

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 /d 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

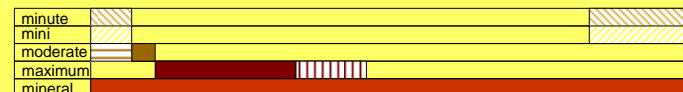
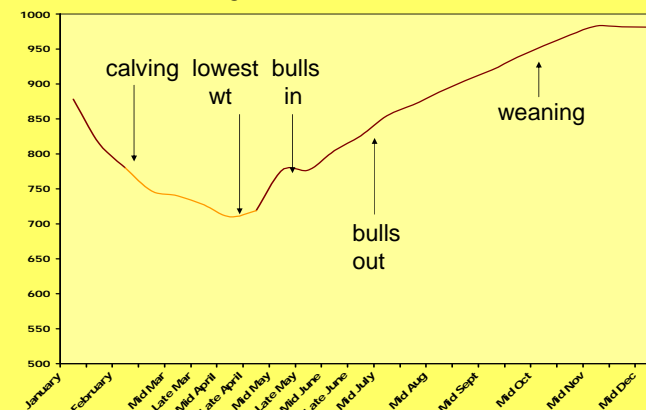
•Please see the other Strategic Supplementation posters on display today for specific research findings.

STRATEGIC SUPPLEMENTATION

•SUMMARY

- Maintain forage and animal balance
- Ground nutritional management with effective mineral program

Typical Body Weight Change and Supplementation Program for 2 & 3 Year Old Cows



Strategic supplementation scheme; solid bars signify regular practices each year (\$28.30/yr). Dashed bars represent optional schemes depending on cows, grass, yr.

•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.