
Livestock Nutrition Support Offered by County Extension Offices



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Livestock Nutrition Support

- Added Nutrition accounts for 40% of total operating costs in beef operations
- Variety of Livestock Species
 - Cattle
 - Small Ruminants
 - Poultry
 - Equine



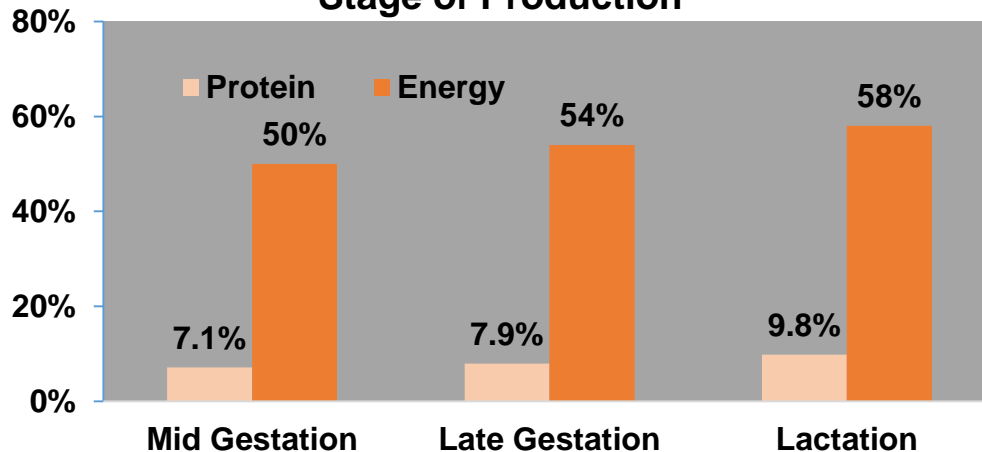
Livestock Nutrition

- Identifying livestock needs
- Interpreting Forage Analysis
- Supplementation
- Total Diet Formulation
- Feed Ingredient Comparison

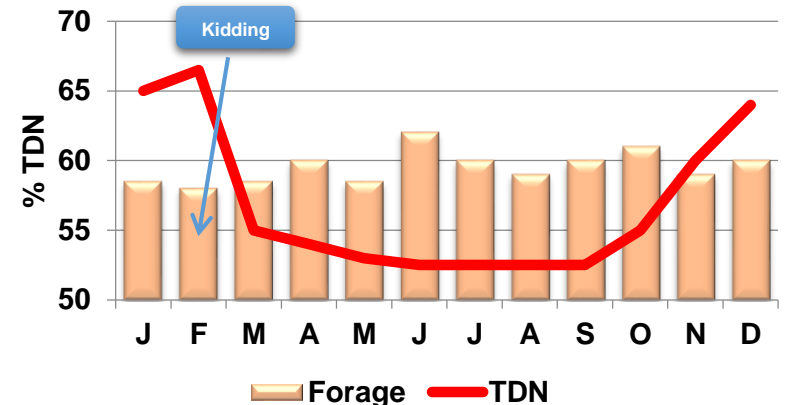
Identifying Livestock Needs

- Stage of Production
- Define Nutrient Requirements

Cow Nutrient Requirements Based on Stage of Production

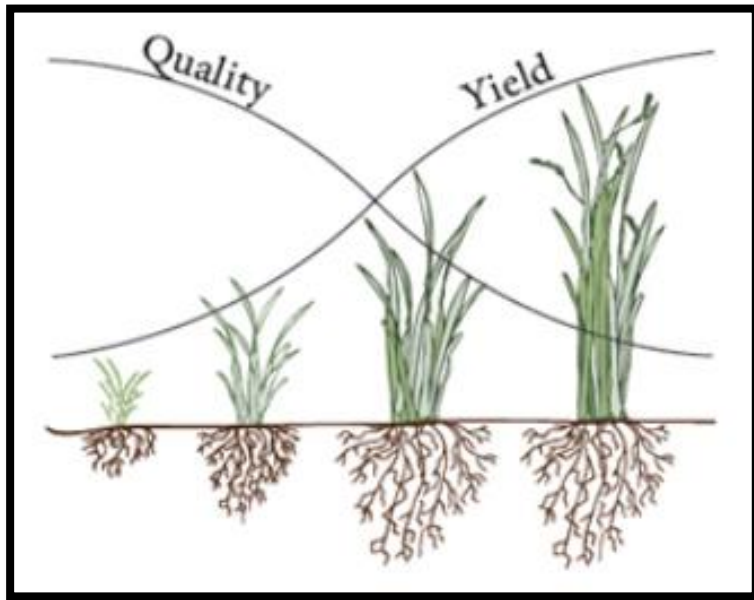


Monthly Breeding Goat TDN Requirements



Forage Analysis Interpretation

- Standing Forage
- Harvested Forage



Balancing Nutrient Supply with Nutrient Requirements

- Overfeeding

- Expensive

- Underfeeding

- Expensive

- Reduced Pregnancy Rates
 - Lower Birth or Weaning Rates
 - Less pounds to sell
 - Inefficient production



Evaluating Supplement Alternatives

- Economical Supplementation
 - Supplements analyzed base on price nutrient need of cows
- Habitual Supplementation
 - Same supplement fed regardless of price changes

Determining Supplemental Need



$$\begin{array}{r} \text{Animal Nutrient Requirements} \\ \text{Subtract} \\ \text{Value Forage/Hay} \\ \hline = \\ \text{Nutrient Excess or Deficiency} \end{array}$$

- What are the supplemental needs?

Determining Supplemental Need

- March Calving Cow (1200 lbs.)
 - Based on 24 lbs. DMI
 - Late Gestation (Dec. – Feb.)
 - Dormant Native Range (4% CP, 49% TDN)

	Crude Protein	TDN
Requirement	1.9 lbs.	12.9 lbs.
Forage Value	-1.0 lb.	-11.7 lbs.
Deficiency	0.9 lb.	1.2 lbs.

What are your supplement options?



Supplement Options

Supplement	Cost/unit
20% Cubes	\$250
38% Cubes	\$300
18% Tub	62*
25% Tub	04*
Liquid Feed	\$260
Liquid Feed 20%	\$240
Alfalfa 18-20%	\$100

How do we decide?



The Comparison

38% Cubes

38% Protein

\$300/ton

760 lbs. CP/ton

\$0.39 per lb. CP

(\$300/760 lb.)

20% Cubes

20% Protein

\$250/ton

400 lbs. CP/ton

\$0.62 per lb. CP

(\$250/400 lb.)

Which would you choose?



Supplement Options

Supplement	Cost/lb. Protein As-Is	DM	Cost/lb. Protein DM basis
20% Cubes	\$0.62	88%	\$0.71
38% Cubes	\$0.39	88%	\$0.44
Alfalfa 18-20%	\$0.26	88%	\$0.29
18% Tub (125#)	\$2.75	75%	\$3.67
25% Tub cooked (200#)	\$2.08	85%	\$2.44
Liquid Feed 14%	\$0.92	50%	\$1.85
Liquid Feed 20%	\$0.60	46%	\$1.30

Balancing Rations

- Animals in a dry-lot or grass trap environment
- Total diet being prepared for them
 - Preconditioning Calves
 - Butcher Beef
 - Semi-Confinement Cows
 - Many other situations



Tools

- OSU COW-culator

 - <http://beefextension.com/pages/cccalc.html>

- OSU Ration Calculator

 - <http://beefextension.com/pages/sccalc.html>

- Forage Supplementation Calculator

- Forage Nitrate Calculator

- Mineral Use Calculator



Thank you!

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