

Effects of Tilmicosin on the Incidence of Bovine Respiratory Disease and Animal Performance When Used in Temperature-Based Therapy and Complete Metaphylaxis Treatment Programs

C.A. Guthrie, DVM

G.J. Vogel, PhD

S.B. Laudert, PhD

*Elanco Animal Health
Indianapolis, IN*

Two trials were conducted to evaluate the effects of tilmicosin (Micotil® 300) on the incidence of morbidity and mortality due to bovine respiratory disease (BRD) when used in temperature-based and complete metaphylactic treatment programs. A total of 1,639 auction market origin steers and bulls, with an average initial weight of 257 kg were used. The cattle were randomly allotted to one of three treatment programs at processing: (1) control: no antibiotic treatment at processing, (2) temperature-based therapy: tilmicosin administered at processing if the rectal temperature of the animal was 104.0°F or greater, (3) complete metaphylaxis: tilmicosin administered to all animals at processing. Tilmicosin was administered as a single, subcutaneous injection at a rate of 10 mg/kg body weight (1.5 ml/cwt Micotil) in the temperature-based and complete metaphylactic treatment groups. Processing procedures included routine vaccination, implanting, and parasiticide administration. At the end of 28 days, morbidity and mortality rates were calculated and analyzed

using General Linear Model (GLM) procedures of Statistical Analysis System (SAS). Complete metaphylaxis reduced ($P<.01$ and $P<.03$, respectively) morbidity compared to control and temperature-based treatment. Morbidity rates were 54.8, 44.7 and 30.4% for the control, temperature-based and complete metaphylactic treatment groups, respectively. Mortality was reduced ($P=.06$) from 3.3% in the controls to 1.1% in the complete metaphylaxis treatment group. Mortality was not different for the temperature-based treatment when compared to either the controls or the complete metaphylaxis treatment. Average daily gain (deads-in, kg) for the 209 day trial was 1.29, 1.36 and 1.40, for the control, temperature-based, and complete metaphylaxis treatment groups, respectively, ($P<.05$). The administration of tilmicosin to all cattle in the complete metaphylaxis treatment program is proven more beneficial at reducing BRD than treatment at processing based upon rectal temperature.