MINNESOTA–Assessing Forage Quality of Modern Alfalfa Varieties

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A new generation of alfalfa varieties with greatly improved forage quality is available for farmers. These new varieties developed through conventional breeding and through transgenic transformation (genetic engineering) have potential to provide increased profit and increase management flexibility for farmers. However, there is lack of information for farmers on direct comparison of these alfalfa varieties. We conducted research to measure forage quality and yield of a diversity of new alfalfa varieties over a range of harvest maturities at St. Paul, MN, and Ithaca, NY. We compared about six alfalfa varieties each in three categories: varieties marketed as reduced lignin, varieties marketed as high quality (HiQual) without the reduced lignin trait, and a "control" group of varieties not marketed as high quality. All varieties had similar forage yield, neutral detergent fiber (NDF), and crude protein concentrations. Forage quality of all entries declined with maturity although rate of decline varied with location and spring and summer harvests. When averaged for all varieties within the three categories, reduced lignin alfalfas had consistently lower lignin and higher NDF digestibility than the control and HiQual marketed varieties. Analysis is underway to determine the variation of quality among varieties within each group.

Alfalfa
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