



# Nebraska Game and Parks Commission

2200 N. 33rd St. / P.O. Box 30370 / Lincoln, NE 68503-0370

Phone: 402-471-0641 / Fax: 402-471-5528 / [www.outdoornebraska.org](http://www.outdoornebraska.org)

Mr. Greg Ibach  
Director  
Nebraska Dept. of Agriculture  
P.O. Box 94947  
Lincoln, NE 68509-4947

January 18, 2006

Dear Mr. Ibach;

The Nebraska Game and Parks Commission (Commission) has been made aware that the Nebraska Dept. of Agriculture has received a request to provide a 24(c) "Special Local Need" registration to allow the use of the pesticide Rozol for the control of black-tailed prairie dogs in Nebraska. The Commission has been provided information regarding the issue from the Dept. of Ag. As the state agency responsible for wildlife species the Commission is providing comments regarding the proposed use of Rozol for prairie dog control. The Commission has significant concerns in regards to the proposed use of Rozol based on a number of factors.

The Commission's primary concerns are in regards to the potential primary and secondary impacts on non-target species. A large number of endangered, threatened, game, furbearer, and nongame species occur within the area of potential Rozol use. The take of these species by direct or secondary poisoning is illegal under state statues and regulations. These species include:

Listed species:

Swift fox, *Vulpes velox*, - Endangered; American burying beetle, *Nicrophorus americanus* - Endangered; Bald eagle, *Haliaeetus leucocephalus*, - Threatened; Whooping crane, *Grus americanus* - Endangered

Game and Furbearer species:

Jackrabbits, Cottontails, Bobcat, Red fox, Gray fox, Badger, Raccoon, Weasels, Opossum, Skunks, Greater prairie chicken, Sharp-tailed grouse, Turkey, Pheasant, Quail

Priority conservation species:

Numerous priority conservation species also occur in the area of potential application. These include Golden eagle, Burrowing owl, Ferruginous hawk, Swainson's hawk, McCown's longspur, nongame species, migratory birds, and species in need of conservation.

The Commission's comments and concerns are as follows:

**1.) Threats to non-target wildlife species.**

In its 1998 publication "Reregistration Eligibility Decision (RED) Rodenticide Cluster (EPA 1998), the EPA presented research conducted in support of the current labeling of chlorophacinone, the active ingredient in Rozol. This publication references the results of research to that date that met the EPA guidelines for study protocols. The RED specifies that chlorophacinone has a very high primary toxicity for mammals. It is also considered to have high secondary toxicity to mammalian predators. This is supported by EPA's 2004 comparative risk assessment (EPA 2004a) for nine rodenticides and the 1996 Genesis Laboratories Study Number 96004 (Ahmed, et al. 1996) sponsored by LiphaTech. The very high toxicity to mammals means that a wide range of non-target species such as mice, voles, and ground squirrels could be directly impacted by the use of Rozol. Mortality from Rozol typically requires multiple feedings. Subsequently, death of individual animals from Rozol poisoning occurs over an extended time period of several days to several weeks. Animals dying from Rozol can remain active during this time and move from the burrow to above ground where they can be captured or scavenged by predators including swift fox, bobcat, red fox, gray fox, badger, raccoon, weasels, opossum, skunks. As indicated on the proposed label it is possible that bait may come to the surface. There is the likelihood of bait coming to the surface as the result of digging by prairie dogs, other rodents, predators, or the movement of animals in and out of burrows. Bait near or on the surface could result in the direct impact to non-target species such as rabbits, game birds, and numerous species of granivorous birds. Feeding on exposed bait has resulted in the documented death of turkeys in other states. This means that a prairie dog colony treated only once may present not only numerous individuals but also a variety of species of poisoned animals above ground for days or weeks. This represents a significant on-going exposure threat to listed, game, and nongame species. Field research is needed to determine the potential species, number of individuals, period, and level for primary exposure and the secondary risk that animals impacted by primary poisoning represent to predators and scavengers.

The RED states that chlorophacinone has a moderate to high primary toxicity for birds. As stated above, the potential for bait to be brought to the surface presents a threat for primary poisoning to non-target species including game and nongame granivorous birds. The RED also states that adequate data was not available to determine secondary avian impacts and that additional research is required. While the 2004 risk assessment concludes that, compared to the other rodenticides, Rozol has a relatively low level of secondary threat to birds, the assessment relies on a number of studies, most of which were completed prior to the 1998 RED. Some of these studies were referenced in the 1998 RED but were not considered adequate to provide necessary data or meet EPA guidelines. Issues with the studies include inadequate sample size and insufficient range of concentrations tested.

Chlorophacinone normally requires multiple feedings to be effective. The RED states that chlorophacinone is highly toxic on the subacute basis. Identified data needs are that existing research may not adequately address exposure for longer periods. Possible adverse effects of sublethal exposure are unknown, as are the relationship of the ratio of body mass to amount of toxicant ingested. Avian and mammalian reproduction studies are needed to establish a no-

observable-adverse-effects concentration (i.e., "toxicity threshold"). As shown with other pesticides it is possible that young animals may be more susceptible to poisoning than adults. Great horned owls occur throughout the area of potential Rozol use. They begin nesting in very early spring and can have young in March. Young owls are fed quantities of prey several times those used in the studies. This represents a potential threat through the significant bioaccumulation of pesticides in owlets.

Chlorophacinone also has a very high primary toxicity for aquatic invertebrates and fish. No research has been conducted to determine primary or secondary toxicity for terrestrial invertebrates. The American burying beetle is a scavenger that feeds on dead animals. It occurs in areas with black-tailed prairie dogs and would be expected to feed on dead prairie dogs and other animals poisoned by Rozol. Studies are needed to determine the potential for primary and secondary impacts to terrestrial invertebrate species including the American burying beetle.

A number of issues related to Rozol use have been identified for which there is a lack of information for assessing its appropriate use and labeling. It is necessary to conduct research that is properly designed to obtain scientifically based data that can be used to adequately assess the pesticide's effects. This can then be used to correctly determine the appropriate use and safe application methods for Rozol. The pesticide should not be put into new, widespread use until this information is known and the correct use determined.

## **2). Inadequacies in labeling justification and proposed label restrictions.**

In order to be labeled for species control, the EPA has set the criteria that a pesticide must have at least a 70% efficiency rate of reducing the target species. The available information on Rozol efficiency is from several studies conducted by Dr. Charles Lee in Kansas and reviewed by the EPA (EPA 2004b). These limited studies produced average results ranging from 53.1% to 90.5%. Using a rate of ¼ cup/burrow, only 6 of 13 treatments in the studies produced results greater than 70%. Three of these six had previously been treated at a lesser rate. The studies also used plugged vs. opened burrows to assess effectiveness. This methodology is not considered accurate as it overestimates the efficacy of a control because it does not account for a number of field variables (Sullins 1982). Other methods such as visual observations are more accurate. These results are inconclusive as to the actual efficacy of Rozol. Research designed to accurately determine the application rate and efficacy of Rozol is needed prior to it being considered for use for prairie dog control.

The proposed label restrictions require that dead animals found above ground be collected and disposed of. There are no criteria for the frequency for the collection and removal of dead animals. No data is available to determine the rate or number of poisoned animals that may appear above ground. Therefore in order to prevent the secondary take of non-target species, it should be specified that all above ground animals, as well as those accessible in burrows, be removed and that removal should occur on a daily basis. The proposed label restriction is that carcasses buried on site must be in holes at least 18 inches deep. This depth is inadequate to prevent digging predators/scavengers, such as badgers, from accessing carcasses. A minimum depth of 36 inches should be specified. Appropriate off site disposal (burying 36 inches deep, cremation, etc.) should also be specified.

Zinc phosphide is the current pesticide most commonly used to control prairie dogs. The application method for zinc phosphide is surface placement. Although the label restrictions specify that Rozol be placed at least 6 inches down the burrow, the language of the label, "...measuring from the portion of the burrow that is farthest back into the tunnel." is confusing. It is likely that applicators, used to placing prairie dog bait on the surface combined with the application language, will place Rozol above ground as well as in the burrow. As indicated on the proposed label it is possible that bait may come to the surface. Because of digging and the movement of animals in and out of burrows there is the likely hood of bait coming to the surface. The label requires that spilled bait or bait that may come to the surface be retrieved and properly disposed of. This will add additional time and cost for application. It is also unlikely that improperly applied bait will be retrieved as required. There is also the probability that Rozol may be used in combination with zinc phosphide and placed above ground. Incorrect and illegal application of Rozol that would result in the placement of the pesticide near or on the soil surface could also result in the direct impact to non-target species such as rabbits, game birds, and numerous species of granivorous birds. Such illegal applications would be subject to legal action.

### **3) Issue of special local need for Rozol.**

The 24 (c) label is to meet a special local need for the use of Rozol. It has not been demonstrated that Rozol provides control efficacy, reduces threats to wildlife, or is more cost effective to meet a special local need. A number of pesticides including zinc phosphide, aluminum phosphide, and several types of gas cartridges are currently labeled and regularly used for the control of prairie dogs in Nebraska and other Great Plains states. These pesticides provide for seasonal application from October 1 through March 15, for in burrow use, and use on range and noncrop sites as indicated in the need for Rozol. Rozol is promoted as more cost effective, however, no treatment cost study or actual cost analysis is provided. The supposition is based on a one time application cost for Rozol compared to pre-baiting and treatment application for zinc phosphide. This cost comparison does not address actual Rozol application costs including the required follow-up site visits to collect and dispose of carcasses, or the potential need for second application.

Although Rozol received a 24(c) label for use in Kansas, it appears that there was not a full and complete review of the application on the part of all agencies. In its 2004 report (EPA 2004b), subsequent to Rozol being labeled for use, EPA (EPA 2004b) makes the statement that it does "...not know who in EPA provided KDA with the interpretation of Section 2(ee) [of the Federal Insecticide, Fungicide, and Rodenticide Act] that they opted to use as a basis for proceeding with KS-040004". Based on this and the following statement (EPA 2004b) it is unlikely that EPA would approve Rozol's use if reviewed again: "The rationale by which KS-040004 was considered to be suitable for 'special local needs' labeling supplemental to LiphaTech's Rozol® Pocket Gopher Bait ([EPA Registration Number] 7173-184) is rather thin at present and would become inapplicable if the label for that product is modified as it is expected to be at the time of product reregistration."

South Dakota was also petitioned in 2005 for a 24(c) label registration. The South Dakota Department of Agriculture did not approved the use of Rozol based on the following reasons:

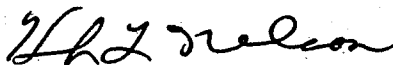
1. There was no special local need due to other registered pesticides being available to meet the needs for prairie dog control.
2. Other pesticides are more effective for prairie dog control. They also stated that to be effective Rozol requires several feedings and may need follow-up treatments.
3. Rozol has environmental hazards, in particular significant secondary poisoning. This requires site monitoring and the removal and proper disposal of carcasses.
4. The cost of Rozol is estimated to be at least 50% higher than zinc phosphide based on pesticide cost, application cost, and monitoring and disposal cost.

The labeling of Rozol for use in Nebraska would represent a potential for its use over a large geographic area. It is questionable that this represents EPA's intent of special local need. This is especially true considering the pesticide's 24(c) labeling in Kansas and the attempt to label it in South Dakota. Given that Liphatech has been promoting the use of Rozol through the 24(c) process, it could be questioned whether Liphatech is attempting to circumvent the EPA process and avoid conducting the research needed and requirements necessary for relabeling.

It is the Commission's view that although Rozol may have potential for prairie dog control, there is a lack of scientific data to negate the potential level of threat represented by the pesticide to the wildlife of the state. Additional research is required to provide the sound scientific data needed for an adequate assessment to determine the safe and appropriate use of Rozol.

Based on the above issues and expressed concerns, the Nebraska Game and Parks Commission recommends that the Nebraska Department of Agriculture not issue a 24(c) Special Local Needs registration for the use of Rozol for black-tailed prairie dog control in Nebraska at this time. Please contact me at 402-471- 5539 in regards to question or additional information relating to our comments.

Sincerely,



Kirk Nelson  
Assistant Director  
Nebraska Game and Parks Commission

cc. Tim Creger; Nebraska Department of Agriculture  
Steve Anschutz; FWS Ecological Services, Nebraska Field Office  
Christina Lydick; FWS Ecological Services, Nebraska Field Office

Literature Cited:

- Ahmed, Md. S., J. Baroch, L. Carlet, D. Whaley, 1996. Secondary Hazard Study Using Chlorophacinone-Killed Laboratory Rats Fed to Domestic Ferrets (*Mustela putoris furo*). Genesis Laboratories Study Number 96004.
- Sullins, M. 1982. Efficacy of strychnine bait placed inside burrows for controlling black-tailed prairie dogs. Technical Report No. 82-5. Montana Department of Agriculture, Environmental Management Division, Technical Services Bureau, Helena, MT. 8 pp.
- U.S. Environmental Protection Agency (EPA). 2004a. Potential risks of nine rodenticides to birds and nontarget mammals: a comparative approach. Office of Pesticide Programs, Environmental Fate and Effects Division, U.S. Environmental Protection Agency, Washington, D.C. 230 pp.
- U.S. Environmental Protection Agency (EPA). 2004b. Efficacy Review: Rozol® Prairie Dog Bait, KS-040004. IRB Branch Review – TSS. Unpublished report prepared for the Insecticide-Rodenticide Branch of the U.S. Environmental Protection Agency, Washington, D.C. 50 pp.
- U.S. Environmental Protection Agency (EPA). 1998. Reregistration Eligibility Decision (RED): Rodenticide Cluster. EPA738-R-98-007. Office of Prevention, Pesticides, and Toxic Substances. U.S. Environmental Protection Agency, Washington, D.C. 319 pp.