

Forage Research Update

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QUEBEC - Researchers Recommend Timothy for Dairy Cows Prior to Calving

Adapted from G.F. Tremblay, H. Brassard, G. Belanger, P. Seguin, R. Drapeau, A. Bregard, R. Michaud, and G. Allard 2006. Dietary cation anion difference in five cool-season grasses. Agron. J. 98:339-348.

Among five cool-season grass species tested in Quebec, Canada, timothy had the lowest dietary cation anion difference (DCAD) in both spring and summer, and is thus the preferred grass forage to feed to dairy cows in the weeks preceding calving. Grasses tested for two years in addition to timothy included orchardgrass, meadow brome, tall fescue and smooth brome, at each of three sites in Quebec.

Low DCAD rations during the two to four weeks preceding calving help prevent milk fever. The cation present in highest amounts in commonly fed dairy rations is potassium derived from forages. Forage species with less potassium reduce DCAD.

Orchardgrass had the highest DCAD in the Quebec study. Species differences in DCAD were due primarily to differences in potassium content. Two to four varieties of each grass species were compared, but variety differences in DCAD occurred only in tall fescue. All three sites also produced similar DCAD levels.