nearly an additional \$477.8 million. This brings the annual costs of PRRS to more than \$1 billion annually in the US.

The National Pork Board, which funded the study, expects to post the complete report in the Herd Health Resource Center of their website (<http://www.porknetwork.com/pork-resources/herd-health>) in the coming months.

AGRONOMY

CSU Releases Two New Wheat Varieties

R.F. Meyer, Golden Plains Area Extension Agronomist

Colorado State University has released two new hard red winter wheat varieties: Brawl CL Plus and Byrd. Although currently not available as Foundation seed for sale to qualified seed growers, supplies of certified seed will be more widely available for the fall 2012 planting season. Yield tests have found that both these varieties are high-yielding, high quality choices.

Brawl CL Plus is released as a new 2-gene Clearfield variety. It is early maturing with a medium-long length coleoptile. It has good stripe rust resistance and excellent straw strength, test weight and milling and baking qualities. This variety can have the herbicide

Beyond applied to it for grass control such as rye and jointed goatgrass. Two-gene Clearfield wheats will allow the use of methylated seed oil with Beyond herbicide to enhance control of rye.

Byrd is a medium maturity high yielding variety that looks adaptable across many Colorado locations. It has good stripe rust resistance, a medium-long coleoptile, and excellent straw strength, test weight, and milling and baking qualities. This variety is expected to be adopted by a large number of Colorado Wheat producers.

More information can be found online at Coloradowheat.org or wheat.colostate.edu.

'Brawl CL Plus' (CO06052) Hard Red Winter Wheat Colorado State University Wheat Breeding Program

General

- Pedigree - Teal 11A/Above//CO99314 (CO99314 = TX91V4931/Halt); last cross made in 2003
- Characteristics – two gene *Clearfield** wheat

Chaff color	white	Stripe rust	moderately resistant
Awns	awned	Leaf rust	moderately susceptible
Plant height	medium	RWA (biotype 1 and 2)	susceptible
Maturity	early	Powdery mildew	moderately resistant
Coleoptile length	medium long	Hessian fly	susceptible
Straw strength	excellent	WSBMV/WSSMV	moderately resistant
Test weight	excellent	BYDV, WSMV	moderately susceptible

'Byrd' (CO06424) Hard Red Winter Wheat Colorado State University Wheat Breeding Program

General

- Pedigree - TAM 112/CO970547-7 (CO970547-7 = Ike/Halt); cross made 2001
- Characteristics

Chaff color	white	Stripe Rust	moderately resistant
Awns	awned	Leaf Rust	moderately susceptible
Plant height	medium	RWA (biotype 1 and 2)	susceptible
Maturity	medium	Powdery mildew	moderately resistant
Coleoptile length	medium	Hessian Fly	susceptible
Straw strength	good	WSBMV/WSSMV	moderately susceptible
Test weight	good	BYDV, WSMV	moderately susceptible

Ten Things To Check Before Planting Season

R.F. Meyer, Golden Plains Area Extension Agronomist

1. **Level the Planter.** Check hitch height. Make sure the planter's tool bar is level (vertically) or running slightly up hill. When planters tip down, coulters run too deep and closing wheels run too shallow.
2. **Check Bushings and Parallel Linkage.** Worn bushings increase row bounce which increases seed bounce. Stand behind the row unit and wiggle it up and down and back and forth checking to make sure bushings are tight.
3. **Drive System.** Check every chain. Kinked chains cause shock and vibration in the meter. Start with fresh, lubricated chains and check them daily. Include transmission chains, meter drive chains and insecticide box chains.
4. **Calibrate Seed Meters.** Calibrated meters can add six or more bushels per acre.
5. **Double Disk Openers.** Test to make sure there is good contact between the double disks. Slide a business card from the top down along the front of the disks until the card won't lower any further. Mark that spot with chalk. Then, take the card from the back and slide it forward until it stops. Mark that spot and measure the distance between the two marks. If it is less than two inches, adjust or replace the disks. In general, the disks should be more than 14.5" in diameter.
6. **Seed Tubes.** Inspect seed tubes for wear at the bottom. Frequently, the tubes will have a small dog ear flap on the left side of the seed tube. If so, replace them.
7. **Closing Wheel System.** For cool, moist planting conditions, take a look at running one spike wheel (15") and one rubber wheel (13"). The spike wheel can help chop the sidewall improving fracturing and sealing in the tough soil conditions. For no-till, an even more aggressive approach may improve trench closing. Two 13" spike wheels with a drag chain provide the most aggressive action.
8. **Closing Wheel Alignment.** With your planter setting on concrete, pull ahead about five feet. Look at the mark left behind the planter by the double disk openers. The mark should run right down the centerline between closing wheels. If a closing wheel is running too close to the mark, adjust the closing wheels to bring it back to center.
9. **Row Cleaners.** With higher levels of residue and more corn on corn, almost any planter can benefit from well adjusted row cleaners. Row cleaners sweep residue from the row, warming the soil around the seed trench, reducing wicking and seedling blight. Make sure row cleaners gently sweep residue – mostly, you don't want to move much soil, just residue. Watch the row cleaners running. They shouldn't turn constantly unless you want to move soil. They should gently turn sporadically, especially through areas of thick residue.
10. **Improve Germination with Seed Firmers.**

Source: Precision Planting, Inc.

Wheat Planting

R.F. Meyer, Golden Plains Area Extension Agronomist

The first step to planning for a 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 wheats 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 planting early to mid-September with September 10 being optimum most years.

Many producers favor early planting to ensure good stand establishment. But 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 and 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. 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. 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 with 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

2011 Collaborative On-Farm Tests (COFT) Wheat Variety Performance Results

County/Town	2011 Varieties ^a													
	Bill Brown		Hatcher		Winterhawk		Snowmass		Ripper		TAM 112		COFT Average	
	Yield _b	Test Wt	Yield _b	Test Wt	Yield _b	Test Wt	Yield _b	Test Wt	Yield _b	Test Wt	Yield _b	Test Wt	Yield _b	Test Wt
	bu/ac	lb/bu	bu/ac	lb/bu	bu/ac	lb/bu	bu/ac	lb/bu	bu/ac	lb/bu	bu/ac	lb/bu	bu/ac	lb/bu
Adams/Bennett	48.0	61.0	45.4	59.5	49.4	62.0	38.7	60.5	40.5	59.5	39.5	62.0	43.6	60.8
Baca/Vilas	18.0	60.0	17.5	61.5	19.8	61.5	15.4	57.0	20.6	61.0	18.4	60.5	18.3	60.3
Baca/Walsh	26.4	61.0	26.3	61.0	24.3	62.0	26.0	62.0	28.3	61.0	23.5	61.0	25.8	61.3
Bent/Lamar	23.6	60.5	25.6	60.5	20.7	58.0	24.0	60.0	27.6	59.0	22.2	59.0	23.9	59.5
Cheyenne/Arapahoe	24.7	59.3	24.2	59.5	20.3	59.5	24.0	59.5	25.3	59.0	19.2	60.0	23.0	59.5
Cheyenne/Cheyenne Wells	68.6	59.0	58.8	62.5	58.3	61.5	58.4	62.0	58.8	60.5	63.1	60.0	61.0	60.9
Kit Carson/Bethune	52.8	61.7	45.0	60.2	47.1	60.2	50.0	59.7	46.0	59.5	40.1	59.7	46.8	60.2
Kit Carson/Stratton	88.4	60.5	84.4	57.5	76.0	55.7	87.0	59.2	87.1	59.4	84.1	59.7	84.5	58.7
Logan/Leroy	66.6	61.5	67.4	60.5	62.8	62.0	65.9	61.5	63.8	60.5	63.3	62.0	65.0	61.3
Logan/Peetz	18.7	60.0	21.5	59.0	17.1	60.0	17.0	59.0	13.9	56.0	14.6	60.0	17.1	59.0
Logan/Sterling W	48.7	59.0	52.3	58.0	46.0	60.0	45.8	58.6	48.0	56.5	44.2	58.5	47.5	58.4
Phillips/Haxtun	71.0	59.0	77.2	60.0	80.5	60.0	80.5	60.0	71.0	58.0	80.5	60.0	76.8	59.5
Prowers/Lamar	23.9	59.0	28.8	62.5	17.9	61.5	25.6	62.0	24.5	60.5	23.0	60.0	23.9	60.9
Washington/Akron E	60.1	56.5	60.2	56.0	55.7	58.0	56.4	56.0	58.6	57.5	63.0	57.5	59.0	56.9
Washington/Woodlin	65.6	60.5	59.5	60.5	60.7	62.0	56.1	62.5	55.3	61.0	60.1	62.5	59.5	61.5
Weld/Keenesburg	64.8	58.5	69.5	58.5	58.7	60.0	49.8	58.5	54.7	58.5	58.0	59.0	59.3	58.8
Weld/New Raymer	33.3	57.5	31.6	57.0	28.3	57.5	31.4	55.5	33.3	55.5	29.5	58.0	31.2	56.8
Weld/Prospect Valley	48.5	57.0	47.8	55.5	43.7	57.0	40.9	56.0	42.0	56.0	42.7	57.0	44.3	56.4
Yuma/Wray	59.6	54.0	66.2	56.3	76.1	59.0	65.9	58.0	55.1	54.0	62.1	57.0	64.2	56.4
Yuma/Yuma	30.6	60.0	30.4	60.0	31.0	60.0	31.6	59.0	31.6	60.0	26.1	60.0	30.2	59.8

Average 47.1 59.3 47.0 59.3 44.7 59.9 44.5 59.3 44.3 58.6 43.9 59.7 45.2 59.3

Significance^c Yield A A B B B B

LSD_(0.30) for yield = 1.2 bu/ac

^a Varieties are ranked left to right by highest average yield

^b Yield corrected to 12% moisture

^c Significance: Varieties with different letters are significantly different from one another based on the LSD values (1.2 bu/ac for yield)

Quick Tips For Harvesting Sunflower & Corn

R.F. Meyer, Golden Plains Area Extension Agronomist

	Physiological Maturity	Common Threshing Mistake to Avoid	Optimum Harvest Moisture	Harvest Equipment Tip	Acceptable Harvest Loss	Storage Moisture
Sunflower	Bracts yellow/brown; Little green remaining back of heads.	Combining too dry: heads will shell out.	Combine at 14-15% moisture and dry down to under 10% moisture	12" pans best for 30" row spacings; 9" better for other row sizes and solid seeding.	About 3% for oil sunflower (i.e., about 20 seeds/sq. ft. or 100 lb/acre).	Below 10% for overwinter storage.
Corn	Kernel black layer forms at tip of kernels; kernel moisture about 30%	Pushing through the crop too fast; stalks ride over the sieves resulting in more separating loss.	15.5%-18% dry to 15.5%	All-crop header will work but is slower than corn head. Operation of cylinder/rotor can affect corn kernel damage more than any other setting.	Try to keep it under 2%. Two kernels/sq. ft. = 1 bu./acre.	15% for short-term 14% or less long-term

RANGE MANAGEMENT

Swath Grazing

Dr. Casey Matney, Regional Extension Specialist, Range Management

Ranchers and livestock producers are always looking to find a better way to stockpile and maintain high quality feed for their cattle and sheep during winter. At the same time, people are trying to find a better method of winter feeding that reduces their costs. In addition to that, people want to minimize the amount of work they have to do and the amount of equipment they have to maintain. Well, I do not have a silver bullet for this problem yet, but there is some evidence to suggest that swath grazing may be worth trying.

Swath grazing is the practice of taking the sum or last of the year's standing forage production and cutting it into a swath. The swaths can be left alone, raked together with other swath rows to make a larger windrow, or they can be raked and bunched. The purpose of swath grazing is to produce near hay quality forage, while reducing

handling and equipment costs. In reality, creating a swath, a large windrow, or a bunch is the equivalent to creating piles or strips of hay. These piles/strips of hay are a little more exposed to the elements than covered bales of hay. However, research on the subject has found that the amount of forage that is lost to waste in swaths appears to be equivalent to that of hay (5% to 10%). In some instances though, Canadian studies have found that as much as 50% of the swath can be lost to waste. Even in that scenario, Canadian researchers found that the swath grazing was more cost-effective than baling hay. Estimates of cost savings in the year 2007, for swath grazing versus baling hay, ranged from about \$20 to \$40 per ton of forage.

Nutrient quality and dry matter for hay versus swathed forage seems to be similar. During 2006, North Dakota State University researchers

found that oat hay actually lost more dry matter than swathed oats. Nevertheless, when it came to protein levels, oat hay maintained slightly higher crude protein than swathed oats. Their conclusion was that swath grazing was a viable option for wintering cattle in southwestern North Dakota.

In addition to stockpiling forage, swath grazing may provide added benefits. Swathing can help make use of less desirable grasses and older plant material that might ordinarily be left behind or avoided under normal field grazing situations, which makes better use of the forage this year, while hopefully improving the growing conditions for the pasture next year. Swath grazing in the pasture may also allow some regrowth to be utilized by the cattle in addition to the forage in the swaths. Lastly, swath grazing allows dung and urine to be deposited on site, recycling and keeping nutrients in the pasture.

When and Where Do I Use Swath Grazing?

The climate here in eastern Colorado is well suited to swath grazing, since we have relatively dry and cold winters. In wetter and warmer climates swath grazing does not work because the swath of forage quickly decomposes.

Forages that work well with swath grazing are alfalfa, mixed alfalfa/grass stands, irrigated grass pastures, and small seeded annual forage crops. Swath grazing may also work well on non-irrigated rangeland comprised of tall grasses and mid-height grasses where the pounds of production exceeds 2,500 lbs per acre. Situations that will not work for swath grazing are those areas comprised of short grasses, areas that are low in production, areas that are periodically flooded in the fall and winter, and areas known to accumulate a lot of snow. Areas that you would not consider baling are areas to avoid swath grazing.

Now, before you jump on your tractor and swath everything you've got. I would recommend you start small. You can always ramp up your swathing operation later if you find that swath grazing is working for you. It definitely won't work for everyone, but it might be worth adding it to your arsenal and give your operation a little more flexibility. If you have questions or want more information, do not hesitate to contact me by phone at (970) 518-0903 or through my website – www.range.colostate.edu.

ENERGY

Gear Up And Throttle Back To Save Fuel

Rich Mullaney, Regional Extension Specialist Community Energy Coordinator

“Gear up and throttle back” is an easy way to save fuel in your tractor for lighter loads with larger tractors.

According to Extension.org website, “For these lighter operations, a substantial amount of fuel can be saved by shifting to a higher gear and slowing the engine speed to maintain the desired field speed, thus the term "Gear Up and Throttle Back." An example of this procedure is shifting a manual transmission car or truck from second to third gear while reducing the throttle setting to maintain travel speed. The goal of gearing up

and throttle back is to not increase operation speeds or do work more quickly, but to save fuel.”

A tractor's engine should be operated at its rated capacity to be the most efficient. There are many field operations, such as light tillage, planting, cultivating, and hay raking, which do not require full tractor power. This can be especially true when older, smaller implements are used with newer higher horsepower tractors.

It is advised to check the operator's manual for specific recommendations for your tractor.

Extension.org has these General Guidelines for Gear Up and Throttle Back:

- Consider "Gear Up and Throttle Back" on light load operations (typically those requiring less than 65% of full engine power).
- Select a higher gear to maintain travel speed and implement productivity while reducing engine RPM.

- Do not overload the engine.
- Remove extra ballast

Gear Up and Throttle Back is an easy way to save on the ever rising full bill.

For more information on this energy saving tip and more go to Extension.org and look under the Energy tab or contact your local CSU Extension Office.

HORTICULTURE

Needle Drop Of Evergreens

Linda Langelo, Horticulture Program Associate

When an evergreen begins to shed needles, most homeowners become alarmed. Evergreens are following a natural cycle. Austrian pines shed their needles every four years while Eastern White pine and Scotch pine shed their needles every two to four years. White pines can shed all but one year old needles and creates a dramatic effect. As late summer approaches the older needles begin to turn yellow, brown or reddish tan. In general, a pine will shed their needles every two to five years, except Junipers and Douglas firs which shed their needles every ten years. And Spruce trees shed their needles in a five to seven year range.

So when do you know if it is natural needle drop or not? Monitor by watching in late summer and early fall to see if the inner most needles, the older needles, begin turning. Sometimes, the change can be very subtle. Environmental stresses such as drought, herbicide damage, insect damage, disease damage or root damage can intensify the fall needle drop. If there is another added stress such as a disease you will want to monitor the tree more often. Acquire knowledge about the disease so that you understand what it is you are monitoring.

Other reasons for unseasonal needle drop might be mites, drought, planting care, nutrition,

herbicides, winter damage or wet/poorly drained soils. Mites cause the needles to yellow and there will be evidence of stippling on the needles. If you suspect mites, hold a white sheet of paper under the branch and shake. If you see small moving insects, they may be mites. If you see light webbing on the branches as well as insects on the white paper, then contact your local Extension service to confirm this.

Herbicide damage can cause premature needle drop as will excessive soluble salts or a lack of potassium. With de-icing along roadsides, the salt content is increased. Increased levels of salts affect nutrient and water absorption of plants. The excessive amounts of sodium displace the calcium, magnesium and potassium uptake. Further, excessive sodium causes soil aggregates to breakdown leading to poor aeration and slower water permeability. This means reduced levels of oxygen for the roots as well as less water because the water is drawn to the high salt content.

Drought such as our late summer heat and no-to-low precipitation in the Golden Plains Area will cause an even earlier needle drop and it may even be more severe because of the insufficient moisture.

Proper planting leads to the best start a tree can have along with planting a tree in the proper place and soil. Planting depth, either too deep or too shallow can cause a decline in the health of a tree and in 80% of transplanted trees cause death within 7 to 8 years. For further information about planting and proper placement go to Colorado State University Extension Website and click on fact sheets. Then click on the title: Trees and Shrubs and go to fact sheet 2.926 Healthy Roots and Healthy Trees. At the end of this fact sheet you can also reference at the bottom of the last page another comprehensive piece of literature titled: Colorado Master Gardener Garden Notes #633 The Science of Planting Trees. Having this information and using it will help guide you to keeping your trees healthy.

Other stresses that cause premature needle drop or excessive needle drop in the fall are nutritional deficiencies such as iron. To avoid this problem before planting new trees have your soil tested so that you can place the proper tree with the proper soil pH. Often times, our high alkaline pH causes an iron deficiency here in the Golden Plains Area.

Winter damage is due to winter injury or winter drought. The best practice is to deep root water before the ground freezes in the fall and periodically during the winter. Newly planted trees need light infrequent watering. It is handy to purchase a soil moisture meter to help you determine moisture levels. For further information on proper watering go to www.cmg.colostate.edu and click on CMG Garden Notes on the left side of the page at the bottom and then under classes click on Tree Planting. Garden Notes #635 Care of Newly Planted Trees provides a listing of tree caliper and watering need for our hardiness zone 4-5. This listing provides irrigation requirements for tree vigor. As a rule of thumb with newly planted trees in our hardiness zone 4-5, they have an establishment that takes one season per inch of trunk caliper.

With this knowledge about evergreens and their natural cycle, you won't panic when needles turn during late summer or early fall. Consider all the other factors in your landscape before accessing the situation or call your local Extension Agent.

MORE INFORMATION

New Farm Truck Safety Regulations

Ron F. Meyer, Area Extension Agent Agronomy

Farmers and ranchers who operate commercial vehicles will need to understand the current truck regulations that will be enforced during the upcoming season.

Enforcement will be the responsibility of the Colorado State Patrol Motor Carrier Safety Section.

Regulations define a Commercial Motor Vehicle as any self propelled or towed vehicle having a Gross

Vehicle Weight or Gross Combined Weight rating of 10,001 pounds or more used on a public road. Further, Farm Vehicle Drivers are considered different than a farmer. A Farm Vehicle Driver is defined as a person who drives a Commercial Motor Vehicle that is:

1. Controlled and operated by a farmer as a private motor carrier

2. Being used to transport either; a) agricultural products or; b) farm machinery or farm supplies
3. Not being used in the operation of a for-hire carrier
4. Not carrying hazardous material
5. Being used within 150 air miles of the farmer's farm.

Additionally, if a heavy farm vehicle is operated within the following requirements, then a CDL (Commercial Drivers License) may also not be required for a farmer/rancher if the vehicle is:

1. Operated by a farmer
2. Used to transport agricultural products to or from a farm
3. Not used in the operation of a contract carrier
4. Used within 150 miles of a person's farm

The regulations further state that drivers do not need to adhere to Hours of Service record requirements if driving is:

1. Within 100 air miles radius of fields or bins
2. Conducted within Colorado during January 1 to December 31 (the planting and harvesting season determined by the Colorado Department of Agriculture)

Truck registration regulations state that farm plates may be

used on any truck tractors and trucks owned by a farmer and whose commercial uses are transporting agricultural products raised by the farmer.

Keep in mind that the width of trucks cannot exceed 8 feet 6 inches and the width of a load of loose hay or round bales cannot exceed 12 feet in width. Rectangular bales cannot exceed 10 feet 6 inches in width.

All farm operations utilizing a Commercial Motor Vehicle must obtain a USDOT number. Commercial Vehicle Markings are required for all farm operations utilizing Commercial Motor Vehicles with gross weights over 10,001 pounds used in interstate transport. Heavy vehicles between 10,001 and 26,000 pounds used in Colorado only need to just possess a USDOT number and are not required to mark the vehicle. Farm vehicles with weights greater than 26,000 pounds must be marked with legal trade name and USDOT number on both left and right sides.

Furthermore, there are no exceptions for farm Commercial Motor Vehicles regarding safe operation.

Daily inspections when operating are required. Repairs and Maintenance records must be documented and kept on file. All Commercial Motor Vehicles are expected to be inspected, repaired, and maintained.

Questions an operator of large trucks needs to ask are:

1. Do I need controlled substance testing?
2. Do I need to obtain a Medical Card?
3. Does my truck require Commercial Vehicle Markings?

Should anyone have questions regarding the regulations pertaining to the Commercial Motor Vehicles more information can be found at the following places:

1. Colorado State Patrol, Motor Carrier Safety, (303) 273-1875.
www.csp.state.co.us
2. Federal Motor Carrier Safety Administration, (720) 963-3130.
www.fmcsa.dot.gov
3. Monte Kinder, Colorado State Patrol, (303) 866-5376.

2011 Colorado Hay Directory

Michael Fisher, Area Livestock Extension Agent, Golden Plains Area

Each year the Colorado Department of Agriculture develops and distributes the Colorado Hay Directory. This booklet contains contact information for hay producers, brokers, and related products and services. The 25th edition is now available from the CDA by calling (303) 239-4115. Producers may also access the directory electronically at www.coloradoagriculture.com/hay.

Managing Tough Times: How Can Your Family Be More Resilient?

Gisele Jefferson, Extension 4-H Youth & Family & Consumer Sciences

Managing Tough Times workshops, where agricultural producers and spouses learn about practices their family can use to reduce financial, production, and human risks, is scheduled for Tuesday, September 13, 2011 in Akron and Wednesday, October 5th in Holyoke. The workshops, set for 5-8 p.m. in the Washington County Courthouse Annex and the Ortner room at the Phillips County Fairgrounds respectively, will provide tools families can use and recommended actions they can take in tough economic times.

Managing Tough Times provides information on topics important to farmers and ranchers. Topics include: business and strategic planning; managing cash flow, debt, and assets; using feasibility analysis; exploring alternative crops and farming options; managing debt better; using debt restructuring; identify resources to use in tough times; recognizing and coping with stress; and family communications and decision making skills.

With this program, participants can get: current research-based information; tools to decrease your couple's/family's production, financial, and human risk; tools to spot signs of high stress, anger, depression, and suicidal thinking in your

family members; and resources and fact sheets for your farm/ranch family.

Colorado State University Extension is partnering with the Western Center for Risk Management Education and USDA National Institute of Food and Agriculture to present workshops in Colorado. These workshops will be from 5:00 to 8:00 p.m. with a meal provided. Presenters for the evening will be John Deering, CSU Extension Regional Specialist in Agriculture and Business Management with Gisele Jefferson, CSU Extension Family and Consumer Science Agent and Dennis Kaan, CSU Extension Economic Development Agent/Golden Plains Area Director.

Please register by Friday, September 9th for the Akron workshop or September 30th for the Holyoke workshop so plans can be made for the meal. Registrations for the workshops may be made by calling the Washington County Extension office at 970-345-2287 or by email to john.deering@colostate.edu.

Individuals with special needs are asked to call ahead for assistance or dietary requests.

Lunch With New CSU Animal Science Chair

Michael Fisher, Area Livestock Extension Agent, Golden Plains Area

In August Dr. Kevin Pond began his new position as the Department Chair for Animal Sciences at Colorado State University. He will be visiting Yuma County on September 21st and would like the opportunity to meet with area livestock producers over the noon hour. We will be at The Club at Indian Hills in Yuma at noon on September 21st. Livestock producers and those with a livestock interest are welcome to join us to hear Dr. Pond's vision for the Animal Sciences Department and to provide your input about CSU and Colorado's livestock industry. Although lunch will be off of the menu and at your own cost, we would still appreciate if you could RSVP with the Yuma County Extension office (970-332-4151 by September 20th. This will help The Club know how many to expect.

AG MARKET PRICES

*John Deering, Agriculture and Business Management
Dennis Kaan, Agriculture and Business Management*

LIVESTOCK CASH PRICES				Week Ending 8/26/11		
				Current ¹	One Month Ago ²	One Year Ago ²
Colorado Auction Feeder Cattle, Medium & Large Frame #1						
Steers,	500-550 lbs	/cwt	None Reported	None Reported	None Reported	None Reported
Steers,	650-700 lbs	/cwt	None Reported	None Reported	None Reported	None Reported
Heifers,	500-550 lbs	/cwt	None Reported	None Reported	None Reported	None Reported
Heifers,	600-650 lbs	/cwt	None Reported	None Reported	None Reported	None Reported
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	/cwt
Over 80% Choice				\$110.00 - 112.00	\$98.00 - 99.00	
65-80% Choice	432	1,275-1,385	\$113.00	\$107.00 - 112.00	\$99.00 - 99.50	
35-65% Choice	883	1,300-1,385	\$113.00	\$108.00 - 112.00	\$97.00 - 98.00	
1-35% Choice						
<u>Live Basis Heifer Sales</u>	Hd Count	Wt Range	/cwt	/cwt	/cwt	/cwt
Over 80% Choice	405	1,170-1,350	\$113.00 - 113.50	\$110.00 - 112.00		
65-80% Choice	1,502	1,150-1,320	\$112.00 - 113.00	\$108.00 - 112.00	\$99.00 - 99.50	
35-65% Choice	2,971	1,150-1,275	\$113.00	\$112.00	\$98.00 - 99.50	
1-35% Choice						
Western Weekly Lamb Report, Formula Contract Purchases, Sales FOB with 4% Shrink,						
	Hd Count	Wt Range	/cwt	/cwt	/cwt	/cwt
Domestic	N/A	75-85	None Reported	None Reported	\$240.00 - 270.00	
Imported					None Reported	
Hogs, As of 9/1/11						
Base Market Hog, 185 lb. Carcass Basis, Plant Delivered						
0.9-1.1" Back-Fat, 6.0/2.0 Loin Area/Depth	/cwt	\$78.50 - 90.93	\$91.00 - 100.00	\$71.75 - 82.11		
Iowa – Southern Minnesota Daily Negotiated Purchases 185 lb Carcass Basis						
1.0" Back-Fat, 6.0/2.0 Loin Area/Depth	/cwt	\$79.00 - 87.00	\$91.00 - 100.00	\$71.75 - 82.11		
Western Cornbelt Daily Negotiated Purchases 185 lb Carcass Basis						
1.0" Back-Fat, 6.0/2.0 Loin Area/Depth	/cwt	\$79.00 - 87.00	\$91.00 - 100.00	\$71.75 - 82.11		
LIVESTOCK FUTURES PRICES				9/1/11		
Live Cattle – CME				Current ¹	One Month Ago ²	One Year Ago ²
Oct	/cwt	\$113.60	\$118.60	\$97.28		
Dec	/cwt	\$115.43	\$121.83	\$100.05		
Feb	/cwt	\$118.95	\$123.90	\$100.60		
Apr	/cwt	\$123.25	\$123.68	\$102.10		
Feeder Cattle – CME				Current ¹	One Month Ago ²	One Year Ago ²
Sep	/cwt	\$132.75	\$137.00	\$114.10		
Oct	/cwt	\$132.78	\$137.25	\$115.10		
Nov	/cwt	\$133.95	\$137.93	\$115.70		
Jan	/cwt	\$135.33	\$136.40	\$114.85		

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

Chicago Board of Trade

Kansas City Board of Trade

Chicago Mercantile Exchange

<http://www.ams.usda.gov>

<http://www.cbot.com/cbot/pub/page>

http://www.kcbot.com/futures_quotes.asp

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

CASH GRAIN PRICES**9/1/11**

		Current ¹	One Month Ago ²	One Year Ago ²
#1 HRW Wheat				
Fleming, Haxtun, Julesburg, Holyoke, Paoli, Amherst	/bu	\$7.44 - 7.51	\$6.86 - 7.93	\$5.27 - 5.39
Yuma, Wray, Brush, Akron, Otis, Anton	/bu	\$7.57 - 7.62	\$6.75 - 7.00	\$5.37 - 5.48
Burlington, Seibert, Flagler, Arriba, Genoa, Hugo	/bu	\$7.63 - 7.72	\$6.76 - 7.11	\$5.24 - 5.40
#2 Yellow Corn				
Haxtun, Julesburg, Fleming, Holyoke, Paoli, Amherst	/bu	\$7.29 - 7.39	\$6.86 - 7.00	\$3.79 - 3.89
Yuma, Wray, Brush, Otis, Anton Seibert, Arriba, Burlington, Flagler, Bethune, Stratton	/bu	\$7.06 - 7.49	\$6.71 - 7.10	\$3.84 - 4.03
		\$7.19 - 7.49	\$6.60 - 6.71	\$3.62 - 3.79
Northeast Colorado, Western Nebraska Beans				
Pinto Beans	/cwt	\$36.00 - 40.00	\$30.00	\$19.00 - 21.00
Great Northern Beans	/cwt	\$40.00	\$35.00	Not Established
Light Red Kidney Beans	/cwt	\$47.00 - 50.00	\$38.00	Not Established
White Millet				
E Colorado / SW Nebraska	/cwt	\$11.25 - 12.50	\$10.75 - 12.00	\$5.50 - 6.50
		Mostly \$11.50 - 12.00		
Sunflowers				
E Colorado / SW Nebraska	/cwt	\$27.50 - 32.00	\$27.50 - 32.00	\$12.25 - 14.50

GRAIN FUTURES PRICES**9/1/11**

		Current ¹	One Month Ago ²	One Year Ago ²
Wheat, Kansas City Board of Trade				
Sep	/bu	\$8.48	\$8.09	\$6.88
Dec	/bu	\$8.72	\$8.20	\$7.02
Mar	/bu	\$8.84	\$8.43	\$7.14
May	/bu	\$8.85	\$8.58	\$7.08
Corn, Chicago Board of Trade				
Sep	/bu	\$7.29	\$7.00	\$4.24
Dec	/bu	\$7.39	\$6.88	\$4.39
Mar	/bu	\$7.51	\$6.60	\$4.52
May	/bu	\$7.57	\$6.73	\$4.58

CASH HAY PRICES**Week Ending 9/1/11**

		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	\$200.00 - 210.00	\$190.00 - 210.00	\$125.00 - 130.00
Premium Alfalfa, 150-180 RFV	/ton	\$180.00 - 200.00	\$180.00 - 190.00	\$120.00
Good Alfalfa, 125-150 RFV	/ton	\$160.00 - 180.00	\$150.00 - 165.00	\$100.00 - 130.00
Fair Alfalfa	/ton	\$150.00 - 160.00	\$140.00 - 150.00	\$90.00 - 105.00
Utility Alfalfa	/ton	\$150.00 - 160.00	\$130.00 - 140.00	\$75.00 - 85.00
Premium Grass (Small Squares)	/ton	\$215.00 - 250.00	\$215.00 - 240.00	\$208.25 - 227.50
Premium Grass (Small Squares)	/bale	\$6.50 - 7.50	\$6.50 - 7.25	\$5.95 - 6.50
Premium Grass (Large Squares)	/ton	\$180.00 - 190.00		
Straw (Large Squares)	/ton	\$50.00 - 70.00		
Straw (Small Squares)	/bale	\$7.50		

GOLDEN PLAINS AREA AGRICULTURAL NEWSLETTER

Calendar Of Events

“Hold The Thin Green Line”

Canola Meal As A Feedstuff

Management Tips For Limiting Goat & Sheep Parasite Problems

PRRS Study To Be Released

CSU Releases Two New Wheat Varieties

Ten Things To Check Before Planting Season

Wheat Planting

2011 Collaborative On-Farm Tests (COFT) Wheat Variety Performance Results

Quick Tips For Harvesting Sunflower & Corn

Swath Grazing

Gear Up And Throttle Back To Save Fuel

Needle Drop Of Evergreens

New Farm Truck Safety Regulations

2011 Colorado hay Directory

Managing Tough Times: How Can Your Family Be: More Resilient?

Lunch With New CSU Animal Science Chair

Ag Market Prices

The Range Beef Cow Symposium XXII Flyer

REGISTRATION INFORMATION

To register complete the attached form and mail with payment to UN-Lincoln, CARI Registration Services, 103H Miller Hall, Lincoln, NE 68583-0711 - *make checks payable to University of Nebraska-Lincoln*. Registration with a credit card can be done online at www.rangebeeffcow.com.

The refund policy allows substitutions only. If you are unable to attend, you may send someone in your place by notifying the registration office at 800-328-2451 (M-F 8:30 - 4:30 p.m. CST).

LODGING INFORMATION

Blocks of rooms have been reserved for November 28, 29 and 30. Lodging reservations must be made by November 14 to guarantee availability and symposium rates. When making reservations indicate you are with the University of Nebraska-Range Beef Cow Symposium to receive the symposium rate. All rates are per night and tax will be added to all rooms.

Scottsbluff

Candlelight Inn and Lounge - 308-635-3751
1822 E. 20th Place, Scottsbluff
Rates: \$55.00 (single) - \$65.00 (double)

Comfort Inn - 308-632-7510
1902 21st Ave., Scottsbluff
Rates: \$65.00 (single/double)

Days Inn - 308-635-3111
1901 21st Avenue, Scottsbluff
Rates: \$52.00 (1-4 people)

Holiday Inn Express - 308-632-1000
1821 Frontage Rd., Scottsbluff
Rates: \$92.00 (single/double)

Lampighter American Inn - 308-632-7108
606 E. 27th St., Scottsbluff
Rates: \$56.00 (single) - \$63.00 (double)
Rooms are not blocked, but are available

Sportsman Inn - 308-632-6012
4 mi. west of Scottsbluff on Hwy. 26
Rates: \$39.95 (single) - \$42.95 (double)

Super 8 Motel - 308-635-1600
2202 Delta Drive, Scottsbluff
Rates: \$45.00 (single or double)

Gering
Monument Inn & Suites - 308-436-1950
1130 M St., Gering
Rates: \$70.00 (single or double)

Morrill
Oak Tree Inn - 308-247-2111
80700 Hwy. 26, Morrill
Rates: \$59.00 (single or double)

GENERAL INFORMATION

Nebraska is excited about hosting the XXIII Range Beef Cow Symposium. We hope you will enjoy cattle country in western Nebraska and the Scottsbluff-Gering area. The Symposium has a reputation of being an excellent educational program. It is held every other year among the four cooperating states. The first Symposium was held in Cheyenne, NE in 1969.

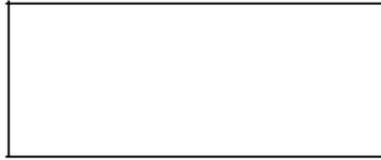
BULL PEN SESSIONS

The Bull Pen Sessions are said to be the most valuable part of the Symposium. This is a time for attendees to have in-depth discussion with the speakers and an opportunity to ask specific questions. The majority of the Symposium speakers on Tuesday and Wednesday will be present in the evening following their presentations. A delicious beef dinner will be offered prior to the Bull Pen Sessions which will be held at the Gering Civic Center, 1050 M Street, Gering, NE. Indicate dinner reservations on the registration form.

COMMERCIAL BOOTH DISPLAYS

Commercial displays representing many segments of the industry are an integral part of the Symposium. Exhibitors will be present to discuss their products, plus information on newly released products will be available.

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The Range Beef Cow Symposium XXII



November 29, 30 & December 1, 2011

Scotts Bluff County Fairgrounds
Events Center
Mitchell, Nebraska
(9 miles west of Scottsbluff on Hwy. 26)

Presented by Cooperative Extension and the
Animal Science Departments of the
University of Nebraska-Lincoln
South Dakota State University
Colorado State University
University of Wyoming



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