Harvest Date Effects on the Yield and Nutritive Value of Corn Utilized for Deferred Grazing

C.D. Teutsch, J.H. Fike, and W.M. Tilson
Virginia Tech

INTRODUCTION
- Winter feed makes up >50% of cow-calf budgets in S.E. U.S.
- Stockpiling tall fescue can reduce winter feed cost by 1/3
- Standing corn could be grazed after stockpiled grass has run out

OBJECTIVE
To evaluate the effect of harvest date on yield and nutritive value of grazing corn, conventional corn, and sorghum-sudangrass

MATERIALS AND METHODS
- Study conducted near Blackstone, VA
- Amazing Graze 112, Pioneer 31R88, and NC+800HS sorghum-sudangrass established in late April 2001-04
- Received 112 kg N ha⁻¹ preplant and 90 kg ha⁻¹ in June
- Harvested monthly from mid-September to mid-March (Fig. 1)
- Residue collected from soil surface
- Three plants separated into ear, husk, leaf, and stalk (Fig. 2)

ECONOMICS
- Grazing d ha⁻¹ corn = 675 d ha⁻¹
- Cost per grazing d corn = $0.68 d⁻¹
- Feeding d Mg⁻¹ hay = 51 d Mg⁻¹ hay
- Cost at which grazing corn is equal to buying hay = $35 Mg⁻¹ hay

SUMMARY
- Sorghum-sudan yielded more, but dry matter was dominated by stalk
- Delaying harvest resulted in leaf loss causing lower yields at final harvest
- Sorghum-sudan was a sterile hybrid and did not produce significant seed
- As harvest was delayed, fiber increased and digestibility decreased
- Standing corn contained sufficient energy for all beef cattle classes
- Standing sorghum-sudan contained sufficient energy for dry cows only
- Whole plant CP for both species would be deficient for all beef cattle
- Information is needed on relative intake of various plant parts to more accurately determine nutritive value
- If hay of equal quality cost >$35 Mg⁻¹ then corn could be profitable for extending grazing in late winter