

Agriculture

CENTRAL KANSAS EXTENSION DISTRICT NEWS

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November 2021

Upcoming Events

November

- 11 Offices Closed
- 18 K-State Swine Day
- 25 &
26 Offices Closed

December

- 24 - 31 Offices Closed

July 2022

- 19-22 Ottawa County Fair

K-STATE
Research and Extension

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opportunity provider and employer.

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**Central Kansas Extension offices will be
closed on the following dates:**



Veterans Day
November 11th



Thanksgiving
November 25th & 26th



Christmas Eve - New Years Day
December 24th – January 1st

2021 KSU Swine Day

Make plans now to attend the 2021 KSU Swine Day. The 2021 KSU Swine Day will be hosted Thursday, November 18, at the KSU Alumni Center.

The schedule for the day includes:
8:00 a.m. – 4:00 p.m. Trade Show



9:15 a.m. Welcome Dr. Mike Day, Department Head, Animal Sciences and Industry

9:30 a.m. Latest Update on K-State Applied Swine Nutrition Research: 15-minute rotation including topics on Swine Nutrition, Feed Safety and Feed Processing K-State Swine Faculty

11:30 a.m. Lunch with Trade Show

1:30 p.m. Latest Update on K-State Applied Swine Nutrition Research (continued)

2:00 p.m. Swine Health Improvement Plan -Dr. Rodger Main, Director at Iowa State University Veterinary Diagnostic Laboratory

2:30 p.m. Adapting to a Changing Swine Industry Landscape Dr. Jon DeJong, President, Pipestone Nutrition, Pipestone, MN

3:00 p.m. Question and Answer Session

3:30 p.m. Reception with K-State Ice Cream

Pre-registration fee is \$25 per participant by November 10, with registration at the door \$50 per participant. The complete schedule and online registration information can be found at www.KSUswine.org. For more information, contact Lois Schreiner at schrein@ksu.edu or 785-532-1267.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service



Upcoming Calving Schools

A series of KSU Calving Schools has been planned for January 2022 in anticipation of calving season. The program will outline overall calving management that includes stages of the normal calving process as well as tips to handle difficult calving situations. The goals of the event are to increase knowledge, practical skills and the number of live calves born if they need assistance. The meetings will have other timely educational topics such as forage sampling/analysis, and vaccine care and handling.

Dates and locations for the 2021-2022 calving schools include:

- Dec. 15 - Fairgrounds Admin Building, Tonganoxie, Kansas
- Dec. 16 - Coffey County 4-H Building, Burlington, Kansas
- Jan. 5 - Colby Event Center, Colby, Kansas
- Jan. 6 - Kearny County Fairgrounds, Lakin, Kansas
- Jan. 11- Fairview Community Center, Fairview, Kansas
- Jan. 13, McPherson County 4-H Building, McPherson, Kansas

Watch www.KSUBeef.org for more details and registration information.

K-State Research and Extension

Round 3

Join us for the 2021 “Cattle Conversations Series:

**10:00 a.m.
Thursdays
Dec 2, 9, 16, 23, 30**

Details

- Online sessions, Thursdays, beginning Dec 2
- 10:00 a.m.-10:30 a.m. each Thursday through Dec 30
- One 30 minute session each week with five topics
- NO COST

Visit the CKD website for more information and the link to register
<https://www.centrankansas.k-state.edu/livestock/index.html>
(Once you register you will receive the link to participate.)

Schedule:

Thursday, Dec 2: Tax Program - TBD

Thursday, Dec 9: Co grazing - Dr. Allison Crane, KSU Sheep & Goat Specialist

Thursday, Dec 16: Utilizing Cover Crop - TBD

Thursday, Dec 23: Early Cow Calf Health - TBD

Thursday, Dec 30: Fertility in Heifers – Sandy Johnson, Extension Beef Specialist



This program is a collaboration with K-State Research and Extension Districts:
Central KS, Cottonwood, Midway, Post Rock and River Valley.

Kansas State University is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision, or hearing disability, contact Sandra L. Wick (785-282-6823). Kansas State University Agricultural Experiment Station and Cooperative Extension Service. K-State Research and Extension is an equal opportunity provider and employer.

2021 Soybean Plot Lindsey, Ks Planted May 13, 2021 Harvested October 6, 2021

				Test	Moisture	YLD % of
	Brand	Variety	Moisture	Weight	adj Yield	Average
1	Pioneer	P42A96X	11.2	56.6	31.2	103.3%
2	Philips	442XFS	10.4	58.5	28.4	93.9%
3	Channel	4320RXF	9.5	59.5	31.6	104.7%
4	Golden Harvest	GH4392XF	9.9	57.2	27.7	91.8%
5	Channel	4121RXF/SR	9.7	58.8	32.7	108.3%
6	Croplan	CP4041XF	9.8	58.6	33.3	110.3%
7	Asgrow	40XF0	8.7	58.3	29.1	96.4%
8	Pioneer	P39A45X	9.3	57.3	34.2	113.4%
9	Croplan	CP3940XF	9.4	57.6	30.4	100.8%
10	Golden Harvest	GH3952XF	9.4	56.6	24.6	81.3%
11	Asgrow	37XF1	9.3	57.9	31.1	103.0%
12	Pioneer	P42A96X	9.8	57.9	28.4	94.1%
				Average	30.2	

2021 Sorghum Plot Lindsey, Ks Planted June 15, 2021 Harvested October 21, 2021

49,000 Population 7 Gallon 10-34-0 and 90# N Lexar Pre Herbicide

				Test	Moisture	YLD % of
	Brand	Variety	Moisture	Weight	adj Yield	Average
1	Pioneer	P42A96X	11.2	56.6	31.2	103.3%
2	Philips	442XFS	10.4	58.5	28.4	93.9%
3	Channel	4320RXF	9.5	59.5	31.6	104.7%
4	Golden Harvest	GH4392XF	9.9	57.2	27.7	91.8%
5	Channel	4121RXF/SR	9.7	58.8	32.7	108.3%
6	Croplan	CP4041XF	9.8	58.6	33.3	110.3%
7	Asgrow	40XF0	8.7	58.3	29.1	96.4%
8	Pioneer	P39A45X	9.3	57.3	34.2	113.4%
9	Croplan	CP3940XF	9.4	57.6	30.4	100.8%
10	Golden Harvest	GH3952XF	9.4	56.6	24.6	81.3%
11	Asgrow	37XF1	9.3	57.9	31.1	103.0%
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				Average	30.2	

Grazing Crop Residue

By: Justine Henderson, Livestock Production Agent



Temperatures are dropping and fall is among us. Now is the perfect time for producers to take advantage of ways to lower feed costs and extend grazing periods by utilizing crop residues.

Lease Types

There are a few different methods for leasing crop residue. All of which depend on preference of the cattle producer and landowner, type of crop residue being grazed, and level of involvement of each party. For landowners who prefer minimal participation, the flat rate (per acre or per head) method is ideal and often used in grazing residue. However, if the landowner prefers to be more involved, there are other options. Renting crop residue “on the gain” is another method that offers economic incentive to both the cattle producer and residue owner. Typically, with this agreement, the cattle are weighed right before being put on the pasture or residue and then again at the end of the grazing period. The initial negotiated rate is multiplied by the total pounds gained to determine final

payment. With animal performance a common goal, the landowner is also encouraged to contribute to the management and care of the cattle to ensure the greatest possible gain.

Stocking Rates

Proper stocking rates are a vital part of grazing crop residue. Not only do they affect the amount of grain, husk, and leaf that is available to each animal, but can directly affect animal performance and resulting gain.

There are a few ways to determine the proper stocking rate on crop residue. One of them is the well-known “rule of thumb”, which is one acre per cow per month. However, we all know nothing is ever perfect (especially in 2020). So, a more accurate way to arrive at a proper stocking rate is to use grain yield and divide it by 3.5. This results in an estimation of how many grazing days are needed per acre for a 1,200 - pound cow. This final number should be adjusted for producers depending on the number of head, nutrition available throughout the grazing period, weather conditions, and supplemental feed provided.

If you like a little more math, another way to determine proper stocking rates is to use AUM as a tool. AUM (animal unit month) is the amount of forage needed to maintain a 1,000-pound cow for one month. If that 1,000 - pound cow is expected to consume approximately 680 pounds of dry matter monthly, then a 1,200 – pound cow (1.2AU) will consume about 816 pounds per month.

From here, you can use crop grain yield to calculate. Say a crop residue pasture produces 2400 pounds of leaf and husk per acre on a dry matter basis. If only 50% of that was consumed, the residue would provide a 1200-pound cow approximately 44 days of grazing. Again, this final calculation will need to be adjusted for different operations and situations.

Nutrition & Selective Grazing

Both corn and milo stubble offer nutritional value to cattle. Nutrient content varies between type of crop and time of year. Milo leaf is generally higher in crude protein and total digestible nutrients than corn leaf. Nevertheless, the leaves of both crops offer more nutrients, are generally more palatable, and are higher in digestibility than the stems.

Cattle will usually choose to eat the best, highest quality feed first when grazing crop residue. They begin with grain, then move to the leaves and husk. This means that, depending on the stalking rate, available grain, and type of cattle you are grazing, no energy or protein supplementation may be needed early in the grazing period. Unfortunately, as we get further into the grazing period, the availability and quality of feed will decrease. Here is where proper supplementation, grazing strategies, and management practices should be taken to ensure the cattle are obtaining all required nutrients.

Bottom line is, crop residue grazing can be a valuable tool used by cattle producers to reduce feed costs and extending their grazing periods, while also providing residue owners with an efficient, profitable way to manage crop aftermath.

Forage Analysis: What Numbers do I Need?

By: Justin Waggoner, Ph.D., Beef Systems Specialist

Sample Description	Farm/Code	Sample
DAMP TRITICALE HAY	890	27590810
FRESH TRITICALE 5-3-21		
Analysis Results		
Components	As Fed	DM
% Moisture	19.1	
% Dry Matter	80.9	
% Crude Protein	25.5	31.5
% Available Protein	24.8	30.7
% ADICP	.6	.8
% Adjusted Crude Protein	25.5	31.5
Soluble Protein % CP		56
Degradable Protein % CP		75
% NDICP	5.8	7.2
% ADF	21.7	26.8
% aNDF	31.3	38.7
% Lignin	3.8	4.7
% NFC	11.2	13.8
% Starch	.2	.2
% WSC (Water Sol. Carbs.)	5.1	6.3
% ESC (Simple Sugars)	2.1	2.6
% Crude Fat	2.3	2.9
% Total Fatty Acids	1.61	1.99
% RUFAL	1.29	1.60
% Ash	10.61	13.12
% TDN	55	68
(NEL, Mcal/Lb	.57	.71
(NEM, Mcal/Lb	.56	.69
(NEG, Mcal/Lb	.34	.42

One the more common questions I receive regarding analytical testing of forages and other feedstuffs is "I have the sample, now what do I test for or what analysis package should I select?"

The basic components that nutritionists need to evaluate a feedstuff or develop a ration are dry matter or moisture, crude protein, an estimate of the energy content of the feedstuff (Total Digestible Nutrients (TDN), Net Energy for Maintenance (NEM), Net Energy for gain (NEg), and the macro minerals, Calcium and Phosphorous. These are the most basic numbers that are required but including some additional analyses in the report can give us additional insight into the quality of the feedstuff or improve our ability to predict animal performance, which is the primary reason we analyze feedstuffs. I recommend

that the report include acid detergent fiber (ADF) and neutral detergent fiber (NDF). The amount of NDF in forage reflects the amount of cell wall contents (hemicellulose, cellulose, and lignin) within the sample. The NDF fraction is often associated with the respective bulkiness of forage and is correlated with dry matter intake of the forage or feedstuff. Therefore, the amount of NDF may be used to estimate the expected dry matter intake associated with the forage. The ADF number represents the amount cellulose and lignin within the forage and is correlated with the respective digestibility of the forage. In general, a higher ADF value is associated with forage that has a greater proportion cellulose and lignin and would likely be a more mature. Additionally, the ADF fraction is used to calculate the energy estimates TDN, NEm, and NEg that appear on the report. There are a number of different mathematical equations that the testing laboratory may use to calculate these numbers, based on the type of sample (corn silage, alfalfa, grass hay, etc.). If the ADF is included in the report, the nutritionist can adjust or recalculate the energy estimates if necessary.

If the forage will be fed in combination with a byproduct feed such as wet distiller's grain, including an analysis for sulfur can be beneficial if the forage will be used in a growing or feedlot ration. Additionally, if the forage is a known nitrate accumulator (forage sorghums, sudangrass) or may have been stressed due to drought, including a nitrate analysis should always be considered, especially if the forage will be fed to pregnant cows.

Most analytical laboratories have a number of different analysis packages which encompass the most common procedures or numbers that a nutritionist or producer needs to know about their feeds. These packages will typically include the basic procedures (DM, CP, TDN) and then add on specific analyses such NDF, or the Macrominerals (Ca,P, Mg, K, Na, Cl, S). Some laboratories may group analysis packages by the type of sample (Forage, vs. mixed ration) or production purposes (dairy vs. beef).

The objective of analytical testing of forages and feedstuffs is to improve our ability to meet the animal's nutrient requirements and ultimately predict animal performance. The unequivocal best method of evaluating the quality of a feedstuff is feeding the feedstuff to an animal and evaluating performance over a set period of time, under a specific set of conditions. Since that would not be cost effective or timely, analytically evaluating feedstuffs in a laboratory is the next best the thing and although it is not perfect, it is unequivocally better than the "this looks like really good stuff" method of evaluating feedstuffs.



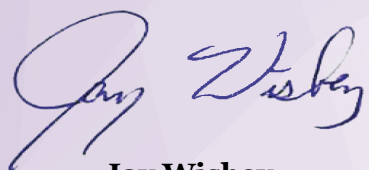
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Address Service Requested

The enclosed material is for your information. If we can be of further assistance, feel free to call or drop by the Extension Office.

Sincerely,



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