2010 K-State Animal Science Extension Agent Update

Brian R. Faris, Ph.D.
Extension Sheep & Meat Goat Specialist
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Outline

• Sheep & Meat Goat Numbers
• Controlled Internal Drug-Release device (CIDR) approval
• Multi-species grazing
• Co-products used in sheep and goat diets
• FAMACHA and Parasitism
• Youth Projects
• New K-State Sheep & Meat Goat Center Update
Sheep & Meat Goat Numbers

• 1990 – US Ranchers had 11.4 million head of sheep (150,000 head in Kansas).
• January 2010 – US Ranchers had 5.6 million head of sheep (80,000 head in Kansas).
• Demand for lamb was down 10% in 2009.
• Supply is a concern.

Sheep & Meat Goat Numbers

• 2005 – US Ranchers had 2.71 million head of goats (25,500 head in Kansas).
• January 2010 – US Ranchers had 3.04 million head of goats (45,800 head in Kansas).
• Goats do not have records earlier than 2005.
• Angora – TX 1990 = 1.9 million head; US 2010 = 150,000 head
• Demand is strong; Hard to track numbers
Sheep CIDR

FDA Announces Approval – November 16, 2009
Available for purchase – mid-December 2009

Multi-Species Grazing
A sheepman’s initial thought of dress when going to speak to cattlemen.

Alternative or Multi-specie Grazing

• Alternative species
  – Seems to refer to different plants grazed
  – Also refers to bison, camelids, elk, deer, ostriches, game birds, rabbits, and goats

• Multi-species
  – Sheep, goats, cattle, or horses
  – When more than one kind of livestock graze a unit of land.
“Stock eat the valuable forage plants and leave the poor ones, thus giving the latter undue advantages in the struggle for existence.”

-E.O. Wooten, 1908

Managed Grazing Systems

Trend in cattle, sheep, and weeds in the 11 Western states. The decline in sheep numbers accounts for almost 90% of the variation in weed acreage.
Major challenges

- Increased fencing requirements.
- Lack knowledge of small ruminant husbandry.
- Increased complexity because of enterprise diversity.

Advantages

- Increased carrying capacity.
- Improved botanical composition of pastures and suppression of undesirable species.
- Increased individual animal performance of one or more species in the mix.
- Reduced predation of sheep or goats grazing among or bonded to cattle.
Advantages

• Improved animal health because parasite problems are often reduced.
• Greater net return for the ranching enterprise.
• Improved cash flow marketing different products at different times of the year.
• Reduced financial risk because of increased enterprise diversity.

Important specie aspects
Dietary and Landscape Preferences

• Cattle
  – 70% grass

• Goats
  – 60% browse

• Sheep
  – 50% grass
  – 30% forbs

• Cattle
  – Lower, flatter areas
  – Degrade riparian areas

• Goats and sheep
  – Utilize steeper slopes
  – Bed on open uplands
  – Strong tendency to graze into wind
  – Overuse bed grounds or one side of pasture

Grazing ecosystems

Dietary preferences should be balanced with available forage.

Result of many ecosystems primarily grazed by cattle.
Other points to consider

• Mineral balance (Copper toxicity in sheep)
• Decrease internal parasite loads
  – Specie specific = cannot survive in GI tract of other specie
• Predator issues
  – Bond sheep/goats to cattle
  – Guardian animals (llamas, dogs, donkeys)

Other points to consider

• Biological control of Invader plant species
  – Serecia lespideza, cedar/juniper, leafy spurge
10 Key Points

- Wildlife and livestock grazing preferences influence which plants dominate grazing lands.
- Single-species grazing can adversely affect botanical composition.
- Multi-species grazing is the norm for natural ecosystems.
- Tradition and easier management have made cattle the norm on grazing lands.

10 Key Points

- The spread of invasive weeds on Western rangelands coincides with a reduction in sheep numbers.
- Multi-species grazing can increase grazing and carrying capacity.
- Two or more species grazed together can improve animal performance.
10 Key Points

• Grazing cattle with sheep or goats can reduce parasites.
• Multi-species grazing can improve cash flow and reduce financial risk.
• Those committed to improving the land may find that multi-species grazing is the best way to fulfill that commitment.

How do we meet nutritional requirements in the face of rising feed costs?
What should we expect?

• Feed = Largest expense of sheep/goat operation
• Regardless of number (25-2500 head)
  – Feed = 50 to 70 % of total cost

What should we expect?

• Nutritional requirements
  – Age
  – Gender
  – Physiological state
  – Climate
“Learn when to feed them to make a dollar, and learn when not to feed them to save a dollar.”

### Sorghum Grain and Corn

<table>
<thead>
<tr>
<th></th>
<th>DM</th>
<th>TDN</th>
<th>NE_{ma}</th>
<th>NE_{a}</th>
<th>NE_{i}</th>
<th>CP</th>
<th>CF</th>
<th>Ca</th>
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<td>82</td>
<td>2.0</td>
<td>1.3</td>
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<td>Sorghum (Milo) Flaked</td>
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<td>Corn Whole</td>
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Co-products

- Wet and Dry Distillers Grains
- Wet and Dry Distillers Grains with Solubles
- Corn Gluten Feed
- Highly concentrated feedstuff

Co-products comparison (DM)

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<thead>
<tr>
<th></th>
<th>DDG</th>
<th>WDG</th>
<th>Corn</th>
<th>SBM</th>
<th>Soy Hulls</th>
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<tr>
<td>DM, %</td>
<td>90</td>
<td>30</td>
<td>89</td>
<td>91</td>
<td>90</td>
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<tr>
<td>TDN, %</td>
<td>83</td>
<td>90</td>
<td>88</td>
<td>84</td>
<td>77</td>
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<td>CP, %</td>
<td>30</td>
<td>33</td>
<td>9.8</td>
<td>49</td>
<td>13</td>
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<td>Fat, %</td>
<td>10.6</td>
<td>4.3</td>
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<td>Calcium, %</td>
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<td>Phosphorus, %</td>
<td>0.60</td>
<td>0.65</td>
<td>0.31</td>
<td>0.71</td>
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<td>Sulfur, %</td>
<td>0.48-1.3</td>
<td>0.58-1.5</td>
<td>0.14</td>
<td>0.45</td>
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<td>Copper (ppm)</td>
<td>6</td>
<td>2.5</td>
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<td>17.8</td>
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NRC, Schauer, Held
Co-products

• Storage

• Feed Safety
  – Challenges due to phosphorus, sulfur, and fat levels
  – Maintaining appropriate Ca:P ratio
  – Research is being reported on feeding increasing levels of DDG in lamb rations

Co-products

• Summary
  – They can be excellent protein supplements or in creep feed
  – Balance for Ca:P and Sulfur content
  – May be a good energy source
  – Major benefit is when they are cheaper than conventional feeds
FAMACHA and Parasitism

• Hot topic
• 4 trainings – over 175 attendees
• 1 training – December 8th – Johnson County Fairgrounds

Kansas Youth Projects

• 2009 County Fairs – 67 Counties Reported
• 841 Market Goats
• 420 Breeding Goats (64 Dairy goats)
• 893 Market Lambs
• 247 Breeding Ewes
New K-State Sheep & Meat Goat Center Update

- Estimated ground breaking = March 2011
- Estimated completion = December 2011
- New Unit Manager hired – Kalen Poe – August 2010