

The Effect of Zuprevo, a Macrolide Antibiotic, on Bighorn Sheep Lamb Survival Following a Bacterial Pneumonia Outbreak

LAURA A. MCHALE,¹ *Nebraska Game and Parks Commission, 471 Squaw Creek Road, Crawford, NE 69339, USA*

TODD NORDEEN, *Nebraska Game and Parks Commission, 299 Husker Road, Alliance, NE 69301, USA*

JULIE J. SHAFFER, *Bruner Hall of Science, Department of Biology, University of Nebraska Kearney, Kearney, NE 68849, USA*

BRIAN C. PETERSON, *Bruner Hall of Science, Department of Biology, University of Nebraska Kearney, Kearney, NE 68849, USA*

ABSTRACT We investigated the effect of macrolide antibiotic Zuprevo on bighorn sheep (*Ovis canadensis*) lamb survival in 2 herds in the Pine Ridge region of western Nebraska following a bacterial pneumonia outbreak. Respiratory disease is a major cause of mortality in bighorn sheep lambs in Nebraska, threatening the success of the state's bighorn sheep restoration efforts. In 2012, lamb survival rates were documented at 7.3% and 3.1% in the Barrel Butte and Fort Robinson herds, respectively. From 22 June to 30 July 2013, 12 of 33 lambs in the Barrel Butte and Fort Robinson herds were darted using CO₂ rifles that fired injection and marking darts that administered 0.5 cc of Zuprevo into the lambs upon impact. Lamb survival of darted and undarted lambs was then monitored to 1 November 2013. Initial results indicate a positive relationship between darted lambs and lamb survival. High pneumonia-related mortality of bighorn sheep lambs may pose the single greatest threat to population recovery of bighorn sheep herds in the western United States. Our findings suggest that antibiotic treatment of bighorn lambs following a pneumonia outbreak may improve lamb recruitment in these herds. Further research is needed to assess the overall affect and long term impact to bighorn sheep herds.

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¹ E-mail: laura.mchale@nebraska.gov