Strategic Supplementation: Planned Low Cost Supplementation
Research Summary, 1991 to 2008

WHEN ARE COWS SUPPLEMENTED?

**MANAGEMENT GOALS:**
- Calf weaning rate has the greatest impact on profitability
- 95% fall pregnancy rate
- 80% cows calving within 30 days
- Spend no more than $30/cow/year on purchased feed

**OUR DECISION PROCESS:**
First – Determine available forage versus the expected number of cattle and time.
Can a cow eat all she wants every day?
Second – What is the grazeable forage quality?
Is green vegetation available?
Green = higher protein
Brown = lower protein
Third – What are the cow’s requirements?
Physiological stage:
- dry, pregnant, lactating, body condition?
- Also age, climatic stress, activity

WHAT TO SUPPLEMENT?
Characteristics of Strategic Low Cost Supplementation
- Low labor
- Biologically potent response to supplemental nutrients
- Improves animal productivity

Base of Strategic Low Cost Supplementation is:
1. Adequate forage
2. Mineral nutrition; self-fed mineral available year round
   ($0.02/ld for 365 d)
3. Diet – if it is brown/dormant then it is less than 7%CP – expected responses to protein supplement – increase digestibility & intake

DEVELOPING STRATEGY - PROTEIN

**HOW MUCH PROTEIN TO FEED?**
- 4 quantities for NM strategic low-cost supplementation
  • Minute – 0.3 lb/day (self-fed)
  • Minimum – 0.5 lb/day (fed 1 time/week at 3.5 lb/head)
  • Moderate – 1.0 lb/day (fed 2 to 3 times/week)
  • Maximum – 2.0 lb/day (fed 2 to 3 times/week)

**MINUTE**
- 50% NMSU CORONA RANCH Range Mineral
- 50% bypass proteins (fish + feather meal mixed 50:50) – only high-bypass protein sources
- Self-fed, target 0.3 lb/day ($0.06/day)
- Low labor, feed with nutritional stress, very efficient

**MINIMUM**
- 36% crude protein (CP) supplement (cottonseed base)
- 65% rumen degradable with 6% CP equivalents from urea
- Hand-fed (cubes), target 0.5 lb/head/day ($0.06/day)
- Lower labor, feed with low nutritional stress, efficient

**MODERATE**
- 36% CP supplement (cottonseed base)
- 65% rumen degradable with 6% CP equivalents from urea
- Hand-fed (cubes), target 1.0 lb/head/day ($0.10/day for 30 days)
- Fed every other day, two or three times/week
- Effective during pregnancy and/or stressful climatic conditions

**MAXIMUM**
- 36% CP supplement (cottonseed base)
- 50% rumen degradable with 6% CP equivalents from urea
- Hand-fed (cubes/blocks), target 2.0 lb/head/day ($0.30/day for 60 days)
- Fed every other day, two or three times/week
- Most effective during body weight loss (lactation, late pregnancy, or environmental stress)
- Or SUPERMAX for 2-3 year old cows – add 80 g calcium propionate/head/day

**TAKE HOME MESSAGE**
- Strategic supplementation attempts to enhance cow nutrient status
- Most biologically effective supplement form is used to meet cow needs in a timely manner
- The purpose is to be efficient, satisfy cow nutritional needs and achieve production goals while minimizing purchased feed costs.

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