K·STATE Research and Extension Finney County

Extension Connection

AGRICULTURE NEWSLETTER By: Katelyn Barthol May 2017

Topics

Study: Teff hay could serve as drought-tolerant forage for dairy cows

Kansas State University feeding trials indicate promise, economic analysis still coming

MANHATTAN, Kan. – Researchers at Kansas State University may just have found a safety net for dairy producers during times of limited water availability or drought.

Graduate research assistant Benjamin Saylor is reporting findings of a study showing that teff hay has the potential to replace alfalfa and corn silage in the diets of lactating dairy cows.

Teff is a warm-season grass native to Ethiopia, where the grain is also used for human consumption. Due to its physiology, it is well-suited to drought conditions.

The university's feeding trials with high-producing dairy cows included a control diet and two alternative formulations of the teff diet.

"In terms of intake, milk yield and milk fat percentage, there was no significant difference seen among the three diets," Saylor said. "The only significant difference we saw was the two teff diets resulted in milk that had significantly higher protein concentrations."

It's a surprise finding in that teff grass is relatively high in fiber and somewhat lower in protein. "You wouldn't look at the nutrients and say this is an exceptional forage, compared to something like alfalfa," Saylor said.

But in the feeding trials, "it performed well," he added.

The three diets were formulated for similar dry matter, crude protein and starch concentration. The researchers monitored the cows for dry matter intake, milk and component production, body weight, body condition score and other indicators of performance.

"When you go into something like that, it's easy to say, 'well no one is going to adopt this because everyone has been feeding 'XYZ' forever,'" said Barry Bradford, professor of animal sciences and industry, who supervised the project.

"For me an important initial spark for this was five to six years ago. A really well-respected dairy nutrition consultant who was working with some big herds in western Kansas, called me one day and said that we need to do something different with those herds long-term. He asked, 'Are you guys doing anything on more water-efficient forages we can potentially use down the road?'"

Bradford said that helped to lead him and Saylor to this project, which is part of a larger collaboration with researchers in agronomy, agricultural economics and geography.

Doohong Min, an assistant professor of agronomy at K-State, was the lead investigator on a $70,000 grant from the National Science Foundation to study the viability of teff as a dairy forage, Bradford said.

Min coordinated a greenhouse study that helped to set the foundation for the feeding trials. In the greenhouse study, the researchers grew 240 teff grass samples to determine the effects of seed variety and the best time to harvest teff for yield, quality and digestibility.

They found that seed variety did not make a difference, and that in greenhouse conditions, cutting teff at 45 to 50 days after planting was the best time to optimize yield and quality.

The researchers are now working to incorporate an economic analysis, which could shed light on whether it would be profitable for producers to convert land to teff grass to help offset future water shortages.

"I think one of the main limiting factors is that teff has not been grown in field situations across the United States," Saylor said. "Prior to the greenhouse study, there's just not enough data for a farmer to say, 'okay, if I plant this, this is the minimum yield I'm going to get.' It's just uncertain. Some additional field trials need to be done across the United States, looking at rain-fed and irrigated fields. We need more data."

But, he added "We see in the future that this might be a significant issue. There are industry people that are expressing interest, and the idea is to get some preliminary work done prior to a (severe drought) event. If that time comes, we can provide industry with some options without scrambling."

Saylor's work on this project is helping him to complete a master's degree at Kansas State. He plans to continue his studies in dairy cattle nutrition while pursing a doctoral degree at the University of Florida next fall.

Scott City is site of 2017 K-State Cattle Feeders College: Cattle Crew Session

Topics include cattle health, horsemanship and more

GARDEN CITY, Kan. – The 2017 K-State Cattle Feeders College is set for May 25 at the William Carpenter 4-H Building, 608 Fairground Road in Scott City, Kansas. Registration begins at 4 p.m.

The conference is designed for the men and women who work in the cattle department of the feedlot business. It offers presentations, the "Top Hand" Cattle Feeding Industry Employee awards, and a complementary dinner sponsored by Lallemand Animal Health. This year's topics and presenters include:

- Beyond Bovine Respiratory Disease, Other Health Considerations for High Risk – A.J. Tarpoff, extension beef veterinarian, Kansas State University;
- Feeding the Working Horse – Jason Turner, extension horse specialist, New Mexico State University;
- Bits: How They Work and What Fits You and Your Horse – Gary Wiggins, Wiggins Bits and Spurs, Brewster, Kansas; and
- Preparing Your Horse for the Feedyard – Todd Adams, Hitch Ranch, Guymon, Oklahoma.

Cattle industry personnel who would like to recognize a colleague or employee are encouraged to nominate them for the 2017 Top Hand Cattle Feeding Industry Award. Nominations are requested by May 19 to Justin Waggoner, jwaggon@ksu.edu or 4500 E. Mary St., Garden City, Kansas 67846.

There is no fee to attend Cattle Feeders College, but registration is required by contacting John Beckman, 620-872-2930 or jbeckman@ksu.edu, or Justin Waggoner, 620-275-9164 or jwaggon@ksu.edu. More information is available at www.southwest.ksu.edu.

K-State to host Southwest Research-Extension Center Spring Field Day

Annual event will focus on wheat and canola; supper is served

GARDEN CITY, Kan. -- Kansas State University's Southwest Research-Extension Center will host its Spring Field Day on Thursday, May 25 from 4:30 to 7 p.m. at the center, located at 4500 E. Mary St. in Garden City, Kansas.

The Spring Field Day is an annual event hosted at the research center for more than a decade. It provides an opportunity for K-State researchers to engage local producers, to provide updates and to

receive feedback on the status of current research programs.

Producers attending the field day will learn about wheat and canola varieties and agronomy management practices to maximize productivity.

"This field day provides a platform to keep producers up to date on new research and technology and a medium for dialogue between researchers and producers," said A.J. Foster, K-State agronomist at the Southwest Research-Extension Center.

"Producers should consider this conference as an opportunity to refresh basic principles and to learn new principles that they can apply to their own situation."

Supper will be provided courtesy of industry supporters. Continuing education credits have been applied for and should be available at this meeting.

Contact Ashlee Wood at 620-276-8286 or email awood22@ksu.edu by 5 p.m. on May 17 to register. Prior registration is important to ensure supper will be available for all attendees.

For more information on the program contact Foster at 620-640-1259, or email anserdj@ksu.edu.

Four winter canola field tours scheduled for May in Kansas

Suitable varieties, production practices will be focus

MANHATTAN, Kan.—K-State Research and Extension will host several opportunities in May to learn more about winter canola varieties and crop production practices, said Mike Stamm, K-State canola breeder.

"Having field tours at this time of year gives us a great opportunity to evaluate yield potential of the winter canola crop. As producers gear up for harvest, there are a number of questions we can address to help with those important decisions. We'll also talk about new varieties, variety development, and how well the crop has fared over the growing season," Stamm said.

- The first tour will be May 12 in the Harper County area and is co-hosted by Progressive Ag Coop. The tour will begin at 10 a.m.
- The second tour will be May 23 starting at 2 p.m. at the South Central Kansas Experiment Field, Redd Foundation Field southwest of Partridge, Kansas.
- The third field day will be May 25 at the Southwest Research-Extension Center, 4500 E. Mary Street, Garden City, in conjunction with the center's Spring Field Day. The field day starts at 4:30 p.m. and a meal will be provided. Attendees will hear about canola variety development, production practices, and the National Winter Canola Variety Trial.
- The fourth field day will be May 26 starting at 10 a.m. near Montezuma. The first stop will be 1 mile north of town on the Ingalls blacktop (12th Road) on the west side of the road. Attendees will learn about canola growth and development, harvest options, and variety development. Lunch will be sponsored by Helena Chemical and Monsanto.

All field days are co-sponsored by K-State Research and Extension and the Great Plains Canola Association. Financial support for these field days was made available through the Great Plains Canola Association's Promote Canola Acres program and the U.S.Department of Agriculture-National Institute of Food and Agriculture Supplemental and Alternative Crops Competitive Grant Program.

Pruning Storm Damaged Trees

Winter storms may cause serious tree damage. Often you will have to decide whether a tree can be saved or not. Here is a checklist on care of a storm-damaged landscape.

1. Be careful: Slippery ice and chainsaws don't mix. Wait until all ice has melted before beginning work.

Check for downed power lines or hanging branches. Don't venture under the tree until it is safe. If large limbs are hanging precariously, a certified arborist has the tools, training and knowledge to do the work safely.

2. Cleanup: Remove debris so you don't trip over it.

3. Decide whether it is feasible to save a tree. If the bark has been split so the cambium is exposed or the main trunk split, the tree probably will not survive and should be removed. If there are so many broken limbs that the tree's form is destroyed, replacement is

the best option.

Topping, where all the main branches are cut and there are only stubs left, is not a recommended pruning procedure. Though new branches will normally arise from the stubs, they are not as firmly attached as the original branches and more likely to break in subsequent storms. Also, the tree must use a lot of energy to develop new branches, leaving less to fight off diseases and insect attacks. Often, the topped tree's life is shortened.

4. Prune broken branches to the next larger branch or to the trunk. If cutting back to the trunk, do not cut flush with the trunk but rather at the collar area between the branch and the trunk. Cutting flush with the trunk leaves a much larger wound than cutting at the collar and takes longer to heal. Middle-aged or younger vigorous trees can have up to one-third of the crown removed and still make a surprisingly swift comeback.

5. Take large limbs off in stages. If you try to take off a large limb in one cut, it will often break before the cut is finished and strip bark from the tree. Instead, first make a cut about 15 inches from the trunk. Start from the bottom and cut one-third of the way up through the limb. Make the second cut from the top down but start 2 inches further away from the trunk than the first. The branch will break away as you make the second cut. The third cut, made at the collar area, removes the stub that is left.

Note: Pruning can be dangerous. Consider hiring a trained, certified arborist to do major work. Also, a good arborist knows how to prune trees so that storm breakage is less likely to occur. Preventing damage is better than trying to fix it once it has happened. The Arbor Day Foundation maintains an excellent Web site that contains detailed information. The URL is: http://www.arborday.org/media/stormindex.cfm
(Ward Upham, KSRE Rapid Response Specialist)

Grow Your Own Food in a Community Garden

For a small fee, you can rent a plot of land to grow food at a community garden! The Finney County Extension Master Gardeners' Community Garden will be available for the fourth year, to anyone interested in having a garden plot. Plot sizes are 10' x 10' and cost is $20 per plot. At the end of the garden season, $10 will be refunded when the plot(s) plant compost is cleaned. The primary focus of the Community Garden is to increase and expand access to healthy, fresh foods.

This Community Garden has some unique features to help people desiring a place to garden. Master Gardeners and the Finney County Extension Office will be glad to provide assistance in answering questions about gardening. A limited numbers of tools, hoses and watering equipment are available for gardeners to use in their plots. The Community Garden is located next to the Finney County Extension office, 501 S 9th Street in Garden City.

If you are interested in a plot, Registration Forms and Rules and Regulations are available at the Finney County Extension office. Register now and reserve a garden plot or two. Gardening season is here, so don't delay and sign up for a plot before they are all gone.

If you have any questions about the Master Gardeners Community Garden, contact the Finney County Extension Office by phone 620-272-3670 or email kbarth25@ksu.edu.

Tractor Safety Training

If you are 14 or 15 years or older, planning on doing farm work for someone other than a parent or legal guardian, you must take a Tractor Safety Course according to U.S. Department of Labor requirements. This years Tractor Safety Training will be Tuesday, May 23, 2017 at Leoti, KS. Transportation to Leoti will be provided. If you are interested in attending, please contact the Finney County Extension Office by phone 620-272-3670 or email kbarth25@ksu.edu.

Calender

May

- **8th- 9th: Small Animal Tagging, 5-7 p.m.**
- **18th: Wildfire Awareness Meeting, 7 pm @ Finney County Fairgrounds 4-H Building**
- **19th-20th: Finney County Spring Livestock Show**
- **23rd: Tractor Safety Training @ Leoti**
- **25th: SW Research Center Spring Field Day**
- **25th: K-State Cattle Feeders College @ Scott City**
- **29th: Office Closed for Memorial Day**

June:

- **2nd- 3rd: 3rd Annual Ag Women of the Heartland Conference**

Events

MAY 18, 7:00PM
WILDFIRE AWARENESS

Prevent fire damage to your property

Be prepared! Let us show how to make informed management decisions to prevent wildfire damage to your home, farmstead, livestock, and equipment. Our experts will cover topics such as natural vs. invasive landcover and fuel, brush management practices, homeowner fire prevention, and fire departments and wildfires in the wildland-urban interface. Please join us!

Homeowner Fire Prevention

Natural vs. Invasive Land Cover and Fuel

Land Management Practices

Fire Departments and Wildfires in the Wildland-Urban Interface

Landscaping for Fire Protection

COME JOIN US!

Finney Co. Fairgrounds
4-H Building
309 Lake Ave
Garden City, KS 67846

Thursday, May 18, 2017
7:00 PM

GARDEN CITY KANSAS · K·STATE Research and Extension · KANSAS FOREST SERVICE · Kansas Department of Wildlife, Parks and Tourism

K-State Cattle Feeders COLLEGE

CATTLE CREW SESSION

SCOTT CITY KS - MAY 25, 2017

4:00 P.M. Registration — William Carpenter 4-H Building
608 Fairground Road

This edition of the K-State Cattle Feeders College will offer in depth, sessions on cattle health, horse nutrition, bits, and horsemanship.

FEATURED PRESENTATIONS

Beyond BRD Other Health Considerations For High Risk Cattle

Dr. AJ Tarpoff, Extension Beef Veterinarian, Kansas State University

- Bovine Respiratory Disease is the most important health consideration in newly arrived high risk feeder calves. However, there are other conditions that can mimic the clinical signs of BRD. Understanding the subtle differences to properly diagnose can improve treatment and management responses.

Feeding the Working Horse

Dr. Jason Turner, Extension Horse Specialist, New Mexico State University

- It can be tough to meet the nutrient demands of working horses. This session will cover how to assess horse condition, feedstuffs, and common feeding myths.

Bits: How They Work and What Fits You and Your Horse

Gary Wiggins, Wiggins Bits and Spurs, Brewster, KS

- When it comes to bits, there are many options. What makes a good bit? How should a bit fit your horse and other topics will be addressed by an award winning bit and spur maker.

Preparing Your Horse for the Feedyard

Todd Adams, Hitch Ranch, Guymon, Oklahoma

- Getting a new horse ready to come into the yard is something every pen rider faces. Todd Adams, featured in a recent edition of "Western Horseman" magazine will demonstrate tips to safely handle the challenges of working in a feedyard.

Dinner sponsored by LALLEMAND · Animal Health

For more information go to www.southwest.ksu.edu

"Top Hand" Cattle Feeding Industry Employee Awards

Help us tell the story of the individuals who make Kansas the best place to feed cattle in the nation.

Do you have members of your organization that are "Top Hands" and symbolize the values of hard work, honesty, reliability, integrity, and animal stewardship that the Kansas Cattle Feeding Industry was built on? If so, tell us what makes these individuals stand out from the herd in 100 words or less.

Top hands will be recognized in the cattle division. A representative of the nominating feedyard and the award recipient must be present.

Nominations are due May 19, 2017. Submit nominations via e-mail to:

jwaggon@ksu.edu or by mail to:
Dr. Justin Waggoner
4500 E. Mary St.,
Garden City, KS 67846

Kansas State Veterinary Diagnostic Laboratory · MERCK Animal Health · ROTO-MIX

NO COST to attend, but registration is required by May 19th

To register, please contact one of the following:

John Beckman
Scott County Extension
620-872-2930
jbeckman@ksu.edu

K·STATE Research and Extension

Dr. Justin Waggoner
K-State Beef Systems Specialist
620-275-9164
jwaggon@ksu.edu

Tractor Safety Training

Tuesday, May 23, 2017
8:30 a.m. – 4:00 p.m.

Wichita County Fairgrounds
Community Building
Leoti, KS

If you are 14 or 15 years or older, planning on doing farm work for someone other than a parent or legal guardian, you must take a Tractor Safety Course according to U.S. Department of Labor requirements.

Please pre-register by calling your local Extension office by May 19th.
Students will need to bring:

- Social Security number
- $10 to cover material costs
- Sack lunch

There is a minimum number that must pre-register in order to hold this training.

Contact your local Extension office for more information:
Finney County Extension office: 620-272-3670
Scott County Extension office: 620-872-2930
Wichita County Extension office: 620-375-2724

Sponsored by: Finney, Scott, & Wichita Counties

K·STATE Research and Extension

K-State Research and Extension is an equal opportunity provider and employer. K-State Research and Extension 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, or a dietary restriction, please contact the Extension Office at 620-272-3670 or fi@listserv.ksu.edu.

AG WOMEN OF THE HEARTLAND 2017

Featuring
"Empower and Encourage"
A presentation that combines cooking and ag advocacy
Presented by:
Debbie Lyons-Blythe and Chef Alli

Debunking Food Myths (Professional Panel)

Envisioning your Farm

Electric Pressure Cooker Demo & Dinner (Friday Evening)

Lunch provided Saturday

AG WOMEN CONFERENCE

"HUMOR, HOPE, HELPFUL IDEAS"

JUNE 2-3, 2017
CLARION INN
GARDEN CITY, KS

Friday June 2, 2017

4:00-4:30 pm	Registration
4:30-6:00 pm	Social Hour/Crafts Create your own Garden Décor or Book Folding
6:10-8:00 pm	*"Empower and Encourage"* Debbie Lyons-Blythe and Chef Alli (Dinner will be provided)

Saturday June 3, 2017

8:00-9:00 am	Registration
9:00-9:10 am	Welcome
9:10-10:30	Debunking Food Myths
10:45-11:00 am	Break-Drawing
11:00-12:30 pm	*"The Other Side of the Plate—Helping Ag Women Live Healthy Lifestyles"*
12:30-1:30 pm	Lunch
1:30-3:00 pm	Envisioning your Farm
3:00-3:15 pm	Closing

K·STATE Research and Extension

"K-State Research & Extension and Finney County Conservation District Are equal opportunity providers and employers."

Finney County Conservation District