

Forage Feed

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Upcoming Events

March 12—Forages for Feed, IFGC Winter Program, Lexington, IL

June 8—IL Forage Expo, held in conjunction with the IL Beef Association Summer Meeting—Details TBD

Visit
www.illinoisforage.org
for details on these upcoming events!



Illinois Forage & Grassland Council Winter Program

Forages for Feed

10:00 am Saturday, March 12, 2022

ILLINOIS STATE UNIVERSITY FARM
CONFERENCE CENTER
25578 ISU Farm Lane Lexington, IL 61753

**JOIN US FOR
A PANEL
DISCUSSION
WITH TWO
GROUPS OF
EXPERTS!**

LIVESTOCK PRODUCERS

Don Mackinson - dairy
Terry Bachtold - beef producer
Elton Mau - sheep & hay producer

FORAGE PRODUCERS

Maria Cox - beef & hay producer
Steve Degner - row crops & hay producer
Brandon Stewart - hay, cover crops & cattle

PROGRAM

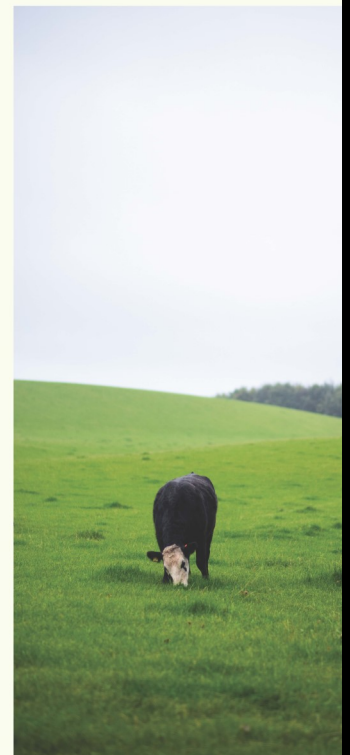
10-12 Forage & Livestock
Producer Panels

12-1 Lunch by
ISU Hoof N' Horn

1-2 Tour of ISU Farm

2-3 IFGC Annual Mtg
(members only)

FREE PROGRAM & LUNCH
No registration necessary



With high fertilizer prices are you better off buying fertilizer or supplemental hay?

Increases in fertilizer prices add to the cost of growing forage for grazing. This leads farmers to ask if they should buy hay or fertilizer, says University of Missouri (MU) Extension nutrient management specialist John Lory.

Comparing the benefits of buying hay versus applying fertilizer for better yields is complicated, but it is crucial to the bottom line, says Lory. A fair comparison looks at the costs of hay versus fertilizer, whether the farmer can use the grown forage or purchased hay and the nutrient efficiency of the grown forage versus purchased feed.

Studies at the MU Forage Systems Research Center in Linneus and MU Southwest Research Center in Mount Vernon give some insight, he says. MU researchers found that 50 pounds



per acre of nitrogen boosted spring pasture yield by an average of 1,100 lbs. per acre. With nitrogen fertilizer prices near \$1/lb., the cost of that feed is 5 cents/lb.

Outlook for the 2022 hay market

Hay prices were unforgiving to livestock producers last year, and will likely continue to be so through 2022.

What is the cost based on utilization rate? Lory explains that cattle only eat part of the forage available to them, leaving the rest to waste. High prices make it critical to manage pastures for high forage utilization rates. Research shows that cattle eat about 60 percent of available forage in highly efficient spring grazing systems, but rates typically dip below 50 percent. That means that cows waste about half of the fertilized forage. At 50 percent use, the actual cost of consumed forage doubles, says Lory. If nitrogen fertilizer is \$1/lb., cost of consumed feed is 10 cents/lb. Many farmers can buy hay for less than that now.

Forage use for purchased feed usually runs higher than that for grazing, says Lory. Hay utilization rates can reach 80 percent but most often are closer to 65 percent. If hay is

\$80 per ton, the cost per pound is 4 cents. However, at 65 percent utilization, the cost per pound of feed eaten goes to 6 cents. "These examples show how purchased feed has the potential to be an economically competitive approach compared to buying fertilizer when prices are high," says Lory.

Improving hay-feeding efficiency on your operation

Over the last 50 years, hay production has steadily increased, while the beef cow inventory has remained relatively constant. https://www.wlj.net/top_headlines/improving-hay-feeding-efficiency-on-your-operation/article_f5c9311a-545d-11ec-99a3-6b68eb526c26.html

The fertilizer value of hay can offset cost. "When you bring hay or other supplemental feed onto your farm, you are buying feed and fertilizer at the same time," says Lory. "A ton of fescue hay contains nearly 100 lbs. of fertilizer nutrients. If spread strategically on your farm, these nutrients provide fertilizer value to offset the cost of the hay." Beef cows typically excrete most of the nutrients they eat. To get the most value from hay, move the hay and cows to pastures that need fertilizer. Unroll hay bales, move hay rings or use some type of bale-graze system to spread across pastures. All of the excreted phosphate, potassium, sulfur and micronutrients in the hay are available to the pasture as fertilizer, but only about 25 percent of the nitrogen is available. The rest is lost or tied up in the soil organic matter. So, a ton of hay with 12.5 percent protein provides about 10 lbs. of nitrogen fertilizer, 12 lbs. of phosphate and 35 lbs. of potash.

The fertilizer value of hay is usually a little over a penny per pound, or slightly more than \$20 per ton. Recently, nitrogen prices rose to nearly \$1/lb., and phosphate and potash prices more than doubled. This increases the fertilizer value of hay to more than 2.5 cents/lb.

Evaluate vitamin A supplementation for beef cattle

Drought brings many nutritional and animal health related challenges. Cow performance issues during the grazing season may result

High Fertilizer Cont'd

from reduced forage quality and quantity.

In pastures, nutrients brought onto the farms as feed or fertilizer recycle and improve yields. When winter feeding hay, the hay's fertilizer will increase spring pasture growth. When properly managed, about 5 tons of feed on a pasture with a total nitrogen fertilizer value of 50 lbs. can provide an additional 1,000 lbs. or more of quality spring forage growth.

Fertilizer value also can influence hay purchase decisions, says Lory. Buying high-quality hay increases the fertilizer value of the hay. With current costs, a ton of hay may have \$20 more fertilizer value than poor-quality hay, making the higher-quality hay the more economical feed, even if it costs more up front.

Overwintered cattle may spread weed seeds

Producers who have relocated their cattle out of state for winter feeding this year should consider having a weed management protocol in place when the cattle return, say North Dakota State University (NDSU) Extension specialists.

"Buying hay instead of fertilizer can provide a predictable feed supply to supplement spring pasture growth at a known price," says Lory. "High utilization can be assured through judicious feeding practices, and unneeded hay can be stored if not used. With high prices, the fertilizer value of the hay has more than doubled, currently around 2.5 cents per pound of forage or \$50 per ton, offsetting a significant fraction of the cost of hay. The fertilizer value of the hay also will boost spring forage growth."

No matter how you meet your herd forage needs, he adds, high prices require you to maximize forage utilization, both when feeding hay and managing pastures.

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M Extension

Hay Auction Dates Set

The Northwestern Illinois Forage and Grassland Council has announced dates for their upcoming hay and straw auctions to be held in Orangeville, Illinois. The Council has sponsored these auctions for over 25 years.



The first auction was held Saturday, October 9 starting 11 am at the Boco Mini-Mart adjacent to Route 26. Subsequent auctions will be held on the 2nd and 4th Saturday of each month continuing through April.

COVID-19 guidelines need to be followed. Individuals attending need to have a mask and 6-foot social distancing must be followed.

Like past years, a 7% commission will be charged to non-members of the NW IL Forage and Grassland Council, members will be charged 6% commission. There is no pre-consignment and no consignment fee.

Quality tested hay, with accompanying printed analysis, is encouraged. Scale tickets are also encouraged so the hay can be sold by the ton. A skid loader will be available to reload bales onto the buyer's trailer for \$1.00 per bale. Loads need to arrive by 10:45 am on day of sale.

Questions can be directed to Phil Barker, auctioneer, 815-821-2544 or Don Brown, Jr., President of the NW IL Forage and Grassland Council, 815-238-8372.

NW IFGC Winter Tour

The NW IFGC winter tour was February 16, 2022. The tour group included 36 members and guests. They toured the Crave Brothers Dairy and Cheese Factory in Waterloo, WI. The farm has a 60 cow rotary milking parlor. The afternoon tour included Renk Seed in Sun Prairie, WI. Cheeseman Coaches provided transportation.



Small Grains Have Large Value For Livestock Producers

Small grains are becoming increasingly popular crops for North American farmers. For many, they serve as cover crops to help prevent soil erosion and nutrient loss in addition to sequestering carbon in the soil on cropland that would normally be bare during the fall and winter months. They can also be useful in crop rotations to help manage weeds or disease cycles (especially for certified organic operations).

For livestock producers, however, small grains such as oats, barley, wheat, rye and triticale (a cross between wheat and rye) can be a versatile, valuable forage crop. They are often part of a planned rotation, planted in the fall after corn silage season and harvested as silage in the spring (except for oats which generally do not survive freezing winter temperatures). Oats and other spring grains can provide a quick emergency forage crop when planted early in the spring to replace alfalfa stands lost to winterkill. They can also be planted in late summer for pasture in order to extend the grazing season into the fall and winter. Be sure to test the crop for nitrates before grazing in the fall if you have experienced a drought or sudden frost because harmful nitrates can accumulate when plants are stressed.

Harvest timing is critical when trying to produce top quality forage. To achieve the highest digestibility the crop should be harvested after the flag leaf appears but before the head emerges (boot stage). Once the seed head emerges the stem elongates, dry matter yield increases but the fiber level also increases and fiber digestibility decreases. If the small grain is planted as a "nurse crop" along with perennial species like alfalfa or clover, harvest timing should be dictated by the growth stage of the permanent crop. You should harvest after the new seeding is well established but before the grain crop has a chance to out-compete the seedlings for sunlight and nutrients.

Choosing the best small grain for your operation can be a challenge. The first consideration should be to select the grain species that performs best under your local conditions. Your agronomist should be able to help with this decision along with information from local and regional universities. A number of universities plant yield trials for small grain forages which can help you get information on relative yields among the various crops and varieties planted.

What about forage quality? A number of factors such as fertility level, weather, and harvest timing can affect the forage quality of small grain silage. What differences are there between the different species of grains? Agri-King's lab tests tens of thousands of forage samples each year from all across North America and the UK and Ireland. Following are the results from small grain silage and balage samples analyzed at Agri-King's ANALAB in Fulton, IL from 2018 through 2020.

Table 1. Small grain silage/balage samples analyzed at Agri-King's ANALAB, Fulton, IL from 01/01/2018 to 12/31/2020. All values are presented as a percentage of dry matter.

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Crop	# of Samples	Crude Protein	NDF¹	NDFD-30²	IVDMD³	NFC⁴	K⁵	TFA⁶
Barley	279	12.27	53.95	55.17	67.74	24.26	2.57	2.12
Oats	588	13.64	55.22	55.90	67.67	20.04	3.00	2.28
Rye	2087	14.04	55.78	62.07	70.31	18.81	2.95	2.24
Triticale	2937	13.41	56.69	61.17	69.83	18.29	3.21	2.01
Wheat	1422	12.08	54.19	57.24	68.85	24.02	2.50	1.88
¹ Neutral Detergent Fiber					⁴ Non-Fiber Carbohydrates			
² 30 hour NDF Digestibility					⁵ Potassium			
³ In Vitro Dry Matter Digestibility					⁶ Total Fatty Acids			

Small Grains Have Large Value For Livestock Producers

These are all of the samples that were identified by the submitter as being small grain silage or balage. With this many samples there was quite a wide range of maturity and forage quality. Table 2 shows the results for the average of the top 20% of samples from each crop as ranked by In Vitro Dry Matter Digestibility (IVDMD). These would be good targets to shoot for if you are planning on managing your crop for maximum forage quality. As you can see these top samples are definitely high enough quality to feed to high-producing dairy cows. You don't have to relegate your small grain silages to just the heifers and dry cows. One thing to note is the potassium (K) level of these samples. Many producers plan on feeding these small grain silages to dry cows, but due to the relatively high K levels present these may not be the best choice as the primary forage in diets trying to achieve negative DCAD ratios.

Table 2. Top 20% of small grain silage/balage samples, by species, based on IVDMD. Samples were analyzed at Agri-King's ANALAB, Fulton, IL from 01/01/2018 to 12/31/2020. All values are presented as a percentage of dry matter.

Crop	# of Samples	Crude Protein	NDF ₁	NDFD-30 ₂	IVDMD ₃	NFC ₄	K ₅	TFA ₆
Barley	56	16.93	47.66	69.69	79.92	23.18	3.54	2.67
Oats	117	17.14	46.91	68.05	79.19	22.55	3.52	2.55
Rye	419	17.99	47.47	74.56	81.49	21.83	3.46	2.66
Triticale	587	16.53	48.10	71.87	80.17	23.19	3.58	2.42
Wheat	282	15.86	47.22	70.79	80.16	26.29	3.06	2.27
₁ Neutral Detergent Fiber					₄ Non-Fiber Carbohydrates			
₂ 30 hour NDF Digestibility					₅ Potassium			
₃ In Vitro Dry Matter Digestibility					₆ Total Fatty Acids			

As you can see, small grains can be a source of high-quality forage in addition to being an important part of your cropping rotation. With proper management your small grains can lead to big profits for your operation!

By Dr. Gene P. Gengelbach, Ph.D., P.A.S.

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ADVANTAGE

IFGC Annual Mtg. & Dues Reminder

The IFGC Annual meeting is planned for March 12 from 2:00–3:00 p.m. at the IL State University Farm Conference Center located at 25578 ISU Farm Lane, Lexington, IL 61753. Directors and officers will be elected.

Paid members are allowed to serve as officers or directors. Membership dues can be paid online at www.illinoisforage.org or can be paid during the Winter Program Event on March 12.

Thank You!

Special thanks to Agri-King for printing the Forage Feed Newsletter. Your support of Illinois Forage and Grassland Council is greatly appreciated!



Membership Application

To renew your membership by credit card:

Go to www.illinoisforage.org and select "Become a Member" then select "Purchase a Membership Now." Complete the membership information to continue. If there are questions after reviewing information at the online site, please email info@illinoisforage.org

To pay by mail: Return this page with your check made payable to Illinois Forage and Grassland Council

Mail to: Illinois Forage and Grassland Council, 216 E. Main Street, Williamsville, IL 62693

Membership renewals for the Northwest Council members will continue to be processed by the Northwest Council. Membership dues remain the same with IFGC - \$30, NW - \$35, and Corporate - \$200.

Illinois Forage and Grassland Council

Membership Application

Make check payable to *Illinois Forage and Grassland Council*

Name _____

Name of Business: _____

Address _____

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IFGC respects the privacy of its members, and does not sell its email address list to solicitors. IFGC and AFGC will email newsletters and other information to members routinely, as a cost-saving measure over regular mail. Thank you..

_____ **\$5 Student Membership**

_____ **\$30 Individual Membership**
(____ Farmer ____ University/Government ____ Industry)

_____ **\$35 Individual Membership if member of Northwestern Illinois FGC**
(____ Farmer ____ University/Government ____ Industry)

_____ **\$ 200 Corporate Business Membership**

All members receive *Forage Feed*, the IFGC newsletter, and AFGC benefits.

Corporate members receive complimentary standard exhibit space at two IFGC sponsored events per year and are recognized in the *Forage Feed* newsletter and on the IFGC website.

2021 IFGC Corporate Members



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<http://www.agriking.com>

Contact your Local FS Cooperative
or
Visit www.fsseeds.com

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Forage Feed is published by the Illinois Forage and Grassland Council

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Contributions for future *Forage Feed* issues or requests to receive future issues electronically can be emailed or mailed to the editors.



The mission of the Illinois Forage and Grassland Council is to provide the framework that unites industry, producers, and educational/governmental institutions for the production, marketing, and wise use of forages and grasslands.

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