

Colorado Nutrition Roundtable Summary
“Emerging Issues in the Feedyard Industry”

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Held at Lamar, CO Community College & CSU Southeastern Colorado Research Center

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I attempted to summarize bits and pieces of what the presenters discussed.

Nutritional Recommendations of Feedlot Consulting Nutritionists: The 2007 Texas Tech University Survey, Dr. Judson Vasconcelos

- *29 Feedyard Nutritionists surveyed across various states
 - 31% from CO, IA, NE, & SD
- *83% use co-products such as distillers with average inclusion of 16.5% (dry basis)
- *Summer roughage level in finisher = 8.3% average (dry)
- *Winter roughage level in finisher = 9% average (dry)
- *Formulate for 13.35% Protein in finisher
 - 1.01% max urea or 2.83% protein units from NPN
 - Most do not formulate for DIP (Degradable Intake Protein)
- *55% give full value to minerals in the basal ingredients, 38% partial, 7% no value
- *Major minerals: Most formulate at 0.7% Ca, no added P, 0.22% Mg, 0.7% K, 0.22% S, & 0.3% Salt
- *Trace minerals: Most formulate higher levels than NRC (1.5-3 times NRC). Most do not add Fe.
- *Vitamins: Most formulate Vit. A at 2 times NRC, do not add Vit. D, and add Vit. E at 11.7 IU/lb. on the average.

Efficiency of Feed Use By Beef Cattle. Dr. Cal Ferrell

- *High feed prices = interest in moderate cow size & improving efficiency
- *Buzz has been around Residual Feed Intake or RFI
- *RFI = actual measured intake minus predicted intake for a given body size and measured gain for a given days on feed
- *Lower or negative RFI indicates the cattle eat less than predicted = more efficient

RFI is not the magic bullet

- *A multi-trait selection approach is still important
- *IF you selected solely for RFI you may end up with a group of cattle that do not eat much, but do not gain much as well
- *RFI is applicable for relative differences within a given set of cattle
- *No standards are set when measure RFI for ON test weight, Days on Feed, Off test weight, energy, fat, etc. levels in the ration, all which can influence actual intake and may bias selection if selecting across groups of cattle if the groups were fed differently.
- *Genetic markers are also being evaluated linked to efficiency to develop markers to assist selecting for efficiency.

Environmental Issues Impacting Cattle Feeding. Dr. Andy Cole

- Using P to determine manure application to crop land
- Run-off from crop land that has had manure applied
- Public comments on issuing a permit to a CAFO with a nutrient management plan
- Nutrient losses of N, P, metals, salt, etc.
- Pathogen losses (E. coli, Salmonella, etc.)
- Losses of physiologically active compounds (hormones, antibiotics, pesticides)
- Effects on Wildlife

Air Quality

- Dust
- Odors
- Ammonia
- Pathogens
- Greenhouse Gases (CH₄, CO₂, N₂O)
- Pests such as flies

Solutions???

- *Formulate diets to meet nutrient requirements without safety factor built in
- *Feed more readily available ingredients & feed lower concentrations
- *Phase feed protein by decreasing the concentration of protein in the diets toward the end of the feeding period
- *Soil amendments to decrease ammonia loss
- *Greenhouse gas control: increase energy density, feed additives, manure management, lagoon management, pen surface maintenance, etc.

Dr. John Wagner who manages the research feedlot at Lamar and graduate students presented various projects that have been going on at the feedlot. They have been doing a fair bit on the environmental piece and some on distillers.

We toured the feedlot, they are doing a project where they ensiled milo wet distillers with wheat straw in a pit. I grabbed and froze a sample of it, if anyone is interested. It looks good coming out of the pit and palatability to cattle has not been an issue.

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