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# GLCI News



## **Finding Efficiency With Forages**

*With the increasing cost of grain, a focus on forages allows cattle producers to "do more with less."*

*By Kindra Gordon*

Today's U.S. beef industry is certainly in uncharted territory – cattle prices have seen historical highs, but so have production costs. Because of this, Jeff Geider, Director of the Institute of Ranch Management at Texas Christian University in Fort Worth, says "Higher prices for livestock will not guarantee profitability. It all depends on what it cost to produce them."

Looking to the future, Geider concedes he can't predict where input costs and prices in the industry will go, but he does believe it will be a "new age for forages." Geider bases this prediction on the premise that the value of gain on forage will remain more competitive than gain on grain-based feedstuffs.

He explains, "Prolonged periods of feeding grain/hay based supplement will impact production costs." To adapt to these economics, Geider says cattlemen will need to find ways to do more with less. He suggests improving and extending opportunities for grazing is a key way to do that.

Geider points out, "Most other countries have forage-based livestock production, maybe there's something we can be learning."

### **ACCEPT THE CHANGE**

As a first step toward adapting to the future, Geider says, "Change is one of the biggest hurdles we face." He adds, "Facing the challenges ahead begins with accepting changing realities. We can accept it or fight it: you have a choice."

If you choose to adapt and adjust, Geider advises taking a total resource management approach. He explains, "This entails taking a detailed – and realistic – inventory of all of your resources to determine where your farm or ranch fits with where the industry is going." The inventory should include human capital and liquid capital along with developing detailed budgets that analyze each enterprise and a clear management plan that allows for adjustments

Geider clarifies two points. Foremost, he says that not all farm or ranch operators are at the same place with their resources, experiences, etc. Thus, the business plan and goals for one entity can be very different for another.

Second, he emphasizes that what is wanted and what is realistically possible – based on soils and growing conditions, human resources and financial resources – must be evaluated.

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# Finding Efficiency With Forages (continued from page 1)

## STRATEGIES FOR SUSTAINABILITY

Ultimately, Geider says successful cow-calf operators of the future will need to be both economically and environmentally sustainable. He says, “I submit you can’t be environmentally sustainable if you’re not economically sustainable.”

To achieve this, Geider suggests livestock managers focus their total resource management system on four levels: soils, forage production, livestock management and economic sustainability.

With those factors in mind, Geider points out to cattle producers, “You don’t raise cattle; you raise grass.”

**“I submit you can’t be environmentally sustainable if you’re not economically sustainable.”**

*Jeff Geider,  
Director, Institute of Ranch Management  
Texas Christian University*

**Start with the soil.** Geider emphasizes, “Soil fertility is the foundation for all production. It determines what, where and how we can develop forage-based production systems. If you don’t take care of the biology in the soil the rest of this becomes moot.”

Once this point is truly realized, Geider says it will greatly influence how the forage that is produced is harvested – namely that managers may realize that haying is counterintuitive. He explains, “Grazing offers the recycling of soil nutrients, while haying is the mining of soil nutrients and something we need to rethink.”



*Jeff Geider*

**Focus on forage production.** As the new age of forages unfolds, Geider stresses that farms and ranches will need to determine what forages are adaptable to their environment. He encourages taking an innovative approach, including considering:

- Nontraditional forage species – both native and introduced – that may be integrated to complement livestock grazing, extend grazing periods or increase plant succession,
- Proper utilization of forage-stocking rates,
- Integration of multi-species livestock grazing,
- Grazing schemes – such as rotational systems and deferred grazing – to optimize production.

**Enhance livestock management.** As producers strive for continued efficiency in harvesting forage produced, Geider also suggests managers improve efforts to:

- Match the cow to the environment, and consider smaller more efficient cows. Geider says, “I adamantly feel we need to decrease size of cows. As a rule of thumb, a cow should wean half her body weight in 7-8 months. If that is the case, ask yourself can a 1,400 lb. cow wean a 700 lb. calf in 7-8 months on forage?”
- Match the cow’s production cycle to the forage growth curve. Geider points out, “This will impact supplemental feeding needs and can potentially lower the unit cost of production (UCOP).”
- Produce livestock that have the ability to express their genetic potential from forage-based grazing systems. “I am not saying the U.S. industry should move to all grass finished cattle, but we need to find a balance and utilize forages more,” Geider concludes.

**Calculate economic efficiencies.** Increasing outputs with the same or even fewer inputs is a reality that livestock managers will need to achieve to remain viable in the future Geider believes. To address economic feasibility within the operation, he suggests analyzing these strategies:

- Transition wherever and whenever possible to forage-based animal growth.
- Allocate assets to optimize returns through weed and brush control and fertilizer applications. “This allows the potential for growing more grass and increasing stocking rates,” Geider points out.
- Decrease overhead and the reliance on non-revenue producing capital assets. “Sit down and push the pencil on equipment and capital assets that do not return efficiently to the operation,” says Geider.
- Implement sensitivity analysis to project the percent changes in inputs and the corresponding impact on outputs or revenue. “Consider different ‘what-if’ scenarios. This may help increase the operation’s flexibility to adapt to highly volatile markets,” says Geider. He adds, “Volatility can be a good thing if you learn how to capitalize on the upswings.”

As an example, he points out that a proactive approach can help in managing both purchase costs and selling price, and says, “Most of the time you can make more money buying than selling if you buy it right.”

- Structure the business to be highly liquid in times of increasing capital requirements. Geider says, “Reacquaint yourself with your balance sheet. Focus on a detailed budget and breakeven for each of the farm/ranch enterprises – and adjust or eliminate the enterprises that aren’t making money.”

## Looking long-term

Of the future beef industry, Texas Christian University’s Institute of Ranch Management director Jeff Geider says the good news is that demand for beef is growing. But to meet that demand – and be sustainable – livestock managers must find ways to be competitive domestically and internationally.

Geider anticipates high grain and feed prices, as well as higher land lease values, are here to stay. He says, “This is quite frightening, but I think realistic. Higher land leases may mean you need to utilize your property differently.”

As a result, he says to determine the economics of a farm or ranch business the opportunity cost must be considered. He explains, “Cattle need to sustain themselves and pay a lease rate. Otherwise you are subsidizing your cows.”

With that in mind, he says, “Livestock producers must focus on being as efficient as possible.” He adds, “We can’t all be stocker operators. We need cow-calf operations in the industry, but they are at a disadvantage because they can’t adjust to market changes as quickly as a stocker operator, feedlot or packer.”

He continues, “This means cow-calf producers need to be more forward thinking and plan years out versus just looking 6 months ahead.”

# Cow-pieology 101: The study of cow pies

You might say you can learn a lot from a cow pie. In fact, many beef producers observe cow pies to determine when to start supplemental feeding or when to rotate the cattle to a different pasture. The shape, size, color and texture can tell a story about the cow's diet quality.

By observing the cow pie, one can get an indication of the quality of the animal's diet. This is not a science but rather an art that can be used as an indicator.

Figure 1 is a cow pie from a pregnant cow eating hay that tested 14.8% protein, 28.2% fiber and 57.3% TDN or energy. This hay met the cow's requirements for protein (7.8%) and TDN (53.2%). This cow pie was flat, round and dark in color. The fiber content in the hay was low (28.2%); therefore, the hay was easily digested.

The cow pie in Figure 2 shows a remarkably different shape. It was not flat and round but rather the cow pie is hard, stacked and showed grooves or waves. When this cow pie landed on the ground, it stacked one on top of the other. This cow was eating hay that tested 5.1% protein, 31.5% fiber and 53.7% TDN. A cow pie with this shape usually is a sign of high fiber and low digestibility. In this example, the protein content was very low (5.1%).

Because of the low protein in the diet, the digestibility of the protein and other nutrients is often seriously decreased. A supply of protein above the minimum promotes healthy microorganisms in the rumen to aid the digestion process.

The cow pie in Figure 3 was from a cow eating hay with more fiber (32.8%), as compared to the Figure 2 cow pie, but it also had more protein (8.8%). Because the protein requirement was being met, more of the hay was digested and the shape of the cow pie was different. The TDN level was only 46.3%. If this cow continued to eat this hay without additional supplement, body condition would diminish.

By observing cow pies, a change in diet quality can be observed before a decrease in body condition occurs.

The science of forage testing is the key to proper supplementation. A forage test provides the nutrient contents of hay. Knowing the nutrient composition of hay allows for the comparison between hay nutrients and the nutrient requirements of the cattle being fed. If the animals' needs are greater than what's provided in the hay, a least-cost feed supplement can be developed.

Least-cost supplemental feeding generally involves grouping animals based on their nutritional requirements, forage testing and identifying the costs of feed grains. To minimize feed costs, cattle with different nutritional requirements should be grouped separately and supplemented accordingly.

Commingling cattle with different requirements (for example, non-lactating cows in the same field as lactating cows) can cause either overfeeding and waste of costly supplements or underfeeding and poor cattle performance.

Knowing the nutrient composition of the forage allows feeding lower-quality hay to cattle with lower nutrient requirements and feeding higher-quality hay to cattle with greater requirements. If the nutrients in the hay are less than the requirements of the cattle being fed, a least-cost supplement can be formulated based on local grain prices and alternative feed sources.

Remember, the "art" of cow pieology may indicate a supplement is needed, but it is the "science" of forage testing that indicates which and how much supplement is needed.

*Source: Dr. Tom Troxel, Professor  
University of Arkansas Division of Agriculture*



Figure 1



Figure 2



Figure 3

## DROUGHT RESOURCES

The drought of 2012 is being called the worst since 1956. Several online pages have been developed to assist landowners and livestock producers with planning their drought management strategies. Here are some of the available resources:

- The Drought Management Page by the editors at BEEF magazine includes links to the US Drought Monitor, the Samuel Roberts Noble Foundation and several University sites. See it at <http://beefmagazine.com/drought-management-resources>.
- A drought calculator is available online at [http://www.nd.nrcs.usda.gov/technical/Drought\\_Calculator.html](http://www.nd.nrcs.usda.gov/technical/Drought_Calculator.html). Development of the Drought Calculator (DC) has been a collaborative process involving USDA-Agricultural Research Service in Fort Collins, CO, USDA-Natural Resources Conservation Service and NDSU Central Grasslands Research Extension Center. Funding was provided by the USDA-Risk Management Agency. Utilizing precipitation information, the DC was developed to help ranchers and other rangeland managers assess the impacts of drought on forage production, enabling them to make better informed decisions as to alternative drought strategies.
- The Managing Drought Risk on the Ranch website (<http://drought.unl.edu/ranchplan/Overview.aspx>) offers step-by-step instructions in writing a drought plan and profiles producers in different states and how they've managed before, during and after drought.

**Important  
DATES!**

# Add These Events To Your Calendar

## *Southwest Pennsylvania Project Grass is Hosting a Grazing Conference in Indiana, PA, October 11-12, 2012*

Speakers include Temple Grandin (Keynote Speaker), Ben Bartlett (World-Wide Grazing), Jon Hopkins (Diversifying the Grazing Operation), Susan Duckett (Grass Finishing, Meat Palatability), Robert Van Suan (Parasite Control in Livestock), Lee Rinehart (Transitioning to Organic Farming), Peter Burns (Integrating Poultry in Grazing Operations), William Wise (Pasture Management for Horses), and Tammy Colt (Wildlife and Grazing).

The second day of the conference will offer a more interactive experience for participants. There will be field tours and three demonstrations at the Indiana Fairgrounds, featuring cattle handling, using working dogs to handle livestock, and exploring how grazing methods affect soil moisture content by using a rainfall simulator.

Register on-line for the conference at [www.swprojectgrass.com](http://www.swprojectgrass.com). A \$95 early registration fee covers all events and meals for both days. After September 8 the registration fee will be \$130.

### *Alfalfa Conference*

The National Alfalfa & Forage Alliance (NAFA) will conduct an Alfalfa Intensive Training Seminar Nov. 13-15 in Sioux Falls, SD. For more information, call NAFA's at 509-585-5460. See a conference schedule at [www.alfalfa.org/training/html](http://www.alfalfa.org/training/html).

### *Orlando Hosts 5th National Conference on Grazing Lands*

This event will be held Dec. 9-12 at the beautiful Caribe Royale Hotel and Convention Center. Registration for the conference can be completed online by visiting [www.glci.org](http://www.glci.org) and clicking on "Grazing Conference." Participants will have the opportunity to listen to dozens of speakers including renowned animal scientist Temple Grandin, Colorado rancher Kit Pharo and animal behavior specialist Fred Provenza.

To have your GLCI activities or upcoming events highlighted in this newsletter, contact Kindra Gordon at phone 605-722-7699 or [kindras@gordonresources.com](mailto:kindras@gordonresources.com).

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- American Farm Bureau Federation (202) 484-3608
  - American Forage and Grassland Council (800) 944-2342
  - American Sheep Industry (303) 771-3500
  - Dairy Industry (517) 323-6575
  - National Association of Conservation Districts (202) 547-6233
  - National Cattlemen's Beef Association (202) 347-0228
  - National Farmers Union (202) 554-1600
  - Society for Range Management (303) 986-3309
  - Soil and Water Conservation Society (515) 289-2331
- Contact these affiliated organizations: