

April-June 2013

Volume 10, Issue 2



Rangeland Monitoring Techniques and Uses

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For many of us it is a challenge to remember exactly what our pastures and rangelands have looked like over the past 10-15 years. You may be thinking, "Of course I remember what they looked like, the dry years there was not much grass and the wet years there was a lot of grass." This article is not intended to dispute what you see for production each year, but to get you thinking about other aspects of range management that are a little harder to keep track of without writing it down or taking a picture.

When people hear the term range monitoring you may expect to see some sort of cringe on their face. I'm guessing for most of us, myself included, we cringe because we instantly think about the responsibility of remembering to monitor and the work involved in keeping organized records. However, range monitoring can be extremely simple and easy to complete.

Why and how to start a monitoring program

Rangeland monitoring is not necessarily fit for every operation. But for many operations or grazing systems it can be an extremely useful tool. If considering the idea of implementing a program, the first step is to determine your management goals and objectives. Some examples of when monitoring might be a useful

tool include: 1) A land manager is curious if a particular grazing system will decrease the amount of bare ground on their property. 2) Another land manager would like to document the density of weeds on their property before and after a particular treatment. 3) A permit holder of a federal agency would like to keep records of when grazing goals are reached.

If you have determined that there is a need for monitoring on your property most likely there are key areas that you are worried about. These key areas may or may not have an existing problem or cover the area where you have implemented some sort of treatment (i.e. re-seeding, new grazing strategy, weed patch, etc.). It is important that these key areas are well documented with photographs and notes when the monitoring program begins.

What monitoring technique to use

After deciding that monitoring is a good idea it can be a bit of a challenge to determine what exact monitoring technique to implement. As you might imagine there are many different strategies to choose from, some simple and others more time consuming and complicated. Some techniques are useful for riparian areas while others are more well suited for upland sites.

Speaking and working with a professional that is well versed with rangeland monitoring is your next best step. A range management professional from a federal agency or your local extension educator are great resources for determining what monitoring program would benefit you and your operation the greatest. If you are planning to monitor for a permit with a federal agency they will most likely already have a recommended strategy for you to use.



Here a quarter meter quadrat is used along a tape to count seedling emergence at a seeding trial.

Range monitoring Techniques

Here are a few examples of some common range monitoring techniques. Keep in mind that there are many others out there for you to use. I hope this helps!

Photo points

When you using photo points you are simply taking pictures from the same spot, at least one time per year, and for many consecutive years. It is important to try and take the pictures at the same time of the year. Making a form to hold next to the picture showing the pasture name or number and date is also a good idea for record keeping. The pictures are a quick and easy method to notice

visual changes in the plant communities, production, and cover for each year.

Greenline Stability

Greenline stability is a technique used for monitoring near streams and riparian areas. With this technique transects are laid parallel to the stream or riparian area. A transect is laid next to the riparian area heading downslope and a second is placed on the opposite side pointed upslope. The plant community, including unvegetated areas, is documented for 363 feet. Different plant communities receive a different score. If the score improves over time most likely the amount of bare soil, sand and gravel is decreasing which is a good thing.

This is great method for documenting what is exactly growing or not growing next to the area of concern. For example, if you are working to improve the number of willows and certain types of trees in an area you can document these changes with this technique. Remember to wear your waders or rubber boots for this monitoring technique. It can get a little wet sometimes.

Photo-Point Transect

Photo-point transect is another technique that incorporates taking pictures to monitor changes in plant communities. This technique is a little more involved than simply taking pictures from the same spot each year. This technique uses a program called samplepoint to help keep track of changes. Pictures are taken along a transect. The pictures are taken for a 3x3 ft area. The pictures are then upload to a computer program where the picture is then used for calculations to measure cover and vegetation communities. This is a great program that tends to get away from the tradition number crunching of other monitoring techniques.

Predicting Range Forage Production

Blaine Horn, NE Area Range & Forage Management Educator

With spring upon us the question on many a rancher's mind is whether it will be dry again as last year or adequate moisture will occur so that further destocking of herds and flocks does not have to transpire. I wish I could answer that question but no one really can although meteorologists at NOAA are predicting that 2013 most likely will be another dry year for this region. Although I cannot predict how much precipitation we'll receive this year I can provide a guide as to when ranchers should kick in their drought plan, if they haven't already; or if they have how much further they might need to reduce their livestock numbers.

Within the Northern High Plains the dominant rangeland grasses are cool season species. The reason for this is that the majority of annual precipitation in this region occurs in the spring (Apr – Jun). Annual precipitation in NE Wyoming averages 14.8 inches with a range of from 12.6 at Billy Creek and Midwest to 19.1 at Sundance. Spring moisture accounts for nearly half (44%) of the annual amount in this region of the State. Summer rains provide an average of 28% of the annual amount, whereas fall and winter moisture account for only 15% and 13%, respectively. Although summer moisture may account for more than a quarter of the annual total, the effective amount is much less due to hotter day time temperatures resulting in higher evapotranspiration rates than for the other seasons of the year. Fall and winter precipitation contributes little to soil moisture due to the ground being frozen for most of this period. Generally the soil has frozen by November and does not completely thaw out until early to mid-April. So, spring precipitation is the driving factor for how much forage will be produced on rangelands of this region.

Over the past 11 years a study conducted at a ranch 10 miles south of Buffalo has compared total peak rangeland forage production (mid-

July) with the amount of precipitation received. From the data collected linear regression equations were developed to predict potential peak amounts of rangeland forage for a year based on how much moisture was received. As might be expected, the best prediction equation was one that used annual precipitation (July through June). The equation had an R^2 value of 0.79 (R^2 of 0 indicates no fit and of 1 a perfect fit) but the equation using just April through June precipitation had one of 0.73. Thus, the equation using Apr-Jun moisture could be fairly reliable in predicting the amount of rangeland forage to expect. However, the earlier stock reducing decisions can be made in the spring is usually for the better.

Using just April through mid-May precipitation an equation was developed that had an R^2 value of 0.59; obviously not as good as the equations using annual or total spring moisture but possibly acceptable. However, this equation, as well as the other two, overestimated plant growth in years when precipitation was below the long-term average (1981-2010) making it less desirable as those are the years when a reliable prediction is needed. Because of this, data from the seven years moisture was below the long-term average of 2.5 inches for the 1 April through 15 May period was used to develop a prediction equation. This equation had an R^2 of 0.80 and the estimated yield values were similar to the actual amounts (Figure 1). Thus, use of this equation to predict potential rangeland forage production when April through mid-May moisture is below average has promise.

The equation: $0.09 + 1.25 \times \% \text{ of normal (1981-2010) April through mid-May precipitation.}$

For example: If April through mid-May moisture at a ranch in the Buffalo area totaled 0.75 inches which is 30% of 2.5 inches ($0.75 \div 2.5$), the norm for Buffalo, the potential amount of rangeland

forage would be 46.5% of average. If total forage production for the major Ecological Sites of this ranch's rangeland pastures averaged 800 pounds per acre when precipitation was at or near normal it could be expected that it will probably be no more than 370 pounds per acre (0.465 x 800). Thus, it would be advisable to reduce stocking rates by at least 50%.

$$0.09 + (1.25 \times (30\% \div 100)) =$$

$$0.09 + (1.25 \times 0.30) = 0.09 + 0.375 = 0.465$$

The equation should be relevant to not only Johnson County but also to most, if not all, of NE Wyoming. Total April through mid-May moisture between 1981 and 2010 from the NOAA weather observation sites located within NE Wyoming ranged from an average of 2.44 inches at Billy Creek at the foot of the Big Horns in Johnson County to 3.65 inches at Sundance. Although this range is over an inch distribution of precipitation among the sites was similar (Figure 2).

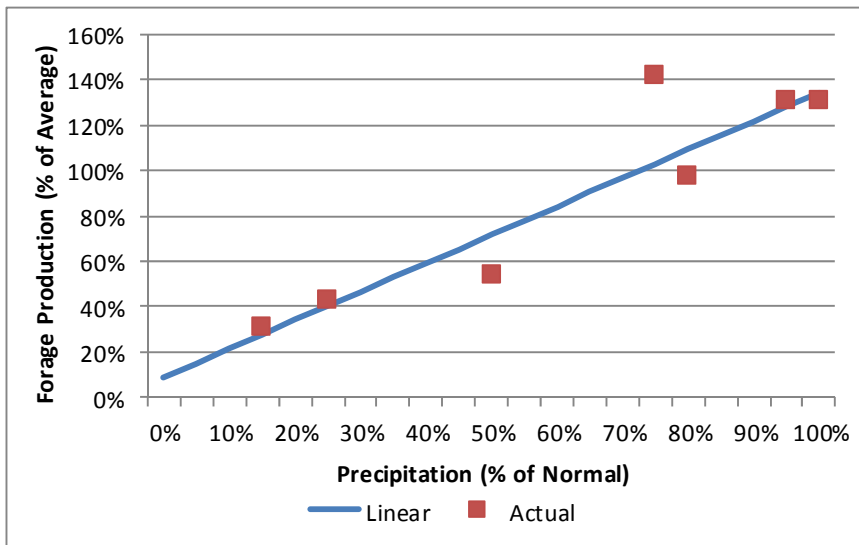


Figure 1. 1 April through 15 May precipitation and corresponding predicted (Linear) and Actual peak forage amounts for a pasture with loamy and shallow loamy rangeland sites 10 miles south of Buffalo, Wyoming. Note: 16 May through 30 June precipitation ranged from 31% to 165% of normal. The two years were moisture was greater than average the amount of peak forage was at or greater than average.

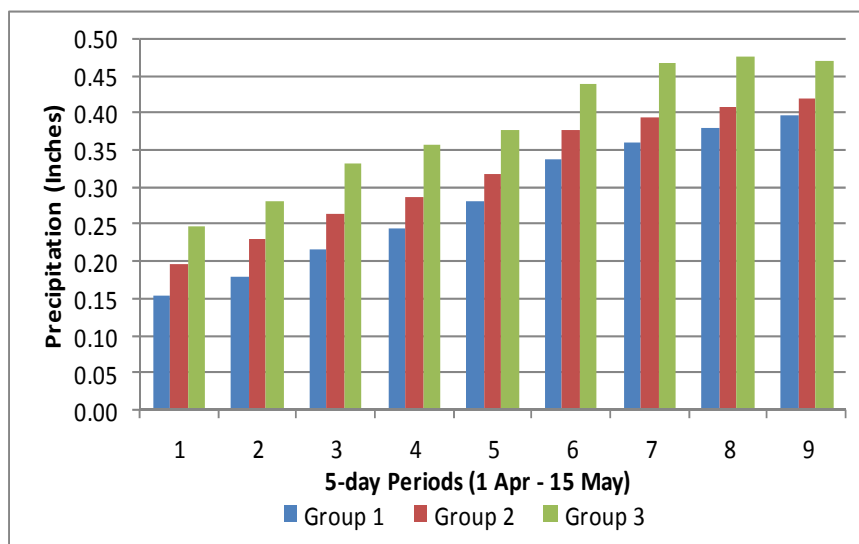


Figure 2. Long-term (1981-2010) precipitation amounts in 5-day increments from 19 NOAA weather observation sites in NE Wyoming; sites classified into three groups based on total Apr through mid-May amounts.

Group 1: Billy Creek, Buffalo, Clearmont 5SW, Colony, Dull Center 1SE, Kaycee, Midwest, Moorcroft CAA, Sheridan Field Station, and Weston (2.4 to 2.6 inches); **Group 2:** Devils Tower 2, Dillinger, Leiter 9N, Newcastle, Sheridan AP, and Upton (2.8 to 3.1 inches); **Group 3:** Echeta 2NW, Gillette 9ESE, and Sundance (3.3 to 3.7 inches)



Noxious Invasive Weeds

by

Scott Hininger, University of Wyoming Extension Sheridan County



Yes, the rumors are true. The Russian olive is on the state's designated noxious weed list. Russian olives are displacing cottonwood and willow stands within riparian areas. Russian olive-dominated riparian areas are often much less diverse in terms of habitat structure and plant community composition. For control information and cost share, contact your local Weed and Pest office.

Purple loosestrife (*Lithium sanitaria*) is a European plant species accidentally introduced to North America from Europe in the 1800's, which is an aggressive invader of North American wetlands, lakes and rivers. Once established, purple loosestrife can become the dominant vegetation, forming a mono specific stands, which significantly reduce biodiversity and degrade habitat quality. Of primary concern is that purple loosestrife displaces native plants eliminating food and shelter for wildlife and other species. While strikingly colorful lavender flower, dense stands of loosestrife also impair recreational use of wetlands and rivers, impede water flow in drainage ditches and invade right of ways, requiring costly management efforts. Purple loosestrife is a widespread and serious problem, affecting both coastal and inland wetlands, lakes and waterways. The Canadian Wildlife Service, Ducks Unlimited Canada, Minnesota Department of Natural Resources and the Great Lakes Sea Grant Network have put together a very good web page on this plant.

Purple Loosestrife can grow from 3 to 6 feet tall, with a square, woody, stalk. The Leaves have smooth edges, are on opposite sides of the stalk, and attach directly to the stalk. The flowers have long pink/purple spikes with a perennial Rootstock, which can send out up to 30 to 50 shoots, and each plant can produce up to 2.7 million seed in one season.

Many organizations throughout North America have taken action to control the spread of purple loosestrife. National wildlife services, state natural resource and environment agencies, universities, nursery trades associations, and con-

servation and community organizations have responded to the purple loosestrife invasion by raising awareness of the threat posed by this invasive plant, and how to prevent its spread. It is considered a noxious weed in Wyoming. If you look at Little Goose or Big Goose creeks and other drainages around Sheridan, you will see it growing. In addition, purple loosestrife seeds are present in some wildflower seed mixes--check the label before you buy any seed packages.

Be careful when planting wildflower seeds because some wildflower seed mixes contain poisonous plants. These could include Lupine and Larkspur, both have nice flowers and are in lots of gardens and people like to take pictures of these on the mountain, but they can poison livestock. Wyeth lupine (*Lupinus yeti*) have palmate leaves with upright showy flower clumps typically purple color but can vary, with the seed pods resembling pea pods. Larkspur (*Delphinium nuttallianum*) which is typically a shorter plant with a tuberous root system, and the leaves being deeply parted into finger-like lobes having a showy violet lavender flowers with a prominent spur on the end. This plant is also poisonous to livestock. Where other plants may not be poisonous but they can spread uncontrollably.

Remember when ordering plants or wildflower seeds to look at the contents and be knowledgeable of what you are getting. Noxious weeds are to be controlled by state statute and the full list can be obtained from the Extension Office or the Weed and Pest Office.

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TRANSFERRING PERSONAL PROPERTY (Part 1)

By

Bill Taylor, Northeast Area Community Development Educator



We all have personal items that are important or precious to us or to those that are associated with us. In estate planning, personal items are often ignored, yet they may cause some of the most significant emotions and conflicts. This is because the collection of family photos or the heirloom that belonged to our great grandparents is often of more emotional significance than a piece of land, the barn, or tractor. We sometimes assume that our personal items are not important enough to plan their passing, even though they were important to us and they may be a significant source of memories or comfort to those we leave behind. We also tend to assume that everyone will cordially receive or pass out our personal goods with no stress or argument about who should receive what or how these items should be divided.

These personal items create complex emotional and family relationships which impact decision making. Inheritance decisions concerning non-titled personal property involve economic and emotional consequences and can enhance family continuity or add to its destruction. For these reasons, most families will face less stress and emotional issues if they develop a plan for personal property transfer before death and while the property holder is of clear mind and sound health.

What is personal or non-titled property? Versus things like land, cattle, vehicles, or stocks and bonds, personal property includes items that do not have a registered title and the owner is not identified with a written document. This would include property items like:

- Sports equipment
- Tools
- Furniture
- Books, papers
- Dishes
- Collections
- Hobby or handmade items
- Linens, needlework, quilts
- Clothes
- Jewelry
- Photos, pictures
- Antiques
- Toys
- Musical instruments

The sentimental meanings of the items involved make the decisions more emotional. One person may attach a high degree of sentimental value to an item because of its importance to a parent or family member, its place of importance within the family culture, or their own use and/or relationship to the item at some point in their life. At the same time, the same item may be of little emotional significance to some other members of the family. And the degree of emotional attachment accorded an item, or group of items, by a potential heir may be unknown to the present owner or administrator of an estate if they feel the item is of little value. Or the person to whom an item is important may not have voiced their attachment to it. The issue is further

complicated if more than one potential heir sees great value in certain items, setting the stage for conflict, jealousy, and hurt feelings.

Passing on the ownership of property involves the process of grieving and saying goodbye, even more so if the property is of an intensely personal nature. Even if the planning is carried out before the death of the present owner, the process itself forces the present owner to face the fact of their own death, and the potential heirs with the passing of a loved one. This heightens the level of emotion that is already present in the estate planning process. And, if the passing of the owner has already occurred, and heirs and/or administrators are dealing with the issue of how to pass on personal items to spouses, siblings, children, grandchildren, nieces, nephews, etc., the process occurs during a time when loss, hurt, and heightened emotions may cloud clear and rational thinking.

Personal family objects often help preserve memories, family culture and history, and family rituals for us. The hat and boots Dad always wore or the favorite china that Mom used on special occasions take us back in time and give us a handle to use to hold on to family traditions and memories.

Due to all of these issues, and more, the concept of being “fair” is often much more complex and difficult with personal items than with titled property. Titled property can often be appraised and valued and some sort of economic division can be developed. How do you “fairly” divide up family heirlooms, photos, knick knacks, or antiques?

Many of these personal belongings have different meanings to different family members and it is difficult to measure their worth or value. And what is “fair” to one family member may seem entirely “unfair” to another. The “rules” often are unwritten and are not the same from family member to family member, seldom being discussed or agreed upon. Family discussions should be designed to bring to the forefront members’ expectations and

understanding of the “rules.” It is often impossible to divide things “equally” and distribution methods and consequences become clouded.

In determining how to be fair there are several questions to answer. We must determine:

Who is involved (in-laws, grandchildren?)

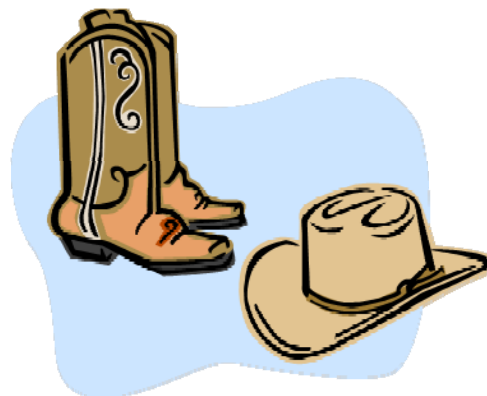
How we proceed (informing everyone, determining values)

When to proceed

What methods and standards to use to be consistent

Family members will consider the process unfair if they feel moral and ethical standards are not followed and if they have not had a voice in the decisions made. This is especially true if a few persons with dominate personalities walk off with everything they want and everyone else gets what is left over.

It is usually much better to face the truths of the situation and develop a workable plan before the death of the family member involved. Remember, the stress level and the degree of emotion will be multiplied after a death or debilitation, and decisions may be made in the heat of the moment that are regretted later, or things may be said or done that create insurmountable rifts in relationships.





SALADS -MIX IT UP!



By Vicki Hayman: University Extension Educator

NE Area Nutrition and Food Safety

It's springtime and if you're a season-conscious shopper, you may have noticed the new additions to the produce aisle. Spring brings a new crop of fruits and vegetables. One way to bring those fresh ingredients to the table is in a lively salad. By selecting a variety of colors, flavors and textures you can give an ordinary salad the kick it needs to be satisfying while being packed with antioxidants.

Since spring is often about lettuces, there's no better time than the present to enjoy the gorgeous greens. Even now the produce section is stocked with beautiful, frilly heads of red leaf, green leaf, romaine and butterhead (a.k.a. Boston, Bibb and butter). These lettuces range in flavor and texture: Romaine is extra crisp and perfect paired with strong flavors (it's famous in Caesar salad). Butterhead is soft, tender and, as the name suggests, buttery. Red leaf and green leaf are not as delicate as butterhead but not as crisp as romaine, so they're in the middle in terms of texture.

Leaves should be bright and fresh looking on any greens you purchase. When shopping for lettuce, a general rule of thumb is to choose those that have crisp, verdant leaves with firm stems and free of blemishes.

Lettuce should be washed and either drained completely or blotted with a paper towel to remove excess moisture. Refrigerate washed-and-dried greens in an airtight plastic bag for three to five days (with the exception of arugula, which is very perishable and should be tightly wrapped in a plastic bag and refrigerated no more than two days). As the week goes on you may need to cut off any edges that look mushy or browned.

Don't cram your lettuce into a bag. Let it have some space. Think of the bags of lettuce as pillows - you don't want all the lettuce smashed together. Instead, have it fluffed and even throughout its storage bag.

A salad can be as simple as greens tossed with vinaigrette and served as a first course, or it can become a main course with the addition of cheese, nuts, and grilled chicken, fish, or meat.

Stock up on the fruits and vegetables that taste best this time of year and make your salads as refreshing as the new season. Here's a breakdown of the ingredients you'll need for the most seasoned salads this spring:

The Base: Lettuces such as arugula, Bibb, Boston, mache (also called *lamb's lettuce*) and mesclun (a mix of lettuces usually including chervil, arugula, and endive) harvest best in the spring. Their light, leafy and crispy features make them perfect for mixing. Spinach serves as another great salad base that is most tender in spring.

The Toppings: Whether you're looking to add one, two or a dozen ingredients to the mix, check out which ingredients are tastiest during the spring season in order to optimize your salad experience. Artichokes, asparagus, peas, radishes, watercress, chives, papayas and strawberries are each harvest-

ed in spring, and with a little taste-testing and pairing can create a one-of-a-kind salad. Orange slices are another great ingredient for spring salads, adding the juice an otherwise dry salad may lack. Before you add this citrus punch, however, know which type of orange you're using and whether you're looking for a sweet or sour taste. Mix navel oranges with blood oranges for rich and unique dish.

The Dressings: Sprinkle your salads with homemade dressings that blend the best flavors and complement your salad's spring taste. Lemon juice, garlic, oil, salt and pepper combined create an easy and zesty dressing for any salad. The Meyer lemon, a cross between a lemon and orange, can be used in a variety of dressings.



SALAD RECIPES

Simple Spring Salad Recipe

You Will Need:

- 1 pound asparagus
- ¼ cup plus 1 table-spoon extra-virgin olive oil
- ½ teaspoon finely grated lemon zest
- Kosher salt and freshly ground pepper
- 1½ tablespoons fresh lemon juice
- 1 tablespoon Dijon mustard
- 10 ounces mixed spring lettuces
- 4 thinly sliced radishes
- One 1½-ounce piece of Parmigiano-Reggiano cheese, shaved into curls with a vegetable peeler



Directions:

1. Preheat the oven to 450°F. On a rimmed baking sheet, toss the asparagus with 1 tablespoon of the oil and the lemon zest. Season with salt and pepper. Roast the asparagus for about 8 minutes, until just tender and the tips begin to turn brown.
2. In a small bowl, whisk the lemon juice with the mustard and the remaining 1/3 cup of olive oil. Season with salt and pepper.
3. In a large bowl, toss lettuces with all but 2 tablespoons of the dressing. Arrange the salad on plates and top with the roasted asparagus, radish slices and cheese curls.
4. Drizzle remaining dressing over the asparagus and serve.



Asparagus & Strawberry Salad with Goat Cheese & Almonds

You Will Need:

- 6-8 Ounces baby greens
- 1 bunch asparagus, washed and dried
- 1 pint strawberries, washed, dried, hulled and sliced
- 1/4-1/2 cup goat cheese, crumbled
- 1/4-1/2 cup toasted sliced almonds

Sherry Vinaigrette:

- 1 -2 garlic cloves, chopped/minced
- salt & pepper to taste
- 1 1/2 tablespoons sherry wine vinegar
- 1 teaspoon Dijon mustard
- 6 tablespoons extra virgin olive oil

Directions:

1. Preheat the oven to 170°F. Place the almonds on a cookie sheet and bake for 15 minutes or until golden brown. Stir occasionally.
2. Bring a pot of water to rolling boil. Meanwhile, prepare a bowl of ice water, with ice cubes.
3. Wash the asparagus spears and break or cut off the ends.
4. Cook asparagus in boiling water for 1 -2 minutes.
5. Remove asparagus from water using tongs and place them into the ice water bath. Leave the asparagus in the water until it is cool.
6. Combine dressing ingredients.
7. Slice the spears at an angle into bite sized pieces.
8. Combine the greens, asparagus, strawberries, and goat cheese in a bowl.
9. Pour the dressing over the top right before serving; be sure to place the almonds in very last so they stay crunchy. Toss it all together and enjoy!



Eat Right to Play Hard!

By Trish Peña, Weston County Cent\$ible Nutrition Educator



Active people need fuel for sports, school and everyday health, as well as normal growth and development. When people are involved in sports, or just active lifestyles, their need for power foods and fluids is higher than usual. Warmer Spring weather makes us want to be more active, so listen up! Here are tips to help you get the fuel and fluids needed to be active and healthy:

Power Foods

Athletes and busy youth need power foods with lots of nutrients and minimal amounts of fat and added sugar. High-energy carbohydrates from whole grains, fruits, vegetables and dairy foods are especially important. Children need extra energy for their sport's practices and games, plus normal levels for growth and brainpower at school. Here's how to provide the carbs they need:

Serve a Champion's Breakfast. Offer whole-grain cereals or serve muffins made with whole grains and fruit, like bananas, blueberries and raisins. Create an instant yogurt parfait with layers of low-fat vanilla yogurt; fresh, frozen or canned fruit; and crunchy whole-grain cereal.

Pack Breakfast to Go. When mornings make sit-down breakfasts difficult, pack a bag with bagels, bananas, apples, string cheese, yogurt cups, juice boxes and low-fat milk for eating on the run.



Power Fluids

Everyone needs plenty of refreshing fluids to stay well-hydrated. Fluids are critical to prevent overheating and to remove the wastes produced by active muscles. Being even slightly dehydrated can dramatically affect performance.



Make Sure Supply Keeps Up with Demand.

Children need to drink at least six 8-ounce cups of water per day. Add another 8 ounces for every half hour of strenuous activity. Keep a personalized water bottle to carry in the car, on the bus, at school and on the field.

Choose Beverages Wisely. Water is always a great, low-cost choice. For activities lasting less than an hour, water will usually provide optimal hydration. For longer activities or when children don't drink enough water, diluted 100 percent fruit juice or sports drinks may increase their fluid intake. New research shows low-fat milk, including chocolate milk, may be one of the most effective beverages for muscle recovery after intense activity.



Locoweeds: What You Should Know

By Rod Litzel, Johnson County Weed & Pest Supervisor

And

Blaine Horn, NE Area Range & Forage Management Educator

Spring is on the way and so are the weeds. Everyone from the homeowner in town, the small acreage owner or farmer/rancher is affected in some way by weeds, some by their invasive nature and others by their poisonous attributes towards livestock. It's easy to recognize weeds such as Canada thistle or Leafy spurge as something that should not be a part of a healthy landscape as they generally begin as a small patch and spread out from there. Others however, are a seemingly benign part of the landscape, that given the right opportunity the "perfect storm" can come together to cause significant problems in livestock.

Locoweed is one such plant that poses a serious threat especially in drier years. Several species of Locoweed fall into this category including Two-grooved milkvetch, Lambert or Silky crazyweed, and White or Woolly (purple) locoweeds. They are members of the legume or pea family and are actually native rangeland plants. Not all Locoweeds are poisonous, but White and Woolly are the most common troublemakers.

Locoweeds contain a toxic compound called swainonine that affects animal growth, reproduction and the nervous system. Symptoms of poisoning include the staggers, running in circles, drooling and looking unthrifty. There is no known treatment and generally the effects are not reversible, usually resulting in death. However, if a poisoning is caught early enough and the animal is immediately removed from access to locoweed the effects can be minimized.

Locoweeds generally do better in wet years; however, they may have more of an impact on livestock in a following dry year, as at least one

Johnson County resident found. While the presence of Locoweeds may not be a result of overgrazing as they can be present in well managed rangelands as well, it certainly can exacerbate the risk of a poisoning and allow Locoweeds increased opportunity for spread.

Locoweeds are generally one of the first plants to green up in the spring and in wet years with grass readily available they usually do not cause a problem. If, however, a dry year ensues with little grass competition, the perfect storm arises. If livestock are forced to eat Locoweeds because little to no other forage is available, they may more readily do so. Spring green-up and fall regrowth are the most common times when livestock poisoning occurs. During the summer months, the dry plants remain toxic but are generally unpalatable and therefore less likely to be eaten.

Furthermore, studies have shown that cattle that might be deficient in protein may in fact seek out Locoweeds because of their high protein levels. As such, providing cattle a protein supplement during early lactation when their protein needs are greatest and until Locoweeds mature and are less palatable, will help in keeping cows from seeking it out during this critical period.

Horses generally are not as intensively managed for grazing as cattle, therefore they can be particularly at risk for poisoning in a small acreage situation; when competing with cattle for forage in a Locoweed infested pasture; or worse yet, immediately follow a cattle grazing rotation as the Locoweed is greening up in the spring or back up in the fall. Horses usually never recover once they are poisoned. Cattle can gain weight back slowly but will often have

abortions, while abortions are common in sheep following a poisoning.

Locoweeds are perennials, in that they regrow each year from the same root. However, there is some evidence that suggests that some of the specie populations are cyclic in nature and tend to fall off in drier years, with White Locoweed being the most persistent and less cyclic. As such, livestock poisonings have followed the same erratic trend.

Identification, education and management are the key to dealing with Locoweeds. Correctly identify which specie or species you are dealing with, evaluating the extent of the infestation and grazing management has to be a priority. Create or have Locoweed free pastures for spring grazing when livestock are most susceptible to Locoweed poisoning; never overgraze pastures but especially if they contain Locoweed as this

increases the risk of livestock poisoning as well as giving the Locoweed a competitive advantage over the desirable plants; and carefully monitor livestock for effects of Locoweed poisoning so that they can be moved to a Locoweed free area and thus less likely to succumb to its effects. Locoweeds are not terribly aggressive or invasive in nature; therefore, it is unlikely they would completely dominate a properly managed landscape, so it may not always be necessary to chemically treat entire acreages for them. Chemical treatment may be considered when trying to create a locoweed free pasture, especially if other weedy species, such as fringed sage, broom snakeweed, curlycup gumweed, or cactus are also present and out competing the range grasses. Contact the local County Weed & Pest District or UW Extension Office for help with Locoweed identification and recommendations.



Woolly or White locoweed



Two-grooved milkvetch

Making the Most of Your



4-H Club Meetings!



By Stacy Madden

4-H/Youth Development Educator, Weston County

4-H Club meetings are some of the most important and fun activities 4-H'ers participate in each year. Outside of 4-H project work, clubs offer 4-H'ers the opportunity to work with a group of peers to conduct business, learn new things, make friends, and serve the community. Part of becoming a well-rounded citizen and participating in 4-H is becoming an active member of your 4-H club.

4-H'ers, as you begin to plan your activities, make sure to put your club meetings on your calendar. Participating as an active member of your 4-H club is fun, but if you don't know what to expect it can be a little intimidating. Keep these pointers in mind as you attend each club meeting, and before you know it you will be comfortable voicing your opinions and participating in club activities!

Attend all of your club meetings. You can't be an active member if you're not around. Arrive on time, and plan to stay until the meeting ends. If you miss a meeting for an important reason, let your leader or an officer know in advance if possible.

Follow an agenda during each meeting and don't get off the subject.

Go to meetings with your ideas and share them with others.

Raise your hand and be called on before speaking. Only one person should talk at a time.

Listen to what others have to say. Even if you don't agree with their opinions, it lets you hear other points of view. No matter what, you should respect what others have to say just as they respect you.

Be a friend. Get to know other members, help out when needed. Not all members are the same, and no member is more important than any other member. Be a friend, and you'll have a friend!



Members of the Weston County Elk Mountain Outlaws club show off the pumpkins they carved at a special Halloween meeting.

Know how to run a good meeting. Utilize parliamentary procedure, and actively participate!

The “official” way to suggest something in a meeting is to “make a motion.” This is done by being called on (recognized) by the president and then saying, “I move that the club does...” Another club member seconds your motion. Then there is discussion and the club votes on the motion. That’s really all there is to it, it just takes practice!



Give a club and county public presentation.

Are you afraid to speak in front of a group? Don’t worry, you can learn how in 4-H. Public speaking skills will not only help your club, but also help you succeed in everything else you do. It’s not hard once you get started.



Weston County 4-H'er giving a presentation about how to make “Smoochie Cookies”

Learn the 4-H Pledge and volunteer to lead the Pledge of Allegiance or the 4-H Pledge



Members and leaders of the Weston County Prairie and Pines club planting flowers in the community planters as a community service project.

at your meetings.

Enjoy your 4-H club. Have fun and learn at the same time!

Appreciate all the hard work that your club leaders and parents contribute to the meetings. Utilize their expertise and advice, and always make sure to thank them for their efforts!

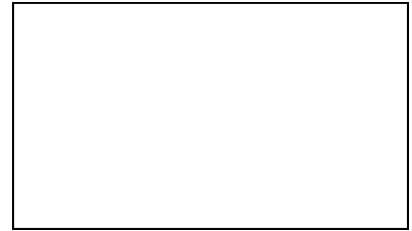
I pledge...

my **head** to clearer thinking,
my **heart** to greater loyalty,
my **hands** to larger service, and
my **health** to better living for
my **club**, my **community**,
my **country**, and my **world**.

Johnson County Extension

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Northeast Extension Connection

***A quarterly report from Campbell, Crook, Johnson, Sheridan
and Weston County Extension***

Campbell County, 307-682-7281: Hannah Hopp - Horticulture; Jessica Gladson and Kim Bell - 4-H/Youth;
Lori Jones, Cent\$ible Nutrition

Crook County, 307-283-1192: Brian Sebade - SMRR; Sarah Fleenor - 4-H/Youth; Trish Peña, Cent\$ible Nutrition

Johnson County, 307-684-7522: Blaine Horn - SMRR; Rachel Vardiman - 4-H/Youth

Sheridan County, 307-674-2980: Scott Hinger - Profitable and Sustainable Agricultural Systems; Kentz Willis -
Nutrition and Food Safety; Jerrica Lind - 4-H/Youth; Sandra Koltiska - Cent\$ible Nutrition

Weston County, 307-746-3531: Bill Taylor, EWCH; Vicki Hayman, Nutrition & Food Safety;
Stacy Madden - 4-H/Youth; Trish Peña, Cent\$ible Nutrition

*Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the
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