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Livestock and Natural Resources

Sampling Forages

As cow-calf producers strive to reduce feed costs by finding different avenues to increase grazing days, many still have to use harvested forages in their year-round feeding program. Sampling and testing forages for quality can make designing a feeding program easy and economical. Nutrient concentration can vary considerably in feeds especially forages. Protein in alfalfa hay can range from 10-25% on a dry matter basis and grass hay will contain between four and 18 percent protein. Using book values to balance rations can result in many times over or under feeding certain nutrients.

The most important factor that impacts forage quality is maturity at harvest. As the plant matures, fiber concentration increases. Fiber is less digestible than other plant parts and fiber digestibility declines as plants mature. Both of these factors cause the concentration of energy in plants to decline as maturity advances. Protein concentration also declines as plants mature.

Getting a representative sample, packaging it properly for transport, knowing what to test for, and understanding the analytical numbers are the critical points.

It is important that samples closely resemble the entire “lot” of forage. A “lot” of forage consists of forage harvested from one field at the same cutting and maturity. All forage from the same lot should be similar for crop, soil type, cutting date, maturity or variety.

We have hay probes that you can check out to sample forages. For large round or square bales, the probe should penetrate at least 18 inches into the bale and have an internal diameter of at least 3/8-inch. If the probe is 18 inches or longer, 15 large round bales should be adequate if the “lot” size is 30-40 bales. Collect one sample from each bale by coring straight in from the center of the end of square bales and from the wrapped circumference of round bales. Place the entire sample into a plastic bucket and mix around and then fill a plastic zip-lock bag for transport. For chopped or ground hay, collect about 10 small samples during the grinding process and place them in a plastic bucket for mixing then place the sample into a zip-lock bag for transport. If you are sampling a pile, take about one-fourth of the samples from the top half of the pile and the rest from the lower half.

Label the bag with your name, address, lot ID, and type of material in the bag. Most testing labs provide a description sheet to report this information and to request the desired test. Freeze samples containing over 15 percent moisture until shipping and store dry samples in a cool location.

Livestock producers should set aside high-quality hay for those animals in need of high nutrient requirements, such as young animals and females in the last one-third of gestation or in the early stage of lactation. Poor quality hay should be reserved for animals with lower nutrient requirements, such as females in early gestation after weaning, or animals that could use additional fiber in their diets.

David G. Hallauer
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Crops & Soils/Horticulture

Free SCN Testing Available

2020 saw a number of soybean fields with really nice growth – but maybe not what we expected for yields. A lot of it was attributable to weather, but other factors could be at work as well. One such possibility is a microscopic worm known as soybean cyst nematode.

Soybean cyst nematode (SCN) losses can be significant, even while going unnoticed. Nebraska research has documented yield losses of over 30 percent on seemingly healthy looking soybean stands.

How is that possible? Root feeding pests like SCN don't generally show aboveground symptoms like stunting or yellowing unless numbers are really high. That means they don't get the attention of other diseases that may *look* severe, even if they are not. Further, unless the yield loss is significant in one portion of the field, any slight yield losses in one area – or even across an entire farm – are generally blamed on something other than SCN.

While found in over half the counties in Kansas, the eastern third of the state continues to be the area of most concern from SCN damage. To help determine if yield losses in your fields are a result of SCN, a free testing program supported by the SCN Coalition through support from Kansas Soybean Checkoff dollars is available to all Kansas producers. Fall is a great time for SCN testing, and this free sampling program can help you determine what your SCN number might be. NOTE: additional charges for shipping may apply.

For additional information on the program and a sampling/shipping protocol, contact your local K-State Research & Extension Office or the Meadowlark Extension District or e-mail me at dhallaue@ksu.edu. A sampling video can be found at <https://youtu.be/b6Eo0isII10>.

Bush Honeysuckle Invasion Continues

Admittedly, I've caught myself admiring bush honeysuckle from afar. It greens up early and stays green late. Bright red berries clustered around the stem make it look almost festive. To say they are 'adapted' is an understatement. Unfortunately, they're also invasive.

The two species of bush honeysuckle found here are likely Amur or Tartarian. Growing from six to 20 feet in height, their adaptability has made them a serious understory invader from here to Ohio. Along the way, they've pushed out many native woodland wildflowers and shrubs. Control is a necessity if you want to preserve more native – and less invasive - species.

For small areas, consider hand pulling when soils are damp. For larger infestations, consider chemical control (mowing often results in vigorous resprouting). Foliar applications (directed, avoiding other growing plants) of glyphosate in late summer and fall can work, as will applications of combination products containing 2,4-D and triclopyr.

Since it's pretty late for foliar applications, consider cut stump treatments containing concentrated formulations of glyphosate or basal bark treatments with products that contain 2,4-D or picloram in an oil carrier (triclopyr containing products are generally ineffective). Cut stump, and basal treatments can be done when the areas to be sprayed are dry and not frozen.

For detailed management information, check out *Economical Control of Bush Honeysuckle*, available online: <https://bookstore.ksre.ksu.edu/pubs/MF3222.pdf> or upon request from any District office. Always read and follow all label instructions when using pesticides.

Cindy Williams
Meadowlark Extension District
Food, Nutrition, Health, and Safety

Cooking for a Crowd: How to Handle the Holidays

There are so many holidays in December, and many of these holidays have large gatherings and feasts! So whether you are celebrating the winter solstice, Christmas, Yule, Kwanzaa, Hanukkah, or Boxing Day, make sure you are safely prepared for a great meal.

Beware of foodborne illnesses and bacteria that may be present in foods. By following four simple steps, you can protect your family and friends and keep your food safe.

- *Clean—Wash hands and surfaces often with warm soapy water
- *Separate---Keep raw meats separated from ready-to-eat foods
- *Cook---Cook to the rights temperature and use a thermometer to check temperatures.
- *Chill---Refrigerate leftovers within 1 to 2 hours after serving.

Planning and shopping

Make sure to have a plan to prepare the food and meal and clean up after the meal. If necessary, make sure there will be enough storage space in the refrigerator and freezer or use coolers.

As stated above, make sure to separate raw meat, poultry, and seafood from other foods in your grocery cart and refrigerator. When shopping, buy cold foods last and plan to drive straight home from the grocery store. Perishable foods need to be refrigerated within 2 hours or 1 hour when the temperature is above 90°F.

Food Preparation and Cooking

Wash your hands and surfaces before preparing food. Make sure to keep your foods separated. Using cutting boards, use one for fresh produce and a separate one for meat, poultry, and seafood. When thawing food, use one of these three methods: in the refrigerator, in the microwave, or cold running water in an airtight container—Cook food immediately after thawing.

Use a food thermometer to check internal temperatures of cooking foods. Be sure to check what the safe minimum internal temperatures are for the foods you are cooking. Make sure the foods reaches a safe internal temperature to ensure bacteria are killed.

Finishing Up

Immediately refrigerate or freeze leftovers. Discard all perishable foods that are left out at room temperature longer than 2 hours.

With these tips, you are sure to have a safe and fun event for all your family and friends.

Nancy Nelson
Meadowlark Extension District
Family Life

Holiday Tips for Caregivers

Holidays can be meaningful, enriching times for people with Alzheimer's disease and their families. Maintaining or adapting traditions helps all family members feel a sense of belonging and identity. For a person with Alzheimer's, this link with a familiar past can be reassuring.

For caregivers, the holidays can sometimes present extra demands on their time and energy. The COVID-19 pandemic adds another layer of stress and safety concerns. Older adults are more likely to become seriously ill from COVID-19 and adults with dementia may have trouble following personal protective measures, like wearing a mask or social distancing.

This holiday season you can find ways to safely celebrate the holidays that are important to you while taking care of your own needs and those of the person with Alzheimer's disease. The National Institute on Aging shares these tips.

Take steps to prevent the spread of COVID-19 and avoid in-person gatherings and visits. Make plans to celebrate with family and friends safely: schedule phone calls, a virtual family reunion or potluck, or ask family and friends to send a care package or photo album.

Set your own limits and be clear about them with others. You do not have to live up to the expectations of friends or relatives.

Involve the person with Alzheimer's in simple holiday preparations or have him or her observe your preparations. Observing you will familiarize him or her with the upcoming festivities. Participating with you may give them the pleasure of helping and the fun of anticipating and reminiscing.

Prepare quiet distractions to use, such as a family photo album, if the person with Alzheimer's becomes upset or overstimulated.