

FORAGE UTILIZATION



Table 1*

EFFECT OF SUPPLEMENTATION STRATEGY ON FEED INTAKE AND DIET DIGESTIBILITY

| | Control | SmartLic NE-30 | SmartLic NE-30 Advantage |
|-----------------------------------|---------|----------------|--------------------------|
| Forage Intake, lbs/day | | | |
| Dry Matter | 10.36 | 11.71 | +13.0 |
| Organic Matter | 9.54 | 10.77 | +12.9 |
| Neutral Detergent Fiber | 7.05 | 7.93 | +12.5 |
| Crude Protein | 0.62 | 0.70 | +12.9 |
| Total Intake, lbs/day | | | |
| Dry Matter | 10.36 | 12.58 | +21.4 |
| Organic Matter | 9.54 | 11.38 | +19.3 |
| Neutral Detergent Fiber | 7.05 | 7.97 | +13.0 |
| Crude Protein | 0.62 | 0.94 | +51.6 |
| Digestibility, % | | | |
| Dry Matter | 47.0 | 51.9 | +10.4 |
| Organic Matter | 50.1 | 54.7 | +9.2 |
| Neutral Detergent Fiber | 45.2 | 48.9 | +8.2 |
| Crude Protein | 32.5 | 42.5 | +30.8 |
| Digestible Intake, lbs/day | | | |
| Dry Matter | 4.88 | 6.52 | +33.6 |
| Organic Matter | 4.78 | 6.22 | +30.1 |
| Neutral Detergent Fiber | 3.17 | 3.90 | +23.0 |
| Crude Protein | 0.21 | 0.40 | +90.5 |

* Kansas State University

SmartLic® research has demonstrated that supplementation with SmartLic blocks can effectively improve forage intake and cattle performance. The consistent, economical intake of SmartLic supplements is seemingly small in comparison to the benefits realized by livestock. So how does such a small amount of supplement impact the animal in such a big way? The following report describes a study that was conducted by university researchers to determine the mode of action of SmartLic supplements.

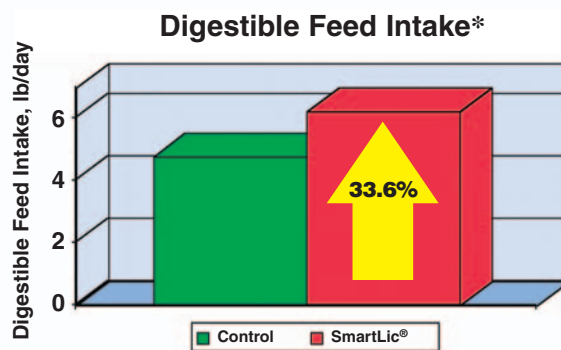
CATTLE DIGESTION TRIAL

Twelve steers averaging 640 pounds were used in an intake and digestion trial at the Kansas State University Beef Cattle Research Center. Treatments consisted of 1) no supplement, and 2) SmartLic NE-30™ supplement. Steers were kept in individual pens throughout the 18-day experiment. Cattle had free access to coarsely chopped prairie hay and water. All steers were fed approximately 0.7 ounces of plain salt each day. SmartLic blocks were broken into small pieces and fed once daily to the supplemented group at the rate of 0.9 lbs per head.

During the final 6 days of the experiment, total fecal output was measured for each animal. The proportions of dry matter, crude protein, neutral detergent fiber, and organic matter were subsequently determined for hay, blocks and feces. This made it possible to calculate total digestibility for each diet. Results of the digestion experiment are shown in Table 1.

Forage intake increased approximately 13% when SmartLic NE-30 was fed to the cattle. Likewise, digestibility of the hay and of the total diet increased significantly by feeding SmartLic supplements.

The high energy content of SmartLic blocks, combined with increases in forage intake and forage digestion resulted in large improvements in digestible feed intake. Digestible feed intake is a good indicator of total energy intake by the animal, and is a reasonable approximation of total diet TDN. SmartLic NE-30 increased digestible feed intake by more than 33.6%, and increased digestible crude protein intake by over 90%.



Supplementing with SmartLic supplements provides essential nutrients that can improve utilization of low quality forages.