Recolonization of Black-tailed Prairie Dogs in Southern Phillips County, Montana[TWS]

Jo Ann L. Dockter Dullum and Dr. Kerry Foresman
University of Montana, Missoula 59812

Black-tailed prairie dogs (*Cynomys ludovicianus*) are an integral component of prairie ecosystems, but in recent years their numbers have been reduced due to eradication programs, conversion of grassland to cropland, and the spread of sylvatic plague. In an effort to re-establish prairie dogs into plagued out historic colony sites, translocation efforts began in 1997 on Charles M. Russell National Wildlife Refuge. Translocation experiments require several issues be determined: 1) Conditions needed for successful translocation such as release method, stocking density, age and sex ratios; 2) Survival and dispersal of translocated animals; and 3) Colony size. Preliminary studies have determined two release methods for future testing. Comparison studies for stocking, age and sex ratios, will be performed between colonies with similar attributes such as soil, vegetation, and slope. Survival rates of translocated animals will be determined using mark-recapture techniques and requires each animal to be individually marked with Passive Integrated Transponder (PIT) tags and dye. Using visual counts of dyed animals, and live-trapping techniques, the numbers of translocated animals within the release area will be determined. Nearby towns will be monitored for dispersers. Monitoring colony sizes and burrow densities provides important information necessary for determining changes due to recolonization, augmented and natural. The perimeters and burrow densities of each colony within Southern Phillips County are currently being mapped using GPS (Global Positioning System) for use as baseline data. From the information gathered, we will be able to determine the affects of augmentation and best release methods.