Fresh versus Field-Cured Grass Quality and Nitrate Concentration at Different Nitrogen Rates. (C06-singer135101-Poster)

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Abstract:

Determining the extent of change in fresh versus field-cured grass hay quality and NO-3-N concentrations under rain-free conditions provides valuable information to hay producers. The objectives of this research were to evaluate the effect of fresh vs. field-cured forage on crude protein (CP), neutral detergent fiber (NDF), total digestible nutrients (TDN), and NO-3-N concentrations of orchardgrass (Dactylis glomerata L.), smooth bromegrass (Bromus inermis Leyss.), and timothy (Phleum pratense L.), and to determine if interactions with N rate exist. At the low N rate in 1999 and 2000, orchardgrass CP in fresh and field-cured forage, NDF , and TDN concentrations were different. Tissue NO-3-N concentration was greater in field-cured orchardgrass at all N rates and at the low N rate in smooth bromegrass in 1999. Interactions between N rate and fresh vs. field-cured smooth bromegrass were detected for all variables in 1999. Our results demonstrate that changes in grass quality and tissue NO-3-N concentrations occur under rain-free field curing conditions. Consequently, forage scientists conducting research on grass hay quality indices should sample subsequent to field-curing to provide accurate results.

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