# Finding Pasture in a Drought

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#### **Use your Imagination!**

- Look for opportunities to inexpensively graze/feed livestock
  - Corn stalks and other crop residues
  - Winter annual forages on crop fields
  - Rental land a growth opportunity near cities
- Utilize the pasture you have more efficiently

#### **Corn Stalks for Pasture**



- 1/2 of the dry matter in a mature corn plant
  - 120 bu / acre = 6700 lb of residue / acre
- Conversion of corn crop residues to hay savings
  - About 15% of the residue is available for grazing
  - 6,700 of residue / acre x 15% = 1/2 ton hay saved/ac = 33 cowdays/ac
- Watch nitrates

#### Hay Fed to Dry, Pregnant Beef Cows

Year	Corn Stalks	Dry Lot
1998-1999	1344	3183
1999-2000	306	3217
Average	825	3200

ISU data. Study conducted over 126 days. Corn stalks stocked at 0.6 acres per cow per mo.

#### **Corn Stalk Forage Quality**



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Sep

Oct

Nov

Dec

Jan

#### **Protein Supplementation**



Any source of degradable protein is acceptable for cattle grazing corn residue

 Choice of protein supplement should be based on price and availability

### **Grazing Management**



- 20 to 60 cow days per acre depending on year
- Strip grazing nearly doubles utilization
- Fence to be moved every 3 or 4 days
- Grass waterways increase available forage

# **Recommendations for Grazing Corn Stalks**

- Can provide 20 to 60 cow days per acre
  - Typically, about 15% of the total available forage is consumed
  - More grazing days possible from high yielding corn and from improperly adjusted combines
- Forage quality low for most livestock and declines over winter
  - 5% crude protein and 50% or higher ADF
- Graze as quickly as possible in autumn
- Supplementation necessary, especially late in the year

#### **Small Grain Pasture**



- Wheat, oats and rye most common
- Vegetative growth from planting until mid-March
- If planted early, grazing can begin in November
- Can work well in combination with some warm-season grasses

# Rye produces more winter pasture than wheat



#### Wheat & rye are great quality in autumn and winter



#### **Animal Performance on Wheat and Rye Pasture**

		Total
Туре	ADG	Gain
	lb/d	lb/acre
Wheat	1.8	180
Rye	1.6	336

Horn et al., 1981

# When Should Grazing Begin?





 Grazing should start when forage reaches 8 inches

# When Should Grazing Stop?



 Livestock should be rotated when forage ht. is less than 3 inches

 Winter-kill increases when over grazed

Livestock must be removed before jointing

# if grain is desired

# Small Grain Recommendations

- Plant in early-September at 100 to 130 lb./acre for dedicated plantings
- 50 to 75 lb./acre N at seeding for dedicated plantings – 50 lb. more in spring if needed
- If planting into bermudagrass or crabgrass, plant in mid-Sept and wait to apply starter N until 1 October
- Do not graze to a height of less than 3 inches
- Graze rye heavily in the spring to maintain vegetative growth

#### **Strip Grazing**



**Perimeter Fence** 







#### **Stockpile Tall Fescue POST-grazed Appearance**





#### Pasture Utilization and Cow Average Daily Gain



Summarized from Curtis et al., 2008, J. Anim. Sci. 86:780-789

#### **Conception Rate of Cows**

Treatment	Conception Rate	
	%	
2.25	93	
3.00	91	
3.75	94	
4.50	92	
Нау	92	

Summarized from Curtis et al., 2008, J. Anim. Sci. 86:780-789

#### Cow Condition the Following July

Treatment	Voor 1	Voor 2
	Tear L	
	Body Condition Score	
2.25	6.6	7.3
3.00	6.7	7.1
3.75	6.7	6.9
4.50	6.6	7.3
Hay	7.0	7.0
LSD (0.05)	NS	NS

## Calf Average Daily Gain

Treatment	ADG	Gain per acre
	lb/day	lb/a
2.25	<b>1.4</b> <sup>b</sup>	<b>138</b> a
3.00	<b>1.6</b> <sup>a</sup>	<b>118</b> <sup>b</sup>
3.75	<b>1.6</b> <sup>a</sup>	96 <sup>c</sup>
4.50	<b>1.8</b> <sup>a</sup>	<b>87</b> <sup>c</sup>
Hay	<b>1.7</b> <sup>a</sup>	_
SE	0.1	8

#### Recommendations

- Clip or graze pastures to a 3 inch ht. in August
- Apply 40 to 80 lb. of N fertilizer per acre in mid-Aug
- Manage cow weight...no point in having fat cows going into spring
- Toxicity declines more rapidly than does forage yield or quality
- Endophyte-free or novel endophyte best for stocker or dairy cows
- Rotational or strip grazing nearly doubles utilization