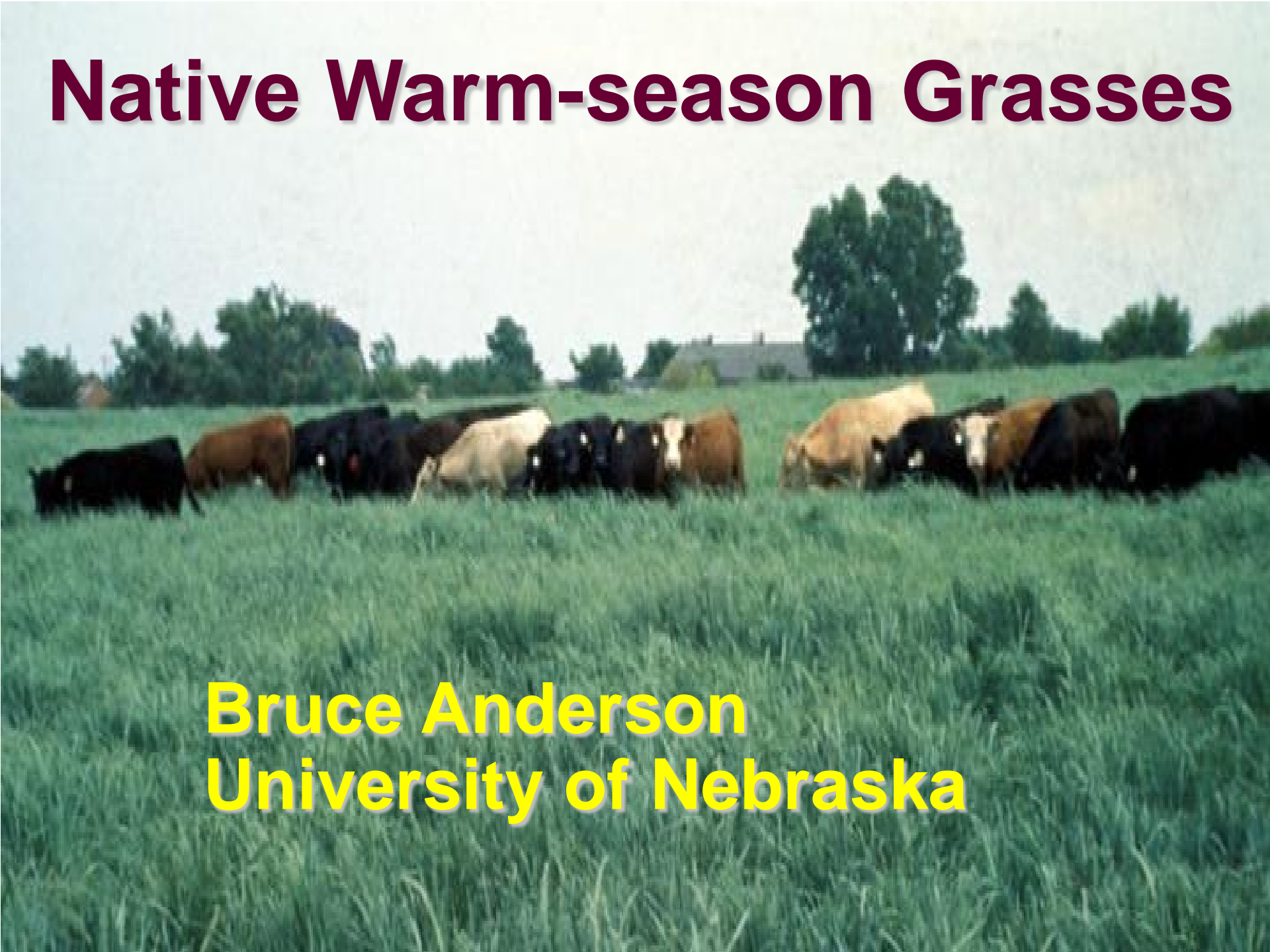


# Native Warm-season Grasses

A photograph of a herd of cattle grazing in a lush green field. The cattle are of various colors, including black, brown, and white. In the background, there are trees and a house. The sky is overcast.

**Bruce Anderson**  
**University of Nebraska**



# Big bluestem

- Establishes slow
- Very palatable
- Good yield and quality
- Competitive if grazed correctly



# Indiangrass

- Establishes slow
- Good yield, quality, and palatability
- Late maturing
- Don't overgraze



# Switchgrass

- Establishes slow
- Early heading
- Big palatability change
- Graze early



# Seasonal steer gains

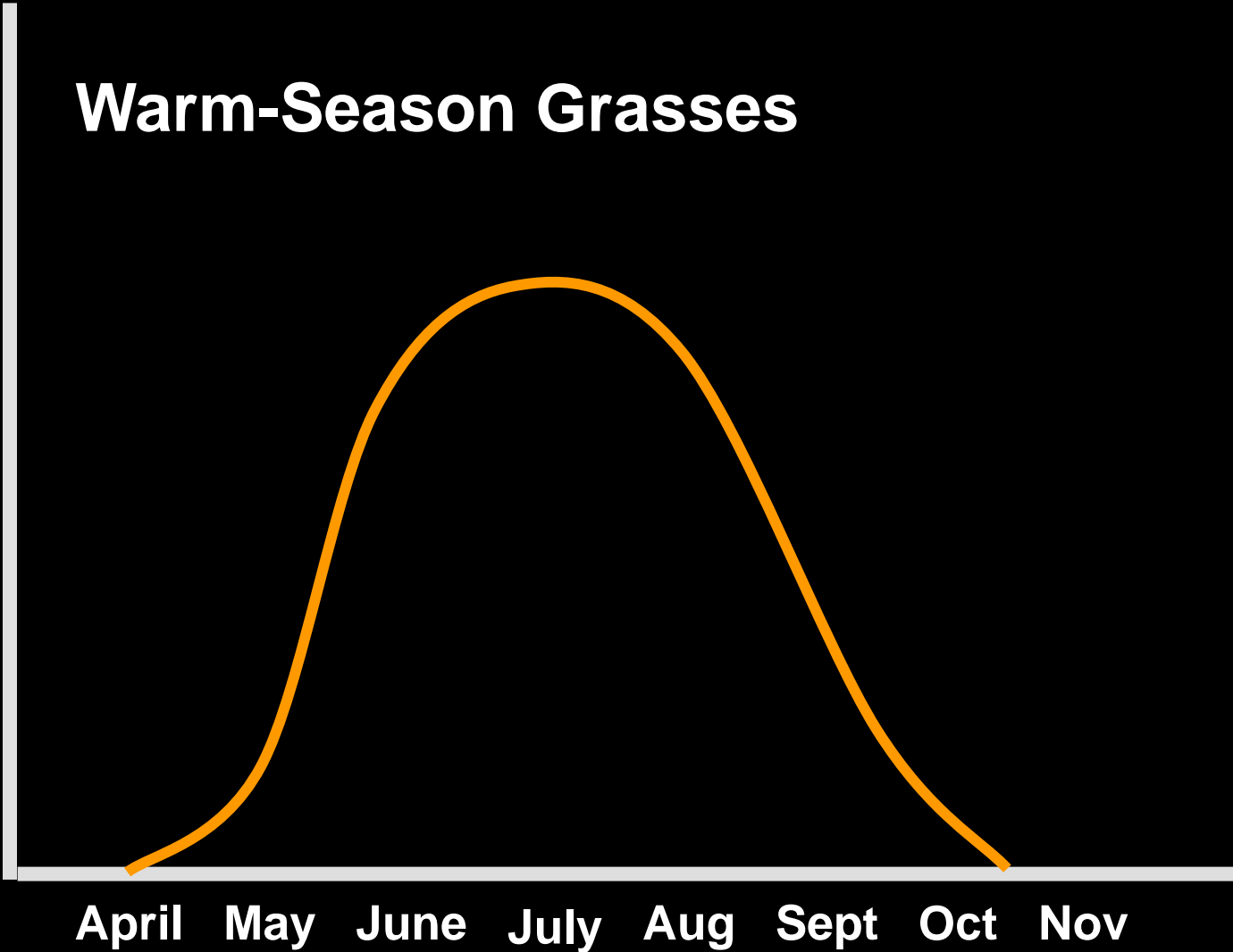
---

Grass	Period	ADG (lbs)
Cool-season	Spring	1.3
Cool-season	Summer	0.4
Cool-season	Fall	1.8
	<b>TOTAL</b>	<b>1.0</b>
Cool-season	Spring	1.3
Warm-season	Summer	1.3
Cool-season	Fall	1.7
	<b>TOTAL</b>	<b>1.4</b>

---

# Forage Supply

## Warm-Season Grasses

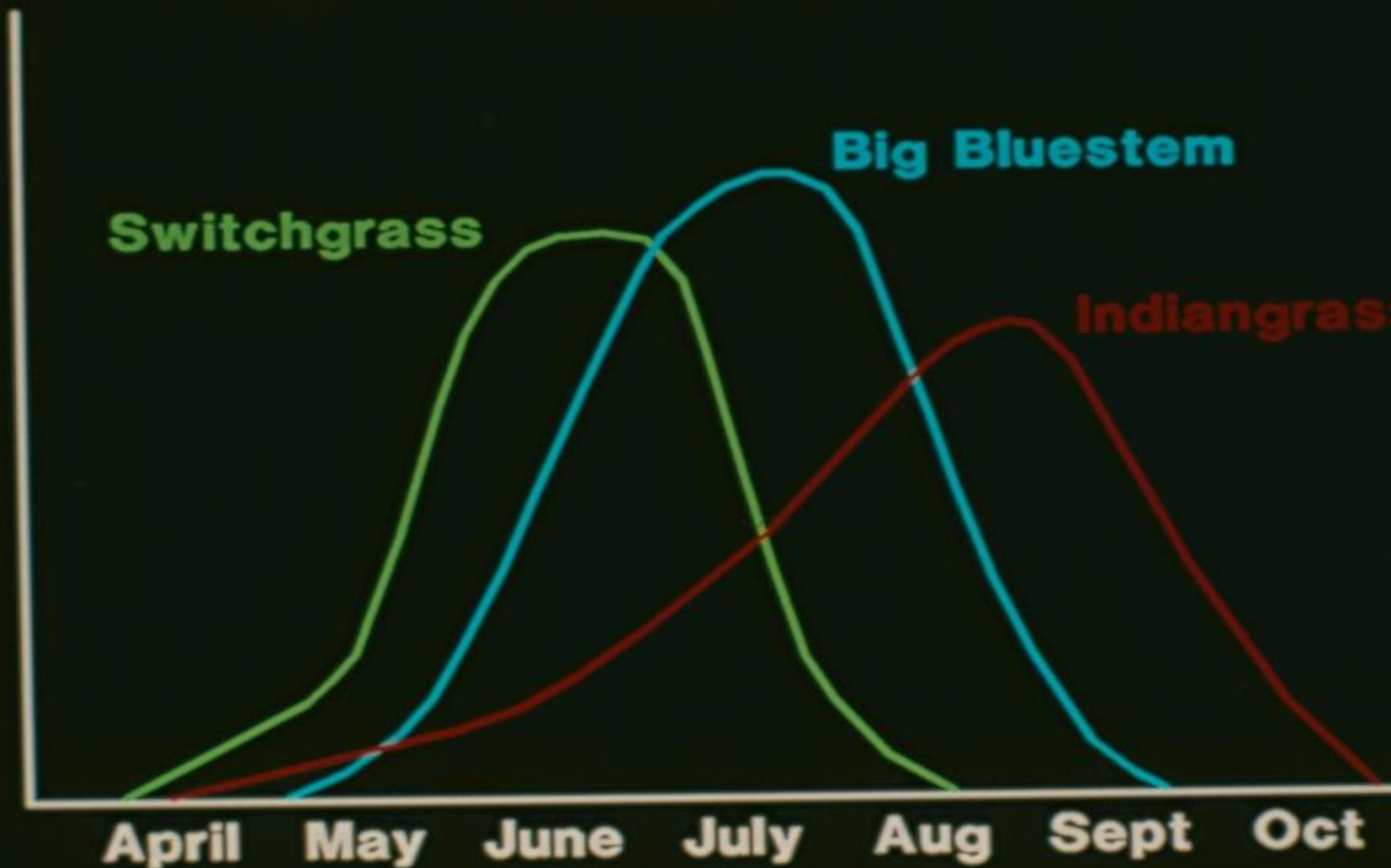


# Characteristics

- **deeply rooted**
- **resource efficient**
- **invasion prone**
- **poor spreaders**
- **management sensitive**



# Forage Supply



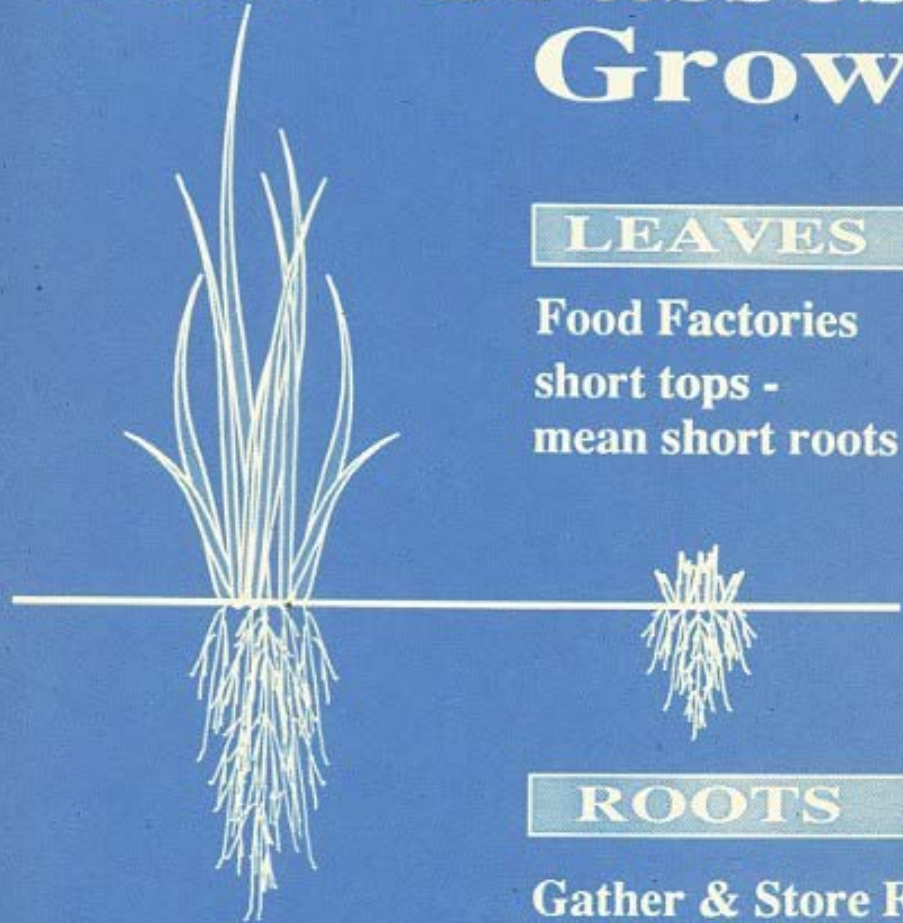
HOW ?

# **How Grasses Grow**

**The basis for grazing  
management**

**GRAZING**

# How Grasses Grow



## LEAVES

Food Factories  
short tops -  
mean short roots

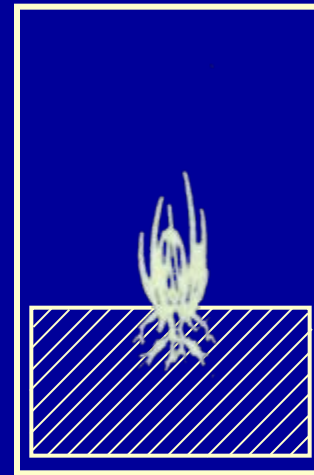
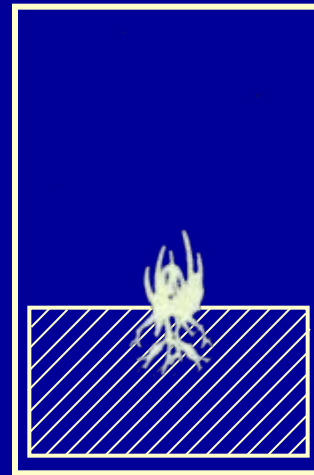
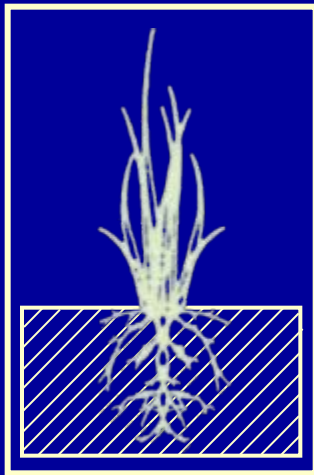
## ROOTS

Gather & Store Food  
short roots -  
mean short tops

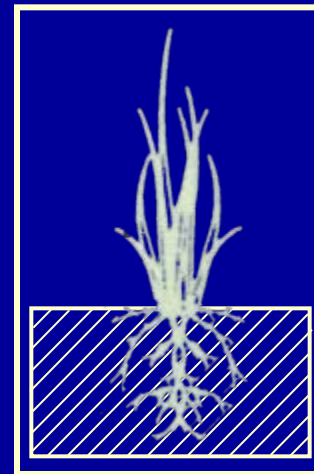
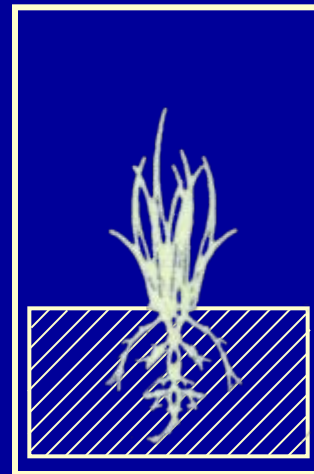
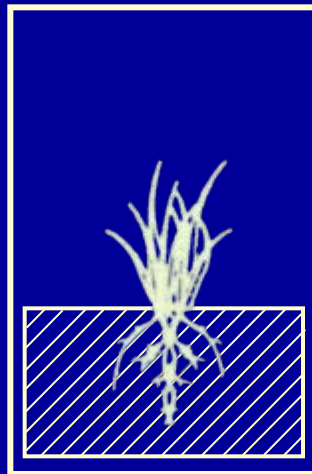
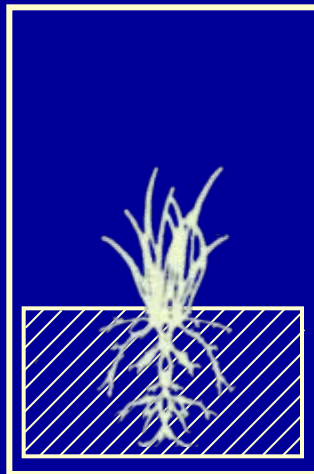
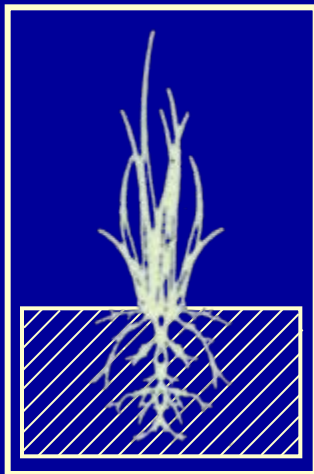
Overgrazing Destroys both leaves and roots

**MANAGEMENT**

**A**



**B**



**PLANTS  
AT START**

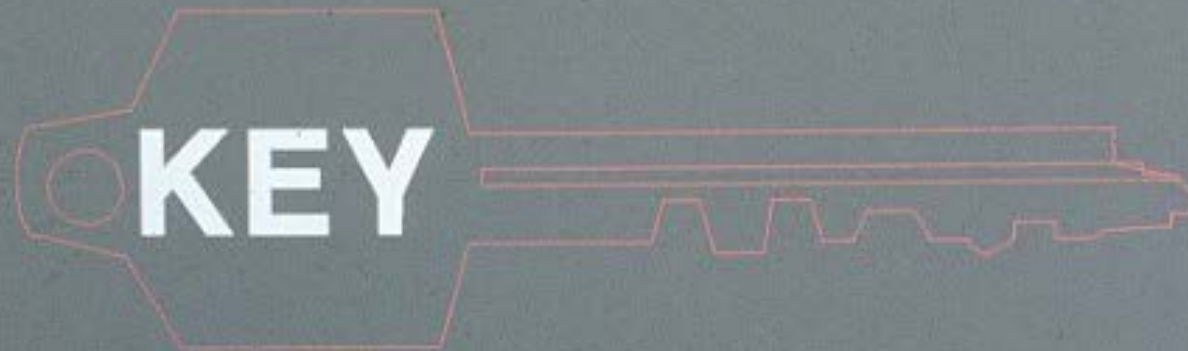
**EXTENT OF  
GRAZING**

**5 DAYS  
RECOVERY**

**10 DAYS  
RECOVERY**

**15 DAYS  
RECOVERY**

**TIME CONTROL IS THE**



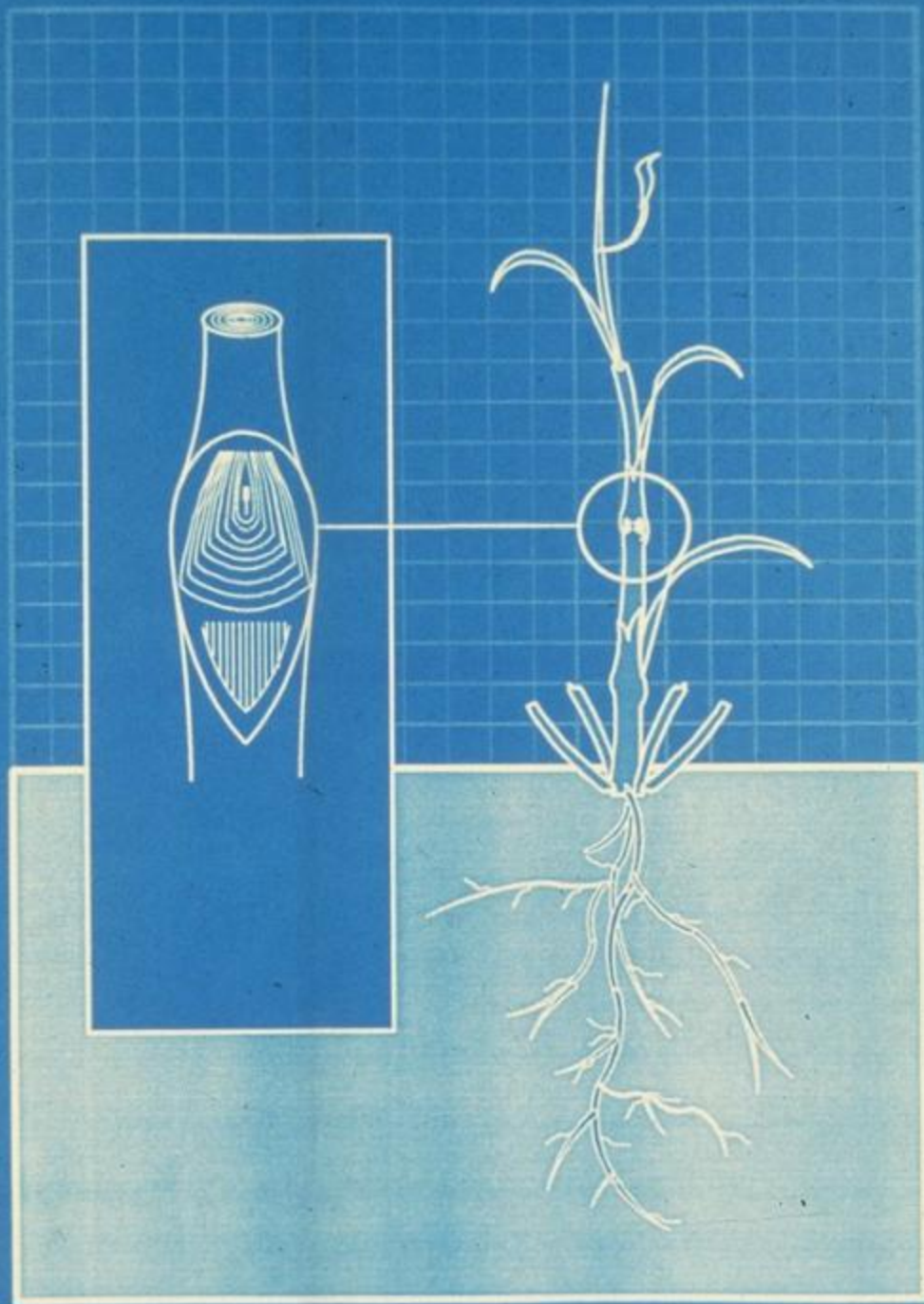
**TO EFFECTIVE PASTURE  
MANAGEMENT**

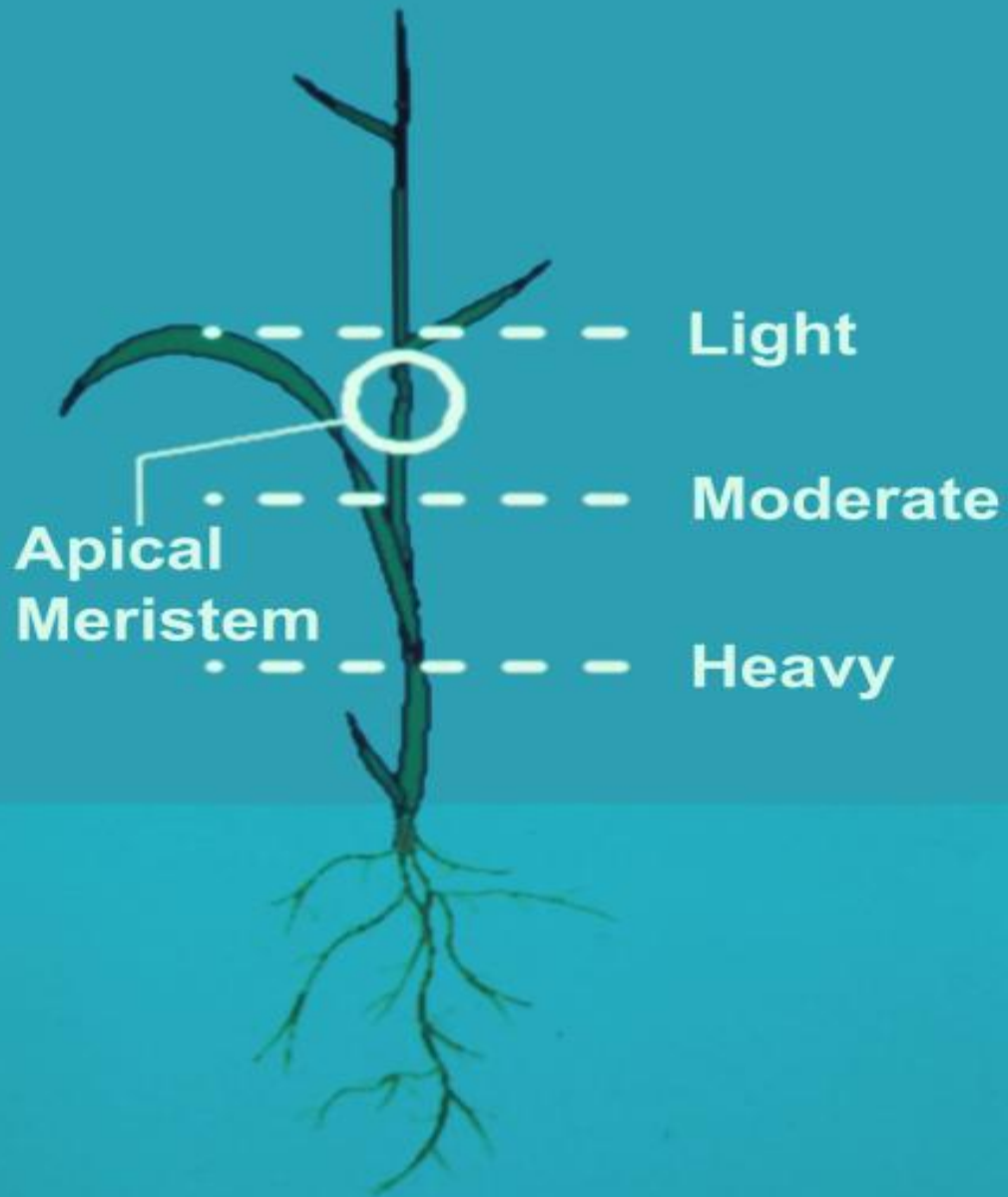
**Leaves must first  
feed the plant  
before the plant  
feeds the animal**

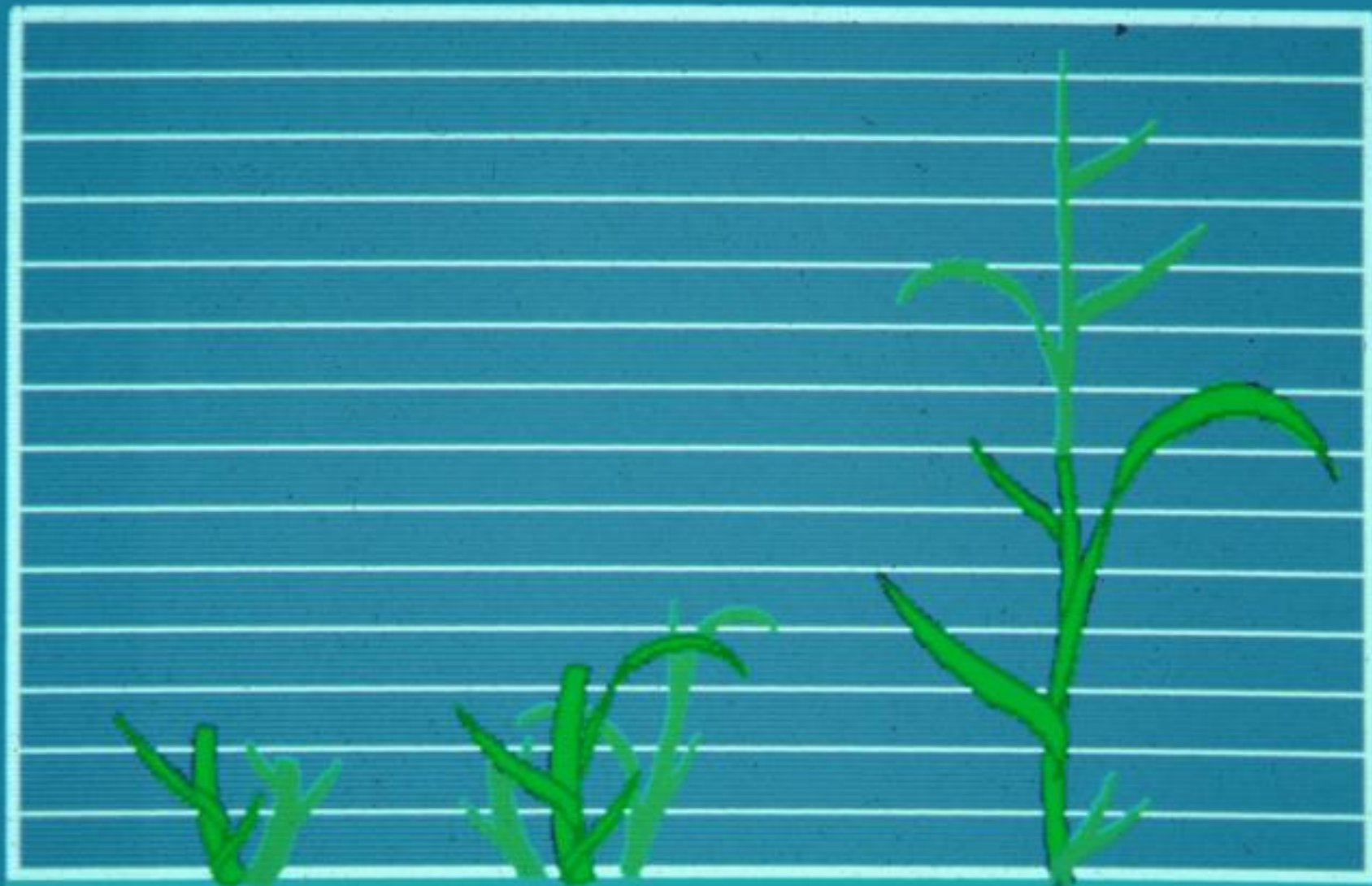
# **Warm-season vs Cool-season**

- **Apical meristem**
- **Sensitivity to severe grazing**
- **Length of recovery period**









**Heavy**

**Moderate**

**Light**



**Encourage Leaves**  
**and**  
**Discourage Stems**

# Warm-season vs Cool-season

- Apical meristem
- Sensitivity to severe grazing
- Length of recovery period

Carbohydrate reserves in switchgrass roots following harvests on June 19 (meristem remained) on June 26 (meristem removed).



# 'Taller stubble thickens stands'

Ground cover of big bluestem following two years of clipping to two stubble heights

Spring sample date	Stubble height	
	4 inches	8 inches
	----- % ground cover -----	
1995	23	23
1996	27	49
1997	22	61







# Pasture types

- **Pure switchgrass**
- **Mixed stands with switchgrass**
- **Mixed stands without switchgrass**

**Switchgrass must  
be grazed before  
seedheads  
develop!!**



# Switchgrass options

- **Continuously stock**  
**10 inches tall**  
**Grazing = growth**  
**6 to 8 weeks**  
**Recover 35+ days**







# Switchgrass options

- **Rotationally stock**
  - 12 to 15 inches tall**
  - 2 to 3 weeks**
  - 4 inches stubble**
  - Recover 40+ days**

**Lengthy  
Rest  
Periods**

# Switchgrass options

- **Partial early graze**
  - Before knee high**
  - Remove meristem**
  - Recover 35+ days**

# **Mixed stands without switchgrass**

- **Take half – leave half**

**Graze < 2 or 3 weeks**

**Recover > 30 to 40 days**



# **Mixed stands without switchgrass**

- **Rapid rotation – partial graze  
gradually increase severity  
short stubble → long rest**

# **Mixed stands with switchgrass**

- **Selective grazing**
- **If only one pasture, manage like pure switchgrass**





# Mixed stands with switchgrass

- Top graze rapidly

SW joints – graze short

SW refused – manage based  
on other

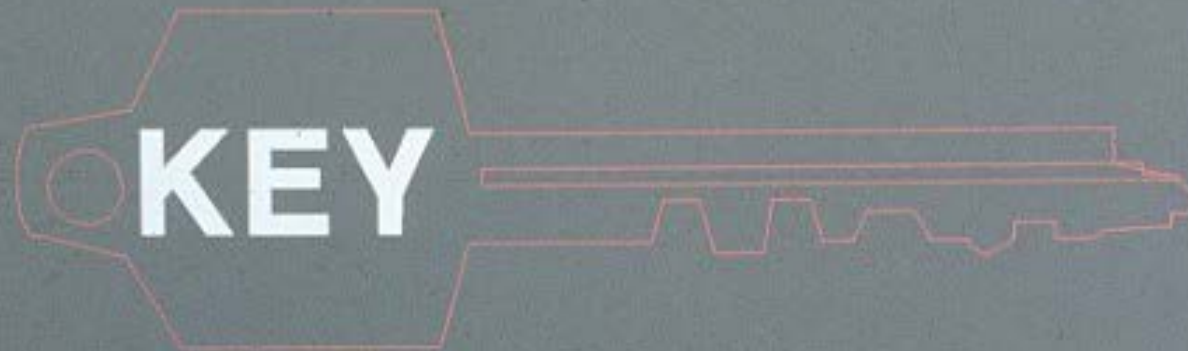
grasses



A landscape photograph showing a vast green field in the foreground, a white fence line, and rolling hills in the background under a dark, clear sky. The hills are illuminated from the side, creating a golden glow. The word "CONCLUSIONS" is overlaid in white, bold, serif font in the lower center of the image.

CONCLUSIONS

**TIME CONTROL IS THE**



**TO EFFECTIVE PASTURE  
MANAGEMENT**

# **Warm-season vs Cool-season**

- **Apical meristem**
- **Sensitivity to severe grazing**
- **Length of recovery period**

**Lengthy  
Rest  
Periods**

The relatively early  
heading of switchgrass  
dominates grazing  
management decisions

