Efficient Use of Range Cubes

Protein Source and Feeding Management

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**Evaluate Feed Cost**

Added Nutrition accounts for 40% of total operating costs
- Hay/Harvested Roughage
- Concentrate feeds – blended feeds, cubes/cake
- Mineral supplements

Yearly evaluation of supplementation/feeding program

Keep in Mind!
- Reproductive efficiency strongly correlates with adequate nutrition
Supplementation

Using feeds to enhance the utilization of the base forage/roughage source while improving the nutritional value of the overall diet

Supplement:
- Overcome limitations on digestion and intake as forage quality declines
- Improve rumen microbial function to increase fermentation and passage rate

Guaranteed Analysis
- Crude Protein: 18.0%
- Crude Fat: 4.5%
- Crude Fiber: 16.0%

Ingredients: Wood Chips, Clay, 10W30 Motor Oil, and Lawn Fertilizer
Sources of Crude Protein

Plant Proteins
- Soybean Meal
- CSM
- Alfalfa
- Linseed Meal
- Etc.

Animal Proteins
- Meat & Bone Meal

Non-Protein Proteins
- Urea
- Biuret
- Ammonia

CAN NOT feed ruminant derived proteins to other ruminants, including goats

Breakdown of Crude Protein

Degraded Intake Protein (DIP) | Undegraded Intake Protein (UIP)
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Urea | Biuret
Dist Sol. | Distillers Grains

Rumen Degradation Time in Hours

Degradable

Bypass
Crude Protein

- Crude Protein = Amount of Nitrogen x 6.25

Urea = 46-0-0

Non-Protein Nitrogen

46% N x 6.25 = 287.5% CP
What is in a range cube?

<table>
<thead>
<tr>
<th>What is in a range cube?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat Midds</td>
</tr>
<tr>
<td>Soybean Hulls</td>
</tr>
<tr>
<td>Corn Gluten</td>
</tr>
<tr>
<td>Dried Distillers Grain</td>
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<tr>
<td>Cottonseed Meal</td>
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<tr>
<td>Soybean Meal</td>
</tr>
<tr>
<td>Limestone (Calcium)</td>
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<tr>
<td>Binder Molasses</td>
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<tr>
<td>Vitamins</td>
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<tr>
<td>Minerals</td>
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<tr>
<td>Antibiotics</td>
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<tr>
<td>Ionophores</td>
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<tr>
<td>Other Special Ingredients</td>
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</tbody>
</table>

I feed a 4-way……

Typically but not always contains:
- Soybean Hulls
- Wheat Midds
- Corn Gluten
- DDGs or Corn

What ingredients and at what inclusion rate?

I ordered corn in my feed and I don’t see any…

To make a consistent cube or pellet that a consumer will be happy with, the ingredients must be ground.

If you see corn in the cube, that means that they have put in some chopped corn instead of ground

Corn kernels in a cube cause a week spot in the cube and results in shorter broken cubes.
Choosing the right supplement.

Muskogee County 2020

Pounds of Supplement Required

Sum of 14%
Sum of 20%
Sum of 37%

CP vs TDN
Muskogee County 2020

14% = $266/ton
20% = $325/ton
37% = $410/ton

Savings of Switching from 20% to Cheaper Supplement for 50 cows for 100 days

14% = $266/ton
20% = $325/ton
37% = $410/ton
Supplementation – Evaluate the Cows

Let your cows tell you when you need to start feeding!

Carefully watch BCS!

Watch Manure Pats

Work with your county OSU Extension Educator to develop a Feeding/Supplementation Strategy!

• Forage Analysis!
  • Try to match the forage quality to animal’s nutrient requirements

• Supplementation Evaluation

Cowculator