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A voluntary partnership with private landowners

Is It Time for Early Weaning?

Benefits included improved reproductive performance, reduced demand on pastures and improved calf performance

By: Jason K. Ahola, Colorado State University animal science professor

With summer upon us, it can be a great time of year: grass is growing, cows are in good body condition due to lush forages this spring, and spring-born calves are old enough to be really growing and muscling-up.

Often, because we like the look of those growing calves so much, the majority of beef cattle producers (53% to be exact), decide when to wean their calves primarily based on calf weight or age. Interestingly, according to USDA survey data, only 7% of producers consider cow body condition score as the primary factor to determine weaning time.

I'll be the first to admit it – it's not very appealing to even look at young, small, and lightweight calves, never mind weaning them like that. We all love to see big, heavy calves at weaning time.

But, numerous studies have demonstrated that weaning calves ***early*** can be an effective tool to help improve reproduction and forage availability by reducing nutrient requirements of the cows.

The case for early weaning

A typical beef cow requires about 10 megacalories of energy per day to maintain her body tissues. When she is lactating, the same cow requires approximately 3 to 6 additional megacalories per day, depending on how many days she has been lactating.

When a calf is weaned earlier than normal, the cow's overall nutritional requirements are reduced when her lactation stops. Non-lactating cows require about 20-35% fewer nutrients than lactating ones. Interestingly, Oklahoma researchers reported that cows consume about 1% of their body weight less after early weaning.

Ultimately, fewer nutrients required per cow means more feed to go around for other more appropriate uses.

Among researchers, it is generally agreed that weaning early can offer these advantages:

- Cows are able to improve their body condition score prior to winter feeding,
- Reproductive performance can improve (as seen by more cows pregnant during the season and/or more cows pregnant earlier in the season) due to reduced nutritional demand and improved body condition scores,
- Greater forage availability for cows or other livestock, including reduced demand on pastures,
- Improved calf performance in drought situations, sometimes including more desirable carcass characteristics.

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Early weaning options

Typically, beef calves are weaned at about 6 or 7 months of age. In fact, beef breed associations adjust calf weaning weights to an age constant of 205 days (about 6 ¾ months). However, researchers have reported that calves can be successfully weaned as young as 1½ to 2 months of age.

Calves weaned prior to or during the breeding season (at 2 to 3 months of age) can have immediate effects on reproductive performance in that same year's breeding season, including changes to conception rate and length of postpartum interval. However, if calves are weaned 1 to 3 months earlier than normal, reproductive performance can only be affected in the next year's breeding season (due to elevated body condition scores at the end of the upcoming winter).

What am I giving up?

Unfortunately, early weaning does have its downfalls compared to traditional weaning. For instance, in the short-term, income will likely be reduced if calves are sold at a significantly lighter weight. But, it should be noted that lighter calves commonly sell for a higher price per pound, and calf prices also tend to be higher in late summer vs. fall. In contrast, when viewed over the long-term, more future calves will likely be born earlier in the calving season (assuming cows are in better condition and breed back sooner) and will be older and heavier at weaning time in subsequent years.

Early weaning also requires an increased focus on management, and possibly a need for improved animal facilities. Calves weaned earlier than normal can still be sold directly off the cow, but reduced income from the sale of lighter calves can be avoided if calves are pastured separately from the cowherd or placed into a feedlot and backgrounded or finished. In addition to requiring more attention to manage health problems, early-weaned calves also tend to have elevated nutritional requirements for energy, protein, and minerals.

On the positive side, weaning calves early can affect forage availability and cost related to upcoming winter supplementation. New Mexico State University researchers developed a "forage budget" to determine the effect of early weaning on forage availability.

Selling calves (and cull cows) 45 days earlier saved 175,000 lbs of forage on a 100 head operation, which was equivalent to the nutritional needs of approximately 25% of the cowherd. This surplus forage can be used to improve cow body condition scores during late summer and fall.

The Bottom Line

Since milk production is a major energy drain on beef cows, adjusting time of weaning has been shown to effectively manipulate cow body condition score. When cows stop lactating, their energy requirements and feed intake reduce substantially (typically in excess of 20 to 30%).

Implementing early weaning will likely have negative short-term consequences, including the possibility for reduced income, increased costs, and the need for more intensive management. However, long-term positive effects can include improved cow body condition score, reproductive performance, and age and weight of calves in subsequent seasons, along with reduced winter supplementation cost.

In reality, early weaning probably offers the most advantage in young cows and in drought situations. Therefore, to experiment with this management option, producers should consider early weaning a portion of their calf crop (e.g. first- and second-calf cows, or old cows) this summer or fall.

Editor's note: Two publications available on-line contain more information and suggestions for producers interested in early weaning their calves: "Early Weaning Beef Calves" by Greg Lardy and Russ Danielson (North Dakota State University) at http:// www.ag.ndsu.edu/drought/ds-8-97.htm, and "Early Weaning Beef Calves" by Clay Mathis and Manny Encinias (New Mexico State University) at www.cahe.nmsu.edu/pubs/_b/B-126.pdf.

DVD available to highlight GLCI efforts

Grassroots & Growing, a 9-minute video featuring the purpose and efforts of the Grazing Lands Conservation Initiative (GLCI) is now available on DVD. The video provides an easy means to help inform landowners, legislators and the public about GLCI efforts and activities. Grassroots & Growing was produced by Bob Stobaugh, public affairs specialist with the Natural Resources Conservation Service. Request a complimentary copy by contacting Gail.Hendricks@fl.usda.gov. The video footage can also be viewed on the GLCI website at www.glci.org.

Resources on the Web

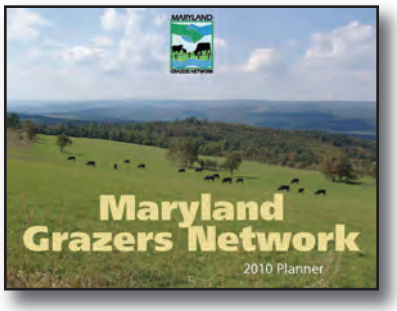
Hay Online – A new online hay auction service patterned after eBay – eHayAuctions – has been set up by Midwestern Cattle Marketing, LLC, a Sidney, NE, company specializing in video cattle auctions. It can be found at www.eHayAuctions.com.

The new hay auction site links buyers and sellers similar to eBay. Sellers register, provide descriptions of their hay (photos and test results are optional), set prices and establish auction timeframes. Potential buyers also register, then bid on hay until the price is met, the seller accepts a bid or the auction time lapses.

For grass-fed beef producers – The Small Farms Institute has developed a set of online resources for producers who want to raise and market grass-fed beef. The handbook was compiled from a series of workshops as part of a USDA-funded project titled "Building a Grass-Fed Beef Production Infrastructure to Support Marketing and Serve Consumers' Demands." It includes information intended to help producers through all aspects of grass-fed beef production, and links to other suggested resources, including identifying opportunities and barriers, grazing systems, processing and added value cuts, interest and demand, and nutrition and carcass quality. For links to the handbook visit http://smallfarminstitute.wordpress.com/grass-fed-beef-notebook/

Land restoration help – Successfully restoring disturbed lands is the aim of a University of Wyoming Extension Service publication entitled: "Successful Restoration of Severely Disturbed Lands: Overview of Critical Components." The publication covers seeding and seedbed preparation, topsoil management and amendments, wildlife-habitat considerations and weed control. The publication is free of charge and available at http://ces.uwyo.edu/PUBS/B1202.pdf.

STATE SPOTLIGHT: MARYLAND GRAZERS NETWORK



The Maryland Grazers Network is a unique organization developed with funding from the Chesapeake Bay Funders Network. The purpose of this group is to equip grazers for economic success and environmental stewardship through networking and educational opportunities.

For 2010 the Maryland Grazers Network developed a calendar planner to provide technical assistance in a non-traditional manner, creating an easy way for landowners to do record keeping for their grazing management system.

Using this planner, a farmer can document the time his livestock spend on a pasture and the number of days of rest provided, simply by recording when a herd is turned into and then out of a pasture. The planner also includes a monthly pasture checklist, as well as a marketing tip-of-the-month.

Two pages of the planner also provide more information about the Maryland Grazers Network, information on how to join the network and contact e-mails for the Network Grazing Team. A glossary of terms and grazing tips are also included. Special thanks is given to the University of Maryland Extension, Soil Conservation District, Chesapeake Bay Foundation, Maryland Department of Agriculture, the University of Maryland Easter Shore and the Natural Resources Conservation Service for their contributions to the development of these calendars as a resource for landowners.

To request a copy of the 2010 Planner – either for your personal use or to use as an example to create a planner in your state – contact Maryland State Grazing Specialist Elmer Dengler at 443-482-2922 or elmer.dengler@md.usda.gov.

Managing Annual Bromes

Herbicides, grazing and fire can be effective tools

By: Kindra Gordon

Research trials conducted by Agricultural Research Service scientists at the Fort Keogh Livestock and Range Research Lab in Miles City, Mont., indicate that timely herbicide applications, grazing and fire are each effective tools in managing Japanese and downy brome. That was the message ARS rangeland ecologist Lance Vermeire shared with attendees at the 21st annual Range Beef Cow Symposium being held in Casper, Wyo. this past December.

Vermeire told producers that managing annual bromes is important because these species can affect forage quality on rangelands and compete with more preferred perennial grasses.

Regarding effective control strategies, Vermeire said, "Control of annual bromes requires reduction of the seedbank over time. If we don't manage the seedbank, it will snap back quickly."

Vermeire discussed the following three strategies for control:

1.**Chemicals**. He noted that traditional herbicide applications, such as Roundup, can be challenging because they are very timing specific and can reduce desired forage species if applied at the wrong time. Thus, ARS researchers instead have conducted trials applying herbicides more traditionally used for broadleaf weed control – such as 2-4D, Picloram and Dicamba – to see the impact on annual bromes.

Viermeire explained that these herbicides have been shown to cause seed sterility in cereal crops if applied during seed development. And, similarly the researchers found that Dicamba and Picloram both gave reductions in viable seed when applied to brome plants. The 2-4D had no effect though.

In a field trial setting, the broadleaf-applied herbicide was effective at reducing seed viability by as much as 95%. And Vermeire said that it was effective if applied at the internode, boot or heading stage, which allows producers some flexibility for application timing.

2.**Grazing**. From the ARS trials, Vermeire shared that close grazing of brome – to about a 3-in height – reduced productivity of plants by 50%. And specifically, grazing brome in June seemed to be the most effective timing.

Thus, his suggestion to producers is to graze brome infested areas in mid-spring. He stated, "That is when forage quality is highest on the brome plants so there is some forage value, and that is when the plants are most susceptible to seed reduction."

He did caution that repeated heavy spring grazing can increase brome, so he also warned, "There is a delicate balance between intensity and timing."

3. **Burning**. Vermeire said research using fire as a control tool is also offering encouraging results. "Fire provides direct consumption of all of the seed that is above the soil," he said, and shared study results that showed fire reduced the amount of seed by 90%.

Vermeire said that study results show that burning in the summer, fall and spring were all effective timings. And, fire not only reduces the annual brome population and seedbank, but promotes a positive response from desirable perennial grasses and forbs. He cited one study where the population of western wheatgrass doubled just two years after a burn.

Vermeire noted that future research will look at timing brome control strategies to make them even more effective and long-lasting. As an example, he said, "If we have a wet fall, we know that is when cheatgrass germinates, and we can prepare to follow grazing or fire treatments in the spring with chemical treatments to give a one-two punch to significantly reduce the annual brome seedbank on rangelands."

STATE SPOTLIGHT: MONTANA GLCI BROADCASTS POSITIVE MESSAGE ABOUT RANCHING, CONSERVATION

Back in 2003, the Montana GLCI earned acclaim for their clever slogan to help promote the benefits of conservation that touts: "Cowboy up with Conservation: It Can Save Your Grass."

Most recently, the Cowboy Up project has developed three 30-second television commercials that are broadcast on Montana CBS-affiliate stations across the state and depict beautiful, tranquil scenes of ranches, grazing cattle, and wildlife set to music and convey a simple, positive message. The result is incredibly appealing, and casts a positive glow over the ranching industry. Several 30- and 60-second radio radio spots (some of which are run as public service announcements, or "PSAs") with a similar tranquil appeal are also part of the campaign to promote conservation. They are run on over 30 radio stations on prime-time farm/ranch audience time slots. PSAs are also run during Colorado Rockies and Denver Broncos radio broadcasts.

The ads represent to the general public that ranchers are actively engaged in preserving rangelands and habitats, and identify the Montana GLCI as instrumental in helping ranchers practice exemplary stewardship.

Russell Nemetz is the Montana GLCI chairman and media representative, as well as the ag director for Northern Ag Network broadcasting and a cattle producer. He says, "Our objective is to continue the education process of the general public about conservation practices that are environmentally sound and innovative and to continue to increase the awareness of the importance of grazing lands, one of Montana's largest natural resources ... We're trying to keep the good word out there about what farmers and ranchers are doing on the ground, every single day, all year long."

Montana GLCI is getting a great response to the program, both from ranchers and those outside the industry: "We're getting tremendous positive feedback from it. People are understanding what we [MT GLCI] do; they're starting to understand our relationship with the NRCS and extension and industry," Nemetz reports.

The Montana GLCI has also gotten creative with their campaign, creating pens, notepads, bumper stickers, chocolates, even chapstick, with the GLCI logo to spread the word that ranchers are concerned about rangeland conservation.

Nemetz adds that other producer groups looking to develop their own marketing and public relations initiatives should feel welcome to contact Montana GLCI to share ideas and learn from their experiences. "We're not experts, by any means, on any of this. You just have to get creative."

- Excerpted from the Western Livestock Journal

Contact the Montana GLCI via their website at http://www.mt.nrcs.usda.gov/technical/glci/

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

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(202) 484-3608

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Grassland Council
(800) 944-2342

American Sheep
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(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, ext 13

Visit the GLCI homepage at http://www.glci.org