Forage Quality of Grain Sorghum Crop Residues. (C03-vietor115946-Oral)

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Abstract:

The stay-green (SG) trait of sorghum could contribute to improved forage quality of crop residues after grain harvest. The objective was to compare neutral- (NDF) and acid-detergent fiber (ADF) concentrations, in situ dry matter digestibility (ISDMD), and HCN potential of leaves and stems among diverse sorghum cultivars under field conditions. SG, brown-midrib (bmr), low-HCN, and senescent lines and hybrids were compared during two years in central and southern Texas. NDF of leaves and stems of a SG line (BTx643) was less than six other lines and hybrids in 2000. Except for a bmr line and two SG hybrids, NDF of two SG lines (BTx643 and BHF8) were less than other lines and hybrids in 2001. Similarly, dry weight losses of SG lines during washing of samples in incubation bags prior to in situ digestion of leaves or stems were relatively large during both years. Losses during washing of in situ samples were inversely correlated with NDF of cultivars for each year and location. After washing of samples, 48-h ISDMD was less for SG than the bmr line and similar to other lines and hybrids. Greater forage quality of SG lines was compromised by large HCN potential of axillary branches.

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