CRABGRASS CULTIVAR RESPOINSE TO NITROGEN FERTILIZER ADDITIVES

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In the southern USA, crabgrass (*Digitaria sanguinalis*) is a valuable summer annual forage that can be used for grazing or hay production, has high nutritive value, and is adapted to a variety of soil and climatic conditions. The objective of this study was to evaluate cultivar response to nitrogen fertilizer additives. The study was conducted at Mississippi State University on a Marietta Fine Sandy loam soil. Five crabgrass cultivars ('Dal's Big River' (DBR), 'NFC01-1' (NFC), 'Quick-N-Big' (QNB), 'Quick-N-Big Spreader' (QNBS), and 'Red River' (RR) were drilled in a prepared seed bed at 8 lb PLS/ac. Cultivars received four nitrogen combinations: control, urea ammonium nitrate (UAN, 32-0-0), UAN plus N-Veil® (26.7% NBTP), and UAN plus Preserve N™ (18-0-0). Nitrogen was applied at rate of 50 lb N/ac. UAN was treated with N-Veil® and Preserve N™ at a rate of 2.0 qt/ton and applied using a sprayer when plants reached a 3-in height to supply 25 gal/ac. Lime, P, and K were applied based on soil test recommendations. Plots were harvested once in 2018 when plants reached 12-in height. Subsamples were dried and analyzed for nutritive value using NIRS. Biomass production was affected by cultivar (P = 0.0201) where QNBS (highest yielding) had 24% greater biomass production than NFC (lowest yielding). There was no N treatment effect on biomass production, but treatments containing fertilizer additives were lower yielding than the control. No significant differences were noted for cultivar and treatment effects on CP and ADF. Species were significantly different in NDF concentration (P = 0.0074).

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