

The Impact of a Monensin Controlled-Release Capsule on Subclinical Ketosis in the Transition Dairy Cow

B. L. Green¹, B. W. McBride¹, D. Sandals², K. E. Leslie², R. Bagg³, and P. Dick³

¹ Department of Animal and Poultry Science, University of Guelph, Guelph, ON, Canada N1G 2W1

² Department of Population Medicine, University of Guelph, Guelph, ON, Canada N1G 2W1

³ Provel Division, Eli Lilly Inc., Guelph, ON, Canada N1G 4T2

An experiment was designed to examine subclinical ketosis in periparturient dairy cows and the antiketogenic effects of monensin. Subclinical ketosis was induced through a 10% feed restriction and was quantitatively determined using a blood β -hydroxybutyrate (BHBA) threshold of 1200 $\mu\text{mol/L}$. Monensin decreased the BHBA concentration by 35% and increased the glucose concentration by 15%. No effect of monensin on milk production was detected, but rumen fermentation was altered. Monensin decreased the acetate to propionate ratio, decreased the butyrate concentration, and increased pH. The lower concentration of BHBA in blood and higher concentration of blood glucose in cows treated with a monensin controlled-release capsule decreased subclinical ketosis in early lactation cows.

Key Words: lactating dairy cows • monensin controlled-release capsule • subclinical ketosis • β beta; -hydroxybutyrate

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