

Nutrition Supplementation and Management Strategies with reduced protein forages and limited feed and forage availability

The spring and summer have brought varying levels of rainfall and subsequent dryness to regions the Midwest. Drier than normal conditions have in most cases reduced forage production in pastures and limited the availability of most hays including brome, alfalfa, and native grass. These environmental conditions warrant development of feeding strategies to supplement pasture conditions and furthermore develop alternative feedstuffs for fall and winter feeding. Suther's has assembled a series of technical bulletins for ranchers to explore and develop with the focus of maintaining beef production while managing increased costs of production.

Pasture Supplementation: Adequate Forage Availability

Reduced rainfall throughout the spring and summer have produced pastures that produced less than normal levels of forage with reduced nutritive value. Reduced available nutrients require supplementation strategies which supply crude protein and other nutrients. Supplementation of rumen degradable protein, also known as degradable intake protein (DIP), enhance efficiency of cattle grazing low quality forages.

Benefits of supplementing (DIP)

- *Increase forage digestibility*
- *Increase forage intake*
- *Increase energy consumed*
- *Extends pasture grazing*

The following table presents supplementation products for pastures with adequate forage availability but with reduced forage quality.

Supplementation Product	Type	Unit Size	Daily Intake	Benefits	Protein Level
Suther's 40-12 Protein Tub	Cooked Tub	200	.75-1.00 lbs/hd/day	Higher protein tub combining both natural protein and protein from urea in addition to vitamins and trace minerals.	40%
Suther's 20% All-Natural Tub	Cooked Tub	200	.75-1.00 lbs/hd/day	High quality natural protein sources with vitamins trace minerals.	20%
Suther's Forage Max 80 %	Meal Form	50	.30-.40 lbs/hd/day	High protein low inclusion supplements utilizing a new technology in protein supplementation. Contains vitamins and trace minerals	80%
Suther's Forage Max 100 %	Meal Form	50	.30-.40 lbs/hd/day	High protein low inclusion supplements utilizing a new technology in protein supplementation. Contains vitamins and trace minerals	100%

Pasture Supplementation: Limited Forage Availability

When available pasture forage levels become limited, feeding supplementation strategies require additional considerations. In addition to supplementing protein, producers should provide feedstuffs containing sources of energy to the animal. Identifying supplements that contain both protein and energy (fiber-friendly) are essential in developing a feeding program in drought conditions.

What are Fiber Friendly Feedstuffs? Fiber Friendly feedstuffs are those that supply highly digestible fiber source that supplies both energy and protein. Fiber Friendly feedstuffs contain low levels of starch and because their energy values are fiber based which are complimentary to the forages that grazing animals are consuming. Feed stuffs which provide the combination of protein and energy from fiber tend compliment grazing strategies well as they do tend not depress intake and increase the rumen efficiency of digesting low quality forages. In comparison,

supplements formulated with the use of grain or high-grain containing cubes will decrease rumen efficiency, depress dry matter (forage) intake and decrease weight gain and/or body condition.

Benefits of Supplementing Fiber Friendly Feedstuffs:

- *Most are high in degradable protein*
- *Excellent energy sources that are fiber friendly*
- *High in digestible fiber which does not limit forage dry matter intake and fiber digestion*
- *Most contain high levels of phosphorous and trace minerals.*

The following table presents Fiber Friendly feedstuffs for pastures with limited forage availability requiring supplementation programs providing both protein and energy.

Supplementation Product	Type	Daily Intake	Benefits	Protein Level	TDN %
Corn Gluten	Pellet	1-5 lbs/hd/day	An excellent source of degradable protein and energy for cattle eating poor quality or limited forages. Energy is in the form of digestible fiber that does not inhibit fiber digestion of cattle consuming low quality forages. In addition, corn gluten is a good source of important minerals and trace minerals.	20%	84
Soy Hulls	Pellet	1-8 lbs/hd/day	Soy hulls are a very good balanced feed effectively increasing the energy level of supplement programs.	12.5%	77
Wheat Midds	Pellet	1-8 lbs/hd/day	A balanced combination of protein and energy. Wheat midds provided slightly more variance in starch levels and require good feeding management practices.	17%	78
Distiller Grains (DDG)	Loose & Wet Meal Feed	1-6 (DRY) lbs/hd/day 1-15 (WET) lbs/hd/day	Distillers grain like corn gluten feed, are low in starch and may be more effective as an energy supplement with poor quality forages. The fat content ranges from 9 to 14 %. DDG is lower in degradable protein and higher in un-degradable protein. It is important to work with Suther's when considering this product.	30 %	88
Alfalfa Hay	Loose	1-12 lbs/hd/day	Alfalfa Hay is an excellent source of degradable protein with a somewhat lower energy value.	17%	58

***Please consult with your Suther Feeds Sales Representative to develop a properly balanced nutrition program when feeding the above mentioned feedstuffs. These ingredients have unique nutritional profiles and require specifically designed mineral supplements.*

Mineral Supplementation: The Overlooked Element

Research demonstrates addition of minerals increase digestibility of fiber by 12% and protein by 5%. The importance of maintaining a balanced mineral program is paramount during drought conditions. Consult with Suther's to ensure your mineral program is properly balanced and formulated to the needs of your cattle operation.