

Patuxent Wildlife Research Center

Characterization of Avian Hazards Following Chlorophacinone Use for Prairie Dog Control



The Challenge: The objective of this study was to determine if operational applications of Rozol result in adverse effects to non-target wildlife. Research on free-ranging and captive wildlife was conducted in Colorado during 2010-2012. Hepatic residue analysis and histopathology were conducted to confirm the cause of death.

The Science: Black-tailed prairie dogs (BTPD), *Cynomys ludovicianus*, are considered a keystone species because they influence the prairie ecosystem's structure, function, and composition. BTPDs remain active above ground throughout the year, making them a valuable food source for wintering raptors. Many in the agricultural community consider BTPDs to be major pests because they damage crops, compete with livestock for forage, and their burrows drain fields of water and create a hazard to livestock and farm equipment.

In 2009, the U.S. Environmental Protection Agency registered the rodenticide Rozol® (0.005 % active ingredient chlorophacinone, 2-[(p-chlorophenyl) phenylacetyl]) 1,3-indandione) for controlling BTPDs in 10 states: Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. Seed eating species are attracted to the grain bait that is coated with Rozol and can be poisoned by directly consuming the bait whereas predatory and scavenger species are secondarily poisoned by feeding on poisoned prey.



The Future: Significant results thus far:

1. first documentation of songbird poisoning from Rozol applications at BTPD colonies,
2. a much greater availability of poisoned prey for raptors than previously reported,
3. raptors selectively foraged in Rozol-poisoned BTPD colonies over untreated colonies.
4. hepatic residues in poisoned wildlife were high enough to harm scavengers and predators,
5. adverse effects can occur weeks after application.

The findings have assisted the U.S Fish and Wildlife Service in developing its Biological Opinion for Section 7 Endangered Species Consultation for Rozol and in their discussions with U.S. Environmental Protection Agency and Rozol's manufacturer by developing risk mitigation requirements for the Rozol label. Samples from the study's final season are being analyzed.

