

CAN WE MANEUVER PAST HIGH ALFALFA PRICES?

by Alvaro Garcia

DAIRY farmers are constantly seeking sustainable and cost-effective feed options for their cows. While alfalfa is a popular forage source, at times it can be expensive and limited by its availability. Therefore, alternative feed options such as distillers dried grains (DDGS), citrus pulp, and beet pulp are being investigated to partially replace alfalfa in dairy cow diets.

DDGS, a co-product of the ethanol industry, provides protein, energy, and minerals that can replace some ration alfalfa without affecting milk production or cow health. However, DDGS alone does not provide sufficient effective fiber levels that are essential for a cow's digestive health. When adding DDGS to rations, alternative forage sources such as hay or straw should be used to ensure enough effective fiber. By blending DDGS with forage sources, farmers can promote sustainable farming practices and reduce their costs.

Using the average values provided by the NRC 2021 Dairy Nutrient Requirements of Dairy Cattle, the nutrient concentration of a blend of one-third wheat straw and two-thirds DDGS shows the following nutrient concentration:

- Crude protein (CP) = $(1/3 \times 4.25\%) + (2/3 \times 28\%) = 18.7\%$
- Neutral detergent fiber (NDF) = $(1/3 \times 77.5\%) + (2/3 \times 40\%) = 35.5\%$
- Net energy of lactation (NEL) = $(1/3 \times 0.59 \text{ Mcal/kg}) + (2/3 \times 2 \text{ Mcal/kg}) = 1.68 \text{ megacalories per kilogram (Mcal/kg)}$

This nutrient concentration is very similar to that of dairy alfalfa hay with a relative feed value (RFV) of 150 which contains:

- CP = 18% to 22%

- NDF = 38% to 42%
- NEL = 1.4 to 1.6 Mcal/kg

Does it perform?

A recent experiment conducted at the University of Nebraska examined the effects on milk production and energy utilization of dairy cows fed a blend of straw and DDGS partially replacing alfalfa hay. The hay was replaced in the treatment diets with a straw/DDGS blend containing approximately one-third wheat straw and two-thirds DDGS as follows:

1. Control diet with 18.2% alfalfa hay, 0% distillers dried grains, and 0% straw.
2. 12.1% alfalfa hay, 6% distillers dried grains, and 2.1% straw.
3. 6.1% alfalfa hay, 12.1% distillers dried grains, and 4.2% straw.
4. 0% alfalfa hay, 18.1% distillers dried grains, and 6.2% straw.

The study found that incorporating DDGS in dairy cow diets raised organic matter digestibility in Diets 2 and 3 but reduced it in Diet 4. However, the digestibility of fiber fraction rose with DDGS in the diet while methane production and water intake fell. Including 6% and 12.1% DDGS in the diets produced more energy-corrected milk and fat.

To formulate a dairy cow's diet, farmers must

consider factors like cow nutrition, feed composition, management practices, and economics. For example, a cow producing 100 pounds of milk with 3.3% protein and 3.7% fat requires a total mixed ration (TMR) with 16% to 18% crude protein and 1.6 to 1.8 Mcal NEL/kg.

To replace some of the alfalfa in the TMR, farmers can use wheat straw and DDGS, which can provide cost savings. Let us assume feed prices of alfalfa hay, \$250 per ton of 150 RFV alfalfa; wheat straw, \$80 per ton; and DDGS, \$275 per ton.

If we replace 9 pounds of alfalfa with 3 pounds of straw and 6 pounds of DDGS, the total annual savings per 1,000 cows would be \$32,000. To calculate the percentage savings, we divide the savings by the cost of the original diet, which is the cost of 1,460 tons of alfalfa. The savings would be 6.3%, or close to 20 cents per cow daily.

Dairy farmers can lower costs by replacing expensive alfalfa with by-products such as DDGS. Replacing alfalfa with straw and DDGS can provide cost savings, particularly in regions where alfalfa is scarce or expensive. **1000+**

■ The author is a retired professor of dairy science from South Dakota State University. He is now a consultant with Dellait Dairy Nutrition & Management.

FOR OUR 1,000+ PRODUCERS

Welcome to this new section in *Hoard's Dairyman*, tailored specifically to you. Here we will provide content focused on the unique requirements and challenges found on operations milking more than 1,000 cows.



IS YOUR PREGNANCY-TEST METHOD HOLDING BACK YOUR DAIRY?

Ultrasound and palpation have been the traditional pregnancy detection methods for decades. But more and more dairies are switching to sample-based pregnancy testing. Why?

Steve Maddox of Maddox Dairy in California sums it up, "We can basically do it on our schedule...It improved our breeding efficiency, our profitability, and our sustainability."

WHAT IS SAMPLE-BASED PREGNANCY TESTING?

Sample-based pregnancy tests use either a blood or a milk sample, which is analyzed for the presence of pregnancy-associated glycoproteins or PAGs. PAGs are produced by the cow only in the presence of a placenta, making them a highly specific indicator of pregnancy. Both blood and milk samples are easy to collect, and both test types are equally accurate (about 98%).

"Instead of using three or four people trying to get the cattle locked up, we're able to get down to a smaller crew on a better schedule."

—Steve Maddox, Maddox Dairy, California

SAMPLE-BASED TESTS SHORTEN LOCKUP TIMES TO REDUCE STRESS, IMPROVE YIELD

Conventional ultrasound or palpation can require cows to remain in headlocks for an hour or more, increasing stress and reducing the cow's resting time. Cows require 12–14 hours of lying and resting each day.¹ But because blood or milk samples can be taken during or right after milking, it takes just a few minutes to gather the samples and send the cows back to the pen.

Steve Maddox confirms that using the Alertys pregnancy tests reduced lockup times and boosted productivity at his dairy, "We were checking cattle every other week, and so

THE PROOF IS IN THE PROFITS

Because the IDEXX Alertys pregnancy tests can be used as early as 28 days postbreeding, operations can find open cows sooner to improve pregnancy rates.

After using the IDEXX Alertys pregnancy tests for more than a year, Steve Maddox said his California dairy's 21-day pregnancy rate went from 23%–25% to 28%–30%. "And that translates to pure dollars," Maddox says. "It's having a quicker turnaround on getting the cows pregnant. Because pregnant cows give more milk, and that's the trick at the end of the day."

they were locked up for 3 or 4 hours, which is really damaging on your milk flow and on cow comfort. It's just a huge, huge savings—you can tell in the milk tank and what's being shipped out."

TIME SAVINGS IMPROVE DAIRY AND VETERINARIAN EFFICIENCY

Because the samples can be collected by dairy staff, sample-based testing frees the dairy to set its own testing schedule, often using a smaller crew.

Dr. Greg Goodell, founder of the Dairy Authority, believes that "Dairies who typically spend 6–8 hours a day on pregnancy checks can reduce that time by two-thirds."

Goodell, a vet who could routinely palpate 1,000 cows a day until his palpating shoulder was injected twice, encourages vets to be open to the change, too. "A vet who moves a farm to sample-based testing has MORE work on the farm, not less—they're just not spending that time palpating."

IDEXX IS THE GLOBAL LEADER IN SAMPLE-BASED PREGNANCY TESTING, WITH MILLIONS OF TESTS SOLD WORLDWIDE TO DATE

There are blood- or milk-based testing options for any operation from small to large. Depending on the specific test, samples can be processed on-site, at a DHIA or private lab, or at IDEXX Bovine Laboratory Services.



"Sample-based pregnancy testing is not only better for the producer and the cow, in terms of cow comfort, it's also better for vet comfort and the sustainability of livelihoods."

—Dr. Greg Goodell, Founder, Dairy Authority



To learn more or speak with an IDEXX representative, scan the code or visit idexx.com/Profits



References

¹ Grant R.J. Cows under pressure: What have we learned about stocking density and natural cow behavior? 2007. Section 4 in Proc 47th Annu New England Dairy Feed Conf and Ruminant Nutrition and Health Conf. West Lebanon, NH and Syracuse, NY.

LEGALITIES OF HUMAN RESOURCES

by Sydney (Endres) Flick

FARM owners need to be aware of the legal side of hiring and retaining good employees and handling underperforming employees. In an episode of the Workable Workforce Series on the “Dairy Stream Podcast,” hosted by the Dairy Business Association and Edge Dairy Farmer Cooperative, Troy Thompson, an employment law attorney at Axley Brynson Law Firm, covered legal aspects of human resources on farms.

Thompson listed four types of employment policies a farm should have in place:

1. Policies required by law, such as equal opportunity policies, anti-discrimination policies, and safety policies.
2. Policies that put in place an early defense to the most common employment claim, such as wage per hour policies.
3. Policies that advance employers’ rights and interests, like confidentiality and nondisclosure agreements.
4. Policies that are critical to the employer’s mission; guiding principles and key standard operating procedures (SOPs) are examples.

Thompson emphasized that these policies need to be in an employee handbook and used in practice.

There are state and federal laws that require posting certain policies in a prominent location. Wage and hour and Family and Medical Leave of Absence (FMLA) policies are examples of these. Equally as important is to walk new employees through the farm policies at the time of hire. Thompson added it is also important to have your employee handbook translated into their primary language so they can utilize it.

Lead by example

“Leaders have to set and be the standard at all working times, especially in times of disagreement,” said Thompson. When managers and supervisors lead by example, their team will follow and be successful.

Farms need to commit to a systematic, process-oriented approach to human resources (HR). Every employee needs the same onboarding and overview of farm policies to gain an understanding of how and why policies are set in place.

Thompson also discussed four main HR mistakes he sees. The first is not training managers and supervisors on their legal duties to act. Under federal, state, and local fair employment laws, managers and supervisors have a special duty to help their employer prevent unlawful discrimination, harassment, and retaliation in the workplace. They also have a responsibility to help an employer conduct an investigation on any report of harassment or discrimination, even if the employer knows that it isn’t unlawful.

Another misstep is discounting the value of strategic HR and failing to give HR a seat at the management table. Farms today operate in an increasingly regulated world, and they need the ability to lawfully navigate employment, immigration, safety, and tax rules to have long-term success.

Not committing to the professional development of employees is another problem Thompson sees. In a stressed labor market, employees need to feel like they have a future for professional development on the farm and that the employer cares about their interests.

Finally, Thompson said businesses fail to develop a safety and health program. Thompson mentioned, “As an employer, we all have a special duty to make sure the employee gets home in one piece every day.”

Many incidents on farms can be preventable and may trace back to a failure of training or supervising employees to ensure they are working safely. Farms can lean on safety professionals through insurance agents or state safety and health programs to help with training.

Hiring foreign labor

Thompson mentioned two ways farms can stay organized when hiring foreign labor. First, every hire needs to complete an I-9. Under federal law, an employer is not authorized to employ an individual that is not work authorized in the United States. Second, communicate policies and safety requirements to employees so they have the information they need to be successful in your organization. The government is concerned about employers taking advantage of vulnerable populations. Being a good employer who shows care for their employees protects against this.

Employers need to give seasonal workers the same onboarding and training as full-time employees. Thompson also stressed that strict child labor laws exist, and farms need to make sure family members of seasonal workers aren’t helping and working off the clock.

Dealing with claims

For farms to avoid employment discrimination, harassment, and retaliation claims, Thompson had two main suggestions. The first was that employers must comply with their obligations under law. For example, good equal opportunity employment and anti-discrimination policies need to be communicated clearly to employees.

The second is periodic written coaching so an employee can’t claim that something never happened. Regular coaching emphasizes the importance of farm policies and makes employees accept responsibility later.

If a claim occurs, documentation provides a heightened warning to an employee that things are getting serious, provides the

employee with the opportunity to review written expectations, and eliminates the chance of credibility disputes.

“Our job as an employer is to lock in place what the facts are so that the agency or court only has to say, ‘here are the facts and here is how the law applies,’” said Thompson.

The Occupational Safety and Health Administration (OSHA) requires that certain injuries and incidents, such as death or inpatient care, are reported in a specific time frame. Employers are also required to report alleged injuries or occupational diseases to workers compensation insurers in a timely manner once they become aware of them. That insurer will then investigate defenses to the claim and push the employee to return to work as soon as possible with light duty. The sooner they can get back to work, the more likely they are to have a long and successful return to the farm.

Under the Americans with Disabilities Act (ADA), federal and most state laws require that the employer participates in an ongoing interactive process to explore reasonable accommodations for an employee who needs time off for medical reasons. Many times, a temporary leave of absence is a reasonable accommodation when this occurs.

Handling difficult situations

One strategy to not lose members of a farm’s workforce but correct underperformance is to apply a formal performance management approach. Thompson said giving people a chance to be successful through good communication can help correct an underperforming employee. It is important to document the communication you provided in the case that employee ends up being let go and the termination is brought to a court.

Thompson explained the importance of first keeping in mind that if you terminate an employee professionally and have always treated that employee respectfully and communicated clearly, they are more likely to accept responsibility. If the termination catches them by surprise, it is more likely to lead to a claim.

In most cases, the employee is deemed eligible for unemployment benefits unless the employer can provide strong evidence of misconduct. Employers need to show that, if a rule was broken, they effectively communicated to the employee that they broke the rule and a fair investigation was conducted.

Managing a team can be a rewarding but challenging job. Now may be the time to review your employee handbook and ensure that your HR items are organized and following local, state, and federal laws. This can help both your farm’s managers and employees be more successful. **1000+**

■ The author is a freelance writer and dairy farmer from Wisconsin.



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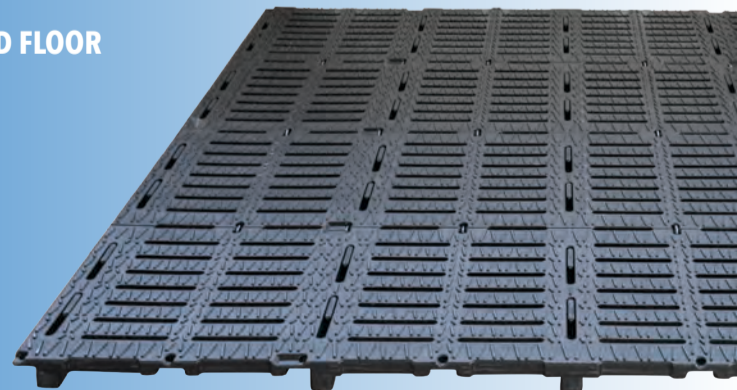


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