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## **\*\*EFFECTS OF GRAZING MANAGEMENT ON SHARP-TAILED GROUSE NEST SURVIVAL IN MIXED GRASS PRAIRIES**

Megan C. Milligan\*, Department of Animal and Range Sciences, Montana State University, Bozeman

Lance B. McNew, Department of Animal and Range Sciences, Montana State University, Bozeman

Lorelle I. Berkeley, Montana Department of Fish, Wildlife, and Parks, Helena

Grazing is the predominant land use across western North America and directly affects the structure, composition, and productivity of native grasslands. Thus, grazing management has a significant impact on the quality and extent of wildlife habitat. Sharp-tailed grouse (*Tympanuchus phasianellus*) have large home ranges and utilize a wide range of habitat types, allowing them to serve as an ideal indicator species for grassland habitats. To better understand the relationship between rangeland management, habitat conditions, and nesting ecology, we monitored 50 radio-collared sharp-tailed grouse in eastern Montana to assess the effects of grazing management, local habitat, and female attributes on nest survival. In the first year of a three-year study, we monitored 73 nests, 27 of which successfully hatched at least one chick. Probability of daily nest survival was  $0.96 \pm 0.006$  and overall nest survival during the nesting period was  $0.24 \pm 0.05$ . Variables at the home-range scale, including grazing system and grassland shape complexity, were better predictors of nest survival than variables at the nest-scale. Nest survival declined with female age, and was higher for nests located in pastures managed with season-long grazing than for pastures managed with rotation and rest-rotation grazing. However, confidence intervals of effects overlapped 0 and a null model was considered parsimonious, suggesting little to no direct effect of grazing system on nest survival during our first year of study. By evaluating the influence of different rangeland management practices on demographic rates, this project will develop specific management recommendations for the conservation of sharp-tailed grouse.