## **Nutrition Programs for Southeastern Stocker Cattle**

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## **Times Have Really Changed Fast!**

Feedlot cost of gains are pushing \$1/lb. Historical price slides between light and heavy cattle are disappearing. Cattle in Southern VA auctions are bringing
 about the same for most weight classes. The stocker sector's biggest threat is the
 probable reduction in cow numbers. At one time 0.35/lb gain feed cost was the goal. Today, \$0.65/lb gain looks pretty good.

**Stocker Programs Across the Southeastern US Vary Widely** 

#### Summer grazing systems

- Mountains
- Warm-season grasses
- Winter grazing systems
  - Small grains/ryegrass
  - Stockpiled fescue

Ory-lot/pasture feeding programs

## Getting Cattle Started on Feed is Key in All Systems

- Source of cattle? Know what you have.
- House them in a good environment
- Get them eating soon after arrival
  - Understand what they know
  - Baby them!
- Use a high quality, fresh starter feed
- Use a smooth transition to the growing program

## House in a good environment

Clean lot
Shade
Dripping water
Dromud
No mud
Avoid
turning in
pasture



## **Composition of starter feeds**

- Need to carry trace minerals and vitamins
- Most practical way for home mixed is to include a good quality mineral at about 2% of starter concentrate
- Large producers should use a special starter mineral

## **Composition of starter feeds**

Avoid unpalatable ingredients ♦ Blood meal, fish meal, RPB (litter), silage Utilize local feeds as much as possible Soyhulls and corn gluten feed are good ingredients in our area • Use a wet ingredient if possible (molasses, BCS, yeast, water) • Use a fat source if available and convenient. Waste fryer fat, peanuts, cottonseed examples

## **Feed additives**

AS-700 (Aureomycin + sulfa) Deccox (decoquinate) Ionophores **Rumensin Bovatec** ♦ Yeast cultures Seaweed extract Others?

## **Practical starting feeds**

	% of feed, as mixed			
Ingredient	Complete	Concentrate		
<b>Cottonseed hulls</b>	20	0		
Soybean meal	12.5	15		
Soybean hulls	20	25		
Cracked corn	20	25		
Corn gluten feed	20	25		
Limestone	1	1		
Mineral mix	1.5	2		
<b>Molasses/other</b>	4	4		
Rumensin	20 g/ton	25 g/ton		

#### **Fescue-based systems**

- Tall fescue is widely distributed across the mid and eastern US making up over 14 million ha of pasture and hayland
- Much of the tall fescue is endophyte infected KY31
- Tall fescue responds to late summer fertilization better than other grasses giving significant autumn growth





## Nitrogen Use Efficiency for Fall Fertilized Tall Fescue

<b><u>Reference</u></b>	<b>Location</b>	<u>lbDM/lbN</u>
Taylor and Templeton, 1976	KY	<b>18-20</b>
Balasko, 1977	WV	24-43
Archer and Decker, 1977	MD	8-14
Freeberg and Loveland, 1978	TN	10
Rayburn et al., 1979	VA	6-13
Collins and Balasko, 1981	WV	<b>18-27</b>
Gerrish et al., 1994	MO	6-25

At \$600/ton of ammonium nitrate and a N efficiency of 15, cost of the standing forage is \$118/ton

## Influence of supplementing heifers grazing stockpiled fescue with whole cottonseed

#### Weight Change in Heifers Grazing Stockpiled Fescue With or Without 2 lb/day Cottonseed



#### ADG Response in Heifers on Stockpiled Fescue to 2 lb Whole Cottonseed Supplementation







We Conducted a Study for 5 Grazing Seasons with Endophyte-free, Toxic Infected, or MaxQ Fescue

- Fescue was hayed and then fertilized about Sept. 1
- Grazing began December 1 and ended in February
- Strip-grazing management was used to minimize forage waste
- For 3 years we also grazed during the spring/early summer period

Table 1. Percent of tillers infected with endophyte and percent of infected tillers that produced ergot alkaloids in E+, E- and EN stands.

	_	Ti			
Item		E+	E-	EN	SE
Infected tille %	ers,				
	yr 1	85.8°	<b>4.6</b> <sup>d</sup>	91.3 <sup>b</sup>	2.38
	yr 5	<b>97.5</b> ª	5.4 <sup>d</sup>	87.1 <sup>bc</sup>	
Ergot alkalo producing tillers,%	oid				
	yr 1	100 <sup>a</sup>	<b>100</b> ª	<b>3.2</b> °	1.35
	yr 5	<b>94.0</b> <sup>b</sup>	100 <sup>a</sup>	0.5 <sup>c</sup>	

a-d means with differing superscripts differ

# Ergot alkaloid concentration at beginning and end of grazing



#### Average daily gain of growing cattle grazing E+, E- and EN Fescue.

Item	E+	E-	EN	SE
Fall accumulation, lb/ac	<b>3501</b> ª	<b>3087</b> <sup>b</sup>	<b>3370</b> ª	84
Winter Grazing days/ac	<b>204</b> ª	<b>160</b> <sup>a</sup>	176 <sup>a</sup>	9
Winter ADG, (Ib/d)	1.14	1.30	1.22	0.03
Spring ADG, (lb/d) <sup>1</sup>	<b>0.54</b> ª	1.66 <sup>b</sup>	1.56 <sup>b</sup>	0.03

<sup>a,b</sup> Differ at *P* < 0.05

## ADG (lb/day) of Stockers on Stockpiled Fescue Differing in Endophyte Status









about \$0.65/lb on all diets

## **Common Blended Commodity Feeds<sup>1</sup>**

% of feed as mixed

Ingredient	Complete	Concentrate		
<b>Cottonseed hulls</b>	25	0		
Soybean hulls	30	46		
Corn gluten feed	30	46		
Limestone	1	1		
Mineral mix	1.5	2.5		
Molasses/other	4	4		
Rumensin	20 g/ton	<b>40 g/ton</b>		

<sup>1</sup>This feed is designed to be fed at 1 to 1.5% of body weight on hay or pasture



## Performance of Stocker Cattle Self-Fed on Byproduct Commodities

Item	Hay	Soybean Hulls	Corn Gluten Feed	Wheat Midds
Initial weight, lb	504	508	504	513
ADG, lb/d	<b>1.39</b> a	<b>3.30</b> <sup>b</sup>	<b>2.93</b> <sup>b</sup>	<b>2.22</b> °
Feed:gain	<b>9.3</b> a	<b>7.0</b> <sup>b</sup>	<b>6.9</b> <sup>b</sup>	<b>7.6</b> <sup>a,b</sup>
Hay intake, lb/d	<b>12.7</b> <sup>a</sup>	<b>4.07</b> <sup>b</sup>	6.67 <sup>c</sup>	<b>4.31</b> <sup>b</sup>
Conc intake, lb/d	<b>0.0</b> a	<b>19.1</b> <sup>b</sup>	<b>13.4</b> <sup>c</sup>	<b>12.4</b> <sup>c</sup>

<sup>a,b,c</sup> means with different superscripts in a row differ, P<0.05.

## **Intake Pattern for Self-fed Byproducts**





## Performance of Stocker Cattle Self-Fed on Byproduct Commodities

Item	Hay	Pelleted Soybean Hulls	Loose Soybean Hulls	Corn Gluten Feed
Initial weight, lb	513	515	516	514
ADG, lb/d	<b>2.10</b> <sup>a</sup>	<b>3.42</b> <sup>b</sup>	<b>3.50</b> <sup>b</sup>	<b>2.64</b> <sup>c</sup>
Feed:gain	7.3	6.1	6.4	6.6
Hay intake, lb/d	<b>15.1</b> <sup>a</sup>	7.05 <sup>b</sup>	<b>5.65</b> <sup>b</sup>	<b>11.2</b> c
Conc intake, lb/d	<b>0.0</b> <sup>a</sup>	<b>13.8</b> <sup>b</sup>	<b>16.7</b> <sup>c</sup>	6.05 c

<sup>a,b,c</sup> means with different superscripts in a row differ, P<0.05.

## Intake Pattern for Self-fed Byproducts

**Daily Intake of Byproducts** 



## **Cautions about self-feeding**

Bloat and founder are always possible
Use Rumensin in feeds or put in a mineral
Calves may over consume
Maximize quality of pasture or hay
Intake may be inconsistent with corn gluten feed

## Frequency of Feeding a Byproduct Blend

- Labor is becoming a bigger issue for all producers.
- Studies with protein supplementation show that 3 times a week works as well as daily supplementation.
- We were taught that energy supplements have to be fed daily.
- Can byproduct blended feeds be fed less frequently than daily?

## Performance of calves (initially 602 lbs) fed hay only, or supplemented with 6 lb/day or 14 lbs 3X/week of 50:50 blend for 84 days (2 yrs)

Item	Hay	<b>7X</b>	<b>3X</b>
ADG, lb/d <sup>a</sup>	0.33	1.52	1.45
Feed:gain <sup>a,b</sup>	16.6	5.9	5.3
Hay intake, lb/d <sup>a,c</sup>	14.2	13.4	11.1

<sup>a</sup> Hay differs from 7X and 3X P<0.05.</li>
<sup>b</sup> 7X and 3X differ, P<0.05</li>
<sup>c</sup> 7X and 3X differ, P<0.07</li>

## Summary

There are many options for stocker programs
 in the Southeastern US

- Due to high feedlot cost of gain, this system is still viable despite increased feed cost
- Getting calves started is a key to success
- Find a growing program that fits your facilities, feed resources, and management

