Effect of Nitrogen Source and Rate on the Yield and Nutritive Value of Crabgrass. (C06-teutsch083729-Oral)

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Abstract:

Crabgrass (Digitaria ciliaris (Retz.) Koel), commonly considered a weed, has significant forage potential. A study evaluating six nitrogen (N) rates ranging from 0 to 336 kg/ha applied as either ammonium nitrate (AN) or broiler litter (BL) was conducted near Blackstone, VA. The experimental design was a randomized complete block with a factorial treatment arrangement and four replications. Total DM yields were 3837, 5240, 6397, 7395, 8073, 8391, and 8926 kg/ha for the 0, 56, 112, 168, 224, 280, and 336 kg N/ha rates, respectively. Yield increased as N rate increased ($P<0.01$). Greater yields were observed with AN compared to BL for harvest 1 only ($P<0.01$). Neutral detergent fiber ranged from 473 to 543 g/kg and 587 to 619 g/kg for harvest 1 and 2, respectively. Acid detergent fiber ranged from 251 to 324 g/kg for harvest 1 and 375 to 393 g/kg for harvest 2. Crude protein ranged from 107 to 141 g/kg for harvest 1 and 60 to 79 g/kg for harvest 2 and increased as N rate increased ($P=0.06$ and $P<0.01$). These data indicate that crabgrass is responsive to N fertilization and could supply high quality summer forage for livestock in the southeastern U.S.

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