THE MINUTES OF THE MEETING OF THE AGRICULTURE COMMITTEE
March 25, 1981

The meeting was called to order by CHAIRMAN CARL SMITH, at 12:00 p.m. in room 431 of the Capitol.

All members of the Committee were present with the exception of REPRESENTATIVE ELLERD who was excused.

HJB 54, A JOINT RESOLUTION OF THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA REQUESTING THE ENVIRONMENTAL PROTECTION AGENCY TO GRANT MONTANA AND OTHER WESTERN STATES ADDITIONAL TIME TO RESPOND TO THE ISSUES RAISED IN THE STRYCHNINE POSITION DOCUMENT NO. 2/3 RECENTLY RELEASED BY THAT AGENCY; AN FURTHER REQUESTING PRESIDENT REAGAN AND THE UNITED STATES SENATE AND HOUSE OF REPRESENTATIVES TO SUPPORT THIS RESOLUTION, was introduced by REPRESENTATIVE UNDERDAL of District 12. (EXHIBIT A)

REPRESENTATIVE UNDERDAL said that the impact is costing millions of dollars worth of damage. REPRESENTATIVE UNDERDAL referred to a letter written to Mr. Ed Johnson of the Document Control Office in the Environmental Protection Agency and their comments (EXHIBIT B), and a letter to Montana Farm and Ranch Organizations and Representative Underdal from the Department of Agriculture, (EXHIBIT C).

In a brief summary, the EPA has proposed:

"The Environmental Protection Agency proposes to initiate actions to cancel registrations or deny applications for the following uses; the control of prairie dogs, deer mice, meadow mice, chipmunks and marmots/woodchucks on rangeland, pasture and cropland and the control of all rodents and lagomorphs on non-agricultural sites, with the exception of ground squirrels on ditch banks, levees, earthen dams and canals and porcupines in forests. The Agency also proposes to cancel registrations or deny application unless the terms and conditions of registration are modified for the following uses: ground squirrels, jack-rabbits, kangaroo rats, and cotton rats on rats on rangeland, pasture, and cropland; ground squirrels on ditch banks, levees, earthen dams, and canals and porcupines in forests; birds on cropland; and pigeons and house sparrows on nonagricultural sites."

GARY GINGERY said that they were given only 30 days to respond to their opposition but have now been given an extension of one year. He said that the Department of Agriculture recommends a 'do pass' on this bill. He referred to a document submitted by the Department of Agriculture, "Comments on the Strychnine Position Document 2/3", (EXHIBIT D).

The meeting was opened for discussion.

REPRESENTATIVE SCHULTZ asked what the E.P.A.'s problem was with this. He used as example, such as use on birds.

MR. GINGERY said that if it was dyed yellow that it would eliminate some of the problem.

The question of why the application could not be put into some of the holes was answered by Mr. Gingery. He said that prairie dogs are surface eating animals.

In reference to 1080, Mr. Gingery said, this was less hazardous to the birds.

REPRESENTATIVE UNDERDAL said that hawks and eagles do not seem to contact the disease and have been seen eating the carcass.

GARY GINGERY stated that strychnine can be purchased over the drug counter but cannot be used as a pesticide.

There being no other questions, REPRESENTATIVE UNDERDAL closed on this bill.

The meeting was called into EXECUTIVE SESSION:

MOTION was made by REPRESENTATIVE CONROY that HJR 54 'do pass'. MOTION PASSED with all in favor.

The meeting adjourned at 12:35 a.m.

Carl M Smith

CARL SMITH, CHAIRMAN

lmw

HOUSE JOINT RESOLUTION NO. 54

INTRODUCED BY

A JOINT RESOLUTION OF THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA REQUESTING THE ENVIRONMENTAL PROTECTION AGENCY TO GRANT MONTANA AND OTHER WESTERN STATES ADDITIONAL TIME TO RESPOND TO THE ISSUES RAISED IN THE STRYCHNINE POSITION DOCUMENT NO. 2/3 RECENTLY RELEASED BY THAT AGENCY; AND FURTHER REQUESTING PRESIDENT REAGAN AND THE UNITED STATES SENATE AND HOUSE OF REPRESENTATIVES TO SUPPORT THIS RESOLUTION.

WHEREAS, the Environmental Protection Agency (EPA) issued the RPAR (Rebuttable Presumption Against Registration) notice for all outdoor aboveground uses of strychnine for field rodent control on December 1, 1976 (41 FR 52810); and

WHEREAS, EPA has taken nearly 4 years to review the existing data on strychnine usage in the United States; and

WHEREAS, the alternative field rodenticides proposed by EPA are either generally not available (1080 - sodium monoflouracetate); generally not effective (zinc phosphide); generally not economical (gas cartridges and fumigants); or generally not economical or not adequately researched, or both (anticoagulants); and

WHEREAS, Montana and several other Western States believe that the recommendations proposed by EPA in Position Document No. 2/3 are not justified by the data reviewed and used in reaching them; and

WHEREAS, Montana and other Western States presently do not have the available manpower and money needed to refute the conclusions of EPA set forth in Position Document No. 2/3; and

WHEREAS, the response of different field rodent species to different environmental conditions has not been adequately addressed or researched; and

WHEREAS, EPA concludes that no macroeconomic impacts would be anticipated as a result of cancellation of strychnine for aboveground rodent control; and

WHEREAS, this conclusion is based upon estimates of estimates and does not consider impacts to individual agricultural producers or to aggregate agricultural communities; and

WHEREAS, the few economic impact studies conducted by Western States indicate that significant economic agricultural impacts do occur to individual agriculturalists and to agricultural communities; and

WHEREAS, considering the necessity to conduct studies under varying environmental conditions, considering all economically damaging rodent species present in the Western

INTRODUCED BILL
HJR 54

States, and considering the time necessary to plan and conduct meaningful studies, a 1-year comment period prior to a final decision by EPA is insufficient.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

That the Environmental Protection Agency give Montana and other Western States until September 1984 to provide new and additional data to rebut the conclusions of Strychnine Position Document No. 2/3.

BE IT FURTHER RESOLVED, that all current aboveground registrations of strychnine for field rodent control continue unchanged during this period.

BE IT FURTHER RESOLVED, that the states and EPA cooperate in making available to each other for review and comment all information that they collect and studies that they propose.

BE IT FURTHER RESOLVED, that the President of the United States and members of the United States Senate and House of Representatives are urgently requested to support this resolution.

BE IT FURTHER RESOLVED, that the Secretary of State send copies of this resolution to the President of the United States, the Administrator of the Environmental Protection Agency, the Secretary of the Department of the

Interior, and the Secretary of the Department of Agriculture and to the Governors and the Congressional Delegations from Montana, Idaho, Washington, Oregon, California, Nevada, Utah, New Mexico, Arizona, Texas, Colorado, Wyoming, North Dakota, South Dakota, Nebraska, Kansas, and Oklahoma.

-End-

DEPARTMENT OF AGRICULTURE
DIRECTOR'S OFFICE

THOMAS L. JUDGE, GOVERNOR

AGRICULTURE/LIVESTOCK BUILDING
CAPITOL STATION

STATE OF MONTANA

(406) 449-3144

HELENA, MONTANA 59601

December 5, 1980

Mr. Ed Johnson
Document Control Office (TS-793)
Office of Pesticides and Toxic Substances
Environmental Protection Agency
401 M. Street South West Room E-447
Washington, DC 20460

Dear Mr. Johnson:

The Montana Department of Agriculture has completed the review of Strychnine Position Document 2/3. Enclosed find three copies of the Department's comments.

In addition to the comments which we have no choice but to make, I want to emphasize two points.

1. The Comment Period - thirty days is a very short time in which to react to a proposal that EPA has spent four years putting together. Therefore, I support Wyoming's request for a one year extension on the Comment Period.

2. I question the justification for cancellation or amendment in the first place.

Montana's Department of Agriculture is responsible for the enforcement of FIFRA and the Montana Pesticide Act, a responsibility we take seriously both from the point of protecting the environment and of protecting an adequate supply of food for the consuming public.

We have documented rodent consumption and destruction of food produced for human consumption. In Montana alone it amounts to millions of dollars annually.

Further restrictions on chemical controls without effective economically feasible alternatives will result in additional rodent consumption of substantial amounts of human food.

The question is are Montana's farmers and ranchers expected to raise food to feed people or to feed rodents.

The unrealistic proposals in Position Document 2/3 appear to give the rodents top priority.

While chemical control unquestionably has been beneficial to Montana's producers as well as to the economy of the entire state, the american consumer has been the chief beneficiary of chemical control. Those tools have been a contributing factor in helping agricultural producers provide the consuming public with the highest quality of food at the lowest price in terms of earning power the world has ever known.

While the Department shares your concern with possible risk to human health through improper use of chemicals, we are also concerned with providing food to America. In this case as well as others risk has been overemphasized. Benefits underemphasized.

It is time to take a more objective, realistic approach to the entire use of chemical control in food production in America.

Sincerely,

W. Gordon McOmber, Director
Montana Department of Agriculture

WGM/sle

Enclosures

DEPARTMENT OF AGRICULTURE
ENVIRONMENTAL MANAGEMENT DIVISION

THOMAS L. JUDGE, GOVERNOR

AGRICULTURE/LIVESTOCK BUILDING
SIXTH AND ROBERTS

STATE OF MONTANA

(406) 449-2944

CAPITOL STATION
HELENA, MONTANA 59601

To Montana Farm and Ranch Organizations December 29, 1980

Dear Representative Underdal:

The Environmental Protection Agency recently published their findings of the rebuttable presumption against registration (RPAR) of the pesticide strychnine. Strychnine has been undergoing RPAR review for the past four years, so a decision on its fate had been expected. Some of the proposed actions against strychnine, however, had not been expected.

The following is a brief summary of what EPA has proposed:

> "The Environmental Protection Agency proposes to initiate actions to cancel registrations or deny applications for the following uses: the control of prairie dogs, deer mice, meadow mice, chipmunks and marmots/woodchucks on rangeland, pasture and cropland and the control of all rodents and lagomorphs on non-agricultural sites, with the exception of ground squirrels on ditch banks, levees, earthen dams and canals and porcupines in forests. The Agency also proposes to cancel registrations or deny applicatio unless the terms and conditions of registration are modified for the following uses: ground squirrels, jack-rabbits, kangaroo rats, and cotton rats on rangeland, pasture, and cropland; ground squirrels on ditch banks, levees, earthen dams, and canals and porcupines in forests; birds on cropland; and pigeons and house sparrows on nonagricultural sites."

You can see that Montana producers will be impacted if strychnine can not be used to control prairie dogs and is too restrictive for use on ground squirrels.

The document which accompanied this notice is too lengthy for us to duplicate and send out. We have enclosed our comments which you may want to support, or you may wish to prepare your own. In either case, we encourage you to send comments as soon as possible to the following address:

Document Control Office (TS-793),
Office of Pesticides and Toxic Substances,
Room E-447,
Environmental Protection Agency,
401 M Street, SW,
Washington, D. C. 20460.

Three copies of comments should be sent to the Document Control Office at the EPA Headquarters address given above. The comments should bear the identifying notation OPP-30000/7B.

Sincerely,

W. Gordon McOmber, Director

Enclosures

30000/7B

Comments on the Strychnine Position Document 2/3

Montana Department of Agriculture

INTRODUCTION

The Montana Department of Agriculture has reviewed the Strychnine Position Document 2/3 and would like to offer comments. Our primary responsibility is to represent agriculture, which is the basic economy of Montana. There has been recent concern among producers over the problems of controlling rodents and their damage to food and fiber production. There is also concern over the potential cancellation of our most effective rodenticides. Damage assessments have shown that rodents, if not managed, will cause a major economic impact to Montana Agriculture. Consequently, we are concerned that farmers and ranchers continue to have effective chemicals and control techniques at their disposal to manage field rodents.

Generally, we believe that EPA, in making its recommendations, has not adequately considered the following areas:

1. Limitations and environmental effects of the presently available alternatives.
2. Effects of proposed rates and active ingredient concentrations upon efficacy of ground squirrel control.
3. Differences among rodents species in response to control methods.
4. Economic impact of ground squirrels and prairie dogs.
5. Effectiveness of the proposed restrictions on ground squirrel baiting to protect the black footed ferret, (i.e., one mile buffer).

This paper intends to discuss these issues and to recommend how they can be modified to protect agricultural producers while providing protection to non-target species.

BACKGROUND

The three major field rodent species that pose problems to Montana agriculture are the Columbian and Richardson ground squirrels and the blacktail prairie dog. The Columbian ground squirrel occupies Montana west of the continental divide and the east slopes of the divide. The Richardson ground squirrel is found east of the continental divide excluding southeastern Montana. The blacktail prairie dog occupies the eastern two-thirds of Montana and its range nearly overlaps the entire range of the Richardson ground squirrel.

Generally, control programs for ground squirrels are most effective if conducted in early spring when males and females emerge and begin mating, or in early summer when the young of the year begin foraging above ground. Because adults begin to aestivate in late summer, control programs at these times are not as effective and are not recommended. Blacktail prairie dog control programs are generally conducted in the period from July to October.

Traditionally, strychnine has provided good control of the Richardson ground squirrel but has been poor for the Columbian ground squirrel. In fact, strychnine alone provides control of the Richardson ground squirrel in Montana at this time. For the blacktail prairie dog, strychnine has provided adequate control - better than with zinc phosphide, but poorer than 1080.

Currently, programs are being conducted in Montana to provide better methods and more efficient rodent control. The Montana Department of Agriculture trains applicators, is determining the economic losses due to rodents, and has tested baits in the field and laboratory. The Department of Livestock is charged with administering rodent control programs and training applicators, conducts efficacy tests of rodenticides, and employs three biologists in its program. The training programs of both agencies are comprehensive courses on such items as rodent identification and biology, application methods and timing, safety, alternative control methods, and environmental protection.

ISSUES

Considering the background information, some issues of concern are addressed here. EPA may not have sufficiently considered several of these issues as they relate to Montana's situation.

Alternative Rodenticides

EPA, in recommending that strychnine registration be cancelled for prairie dog control and modified for ground squirrels, apparently feels that adequate alternatives are available and that they are safer to non-target species. In fact, the main alternatives, compound 1080, zinc phosphide, anticoagulants, and gas cartridges, are also toxic to non-targets. It is also our concern that alternatives will not provide efficacious control and will be too costly in certain instances.

1. Compound 1080

Compound 1080, because of the status of its registration,

cannot be considered a viable alternative. Until the 1080 RPAR process is completed, producers cannot assume that 1080 will be registered. It will be used by government applicators in Montana in 1981 under terms of a specific exemption (sec. 18, FIFRA) to control the Columbian ground squirrel damage in 16 Western Montana counties.

Considering this information, it is useless to discuss 1080 as an alternative regardless of its effect on non-target species and its efficacy.

2. Zinc Phosphide

Zinc phosphide is not a suitable alternative to strychnine in terms of reducing effects to non-target animals or its efficacy. The impacts of strychnine to birds was a primary reason for initiating the RPAR for strychnine. Specifically, the deaths of geese (Howell and Wishert 1969) and effects to birds (Hegdal 1976). In fact, zinc phosphide overall will present a greater hazard of primary poisoning to water fowl, gallinaceous, and other birds. In addition, zinc phosphide remains toxic for long periods despite exposure. The accidental poisoning of 455 geese in California was attributed to zinc phosphide that had been applied three months earlier (Keith and O'Neill 1964).

The efficacy of zinc phosphide has been erratic and undependable in Montana tests. In comparison with strychnine, better control was always achieved from strychnine. Data is presented below on tests conducted without prebaiting:

Species Tested	Percent Controlled: Zinc Phosphide	Percent Controlled: Strychnine	References
Columbian Ground Squirrel	41.5	64.8	Albert&Record 1979
Blacktail Prairie Dog	8.6 - 84.1	73.0 - 88.9	Sullins 1977
Blacktail Prairie Dog	30 - 33	57	Swick 1976
Columbian Ground Squirrel	60.6	--	Baril 1980

Zinc phosphide in tests against the blacktail prairie dog has not been effective (Swick 1976, Sullins 1977, Record 1978). Control ranged from 8.6 to 84.1%. The most effective results were obtained in 1980 and were attributed to extreme drought conditions during the year (Seyler 1980)[1].

The efficacy of zinc phisphide may be improved by applying a prebait. This method may be applicable to small acreages or high-cash crops. However, in Montana the large acreages of low profit crops such as hay and dryland grains make prebaiting uneconomical. Because the time and cost involved in prebaiting nearly doubles the cost of applications, zinc phosphide is even less attractive to individual producers.

3. Anticoagulants

This class of rodenticides is probably the safest despite risks to raptors and carnivores. Generally, little is known concerning the toxicity of these compounds to many non-target wildlife.

More importantly, these compounds do not constitute an acceptable alternative to strychnine in Montana at this time.

[1]Ken Seyler, Montana Department of Livestock, Personal communication

Efficacies against the major rodents have not been determined. The method of dissemination, bait boxes, is costly, unproven for this region, and unacceptable to most producers. Laboratory tests of anticoagulants have been conducted by the Department of Agriculture and field testing is planned.

4. Fumigants

Of all alternatives considered, fumigants may present the greatest threat to the black footed ferret from primary exposure. Other inhabitants of treated burrows will be killed also.

The greatest disadvantage of fumigants is the high cost of application. Albert and Record (1979) estimated the cost to treat 100 burrows would be $53.14 compared to $3.05 for strychnine oats.

In summary, it appears that alternative rodenticides may, depending upon the species exposed, be as toxic as strychnine to non-target species. Cancellation of strychnine for prairie dog control and, possibly, the use of modifications for ground squirrel control may leave Montana producers without viable alternatives at this time.

Standardized Rates and Strychnine Concentrations

EPA's recommendation to standardize the application rates (1 tablespoon per burrow) and strychnine concentration (0.20%) poses several concerns. Will the 0.2% concentration be efficacious against all species of ground squirrels? Experience in Montana has shown the various species to differ in their susceptibility to strychnine. Will ground squirrels consume the large amounts

necessary to obtain a toxic dose? The proposed application rates will double the rate of toxic grain that is now applied per burrow in Montana.

For comparison, standard baiting procedure for strychnine in Montana now calls for 6.2 grams of bait to be applied per burrow. Using 0.44% strychnine bait, this results in 27 mg. of active ingredient per burrow. At EPA's proposed rates, 12 grams of toxic bait with 24 mg. active ingredient will be deposited per burrow.

EPA's modified concentration will slightly reduce the amount of active ingredient applied per burrow. This is not our greatest concern, however. What is of concern is the volume of bait that must be applied per burrow and the volume that must be consumed by ground squirrels. Ground squirrels will be forced to consume twice as much bait to obtain a lethal dose. We are concerned that this will adversely affect the efficacy of strychnine applications. We are also concerned that the recommended rates and concentrations may lead to more squirrels consuming a non lethal dose. This leads to "bait shyness", a problem that we have already encountered in Montana. EPA, on page 70 of the position document, stated that strychnine concentrations should be at the lowest level determined to maintain adequate efficacy. We approve of this concept, but the efficacy of the proposed concentrations has not been determined for the rodent species in Montana.

Therefore, it is recommended that the rates and concentrations be standardized at rates known to be efficacious. We recommend

that rates for the Richardson and Columbian ground squirrels be left at 6.2g./burrow and 0.44%, respectively. If efficacy studies prove that rates and/or concentrations can be lowered and still maintain adequate control, we approve of this. We would cooperate in determining such efficacies.

It is also of interest that EPA's proposed rate of 12 g. (1 tbsp.) will result in twice as much toxic bait being exposed to non-target animals. (Compared to standard rates of 6.2 g. in Montana). The potential hazard of primary poisoning to non-target animals may be increased by EPA's proposal. We recommend that EPA determine effects on non-target species before raising application rates.

Species Differences

EPA has recommended standard rates and concentrations and baiting procedures regardless of the rodent species being controlled. In Montana, there is variability among the species involved that includes life cycle, size, habitat, behavior, food habits, and others. This difference in species is reflected in the approaches to control that have evolved. For example, strychnine has historically given adequate control of the Richardson ground squirrel. This species is a "poucher", that is, food is carried in cheek pouches to the burrow for storage. Strychnine is most effectively absorbed through the cheek lining (Gabrielson 1932). The Columbian ground squirrel, however, prefers green vegetation for food, does not pouch food readily, and is "suspicious" of unnatural foods. Consequently, this species has been more difficult to control

with strychnine. Proper timing of applications, use of fresh bait, once-a-year baiting, and pre-baiting to determine bait acceptance have been necessary to increase the efficacy to strychnine against Columbian ground squirrels.

This example of the species specific response to control measures only serves to illustrate the need to base procedures (rates, concentrations, etc.) upon data developed from specific species. We agree with EPA's contention that bait formulations be maintained at the lowest levels that will provide adequate efficacy. If rates and concentrations are to be standardized, especially to a minimum standard, then it is important that they be based on efficacy studies for individual rodent species.

To summarize, we recommend that rates be modified in the future with respect to efficacy data derived from individual species.

Endangered Species

Several recommendations were made in order to protect endangered species, namely cancellation of strychnine for prairie dog control, creation of a one mile buffer zone between strychnine applications for ground squirrel control and the nearest active prairie dog burrow, and surveys for endangered species.

Concerning cancellation of strychnine's registration for prairie dog control, we see no need for this cancellation if surveys for endangered species are conducted prior to applications. Current strychnine labels registered for prairie dog control in Montana prohibit use where black-footed ferret sign has been determined at any time for 2 previous years. These labels require inspections for current ferret sign also. We recommend that strych-

nine be registered for prairie dog control on cropland, pasture, and range where surveys show that endangered species are not present.

The recommendation that ground squirrel infestations closer than 1 mile from a prairie dog burrow not be treated with strychnine is disturbing. At present, strychnine is the most reliable method for controlling Richardson ground squirrels in Montana. The range of this species is nearly contiguous with that of the blacktail prairie dog in Montana. Because of this, much of the strychnine baiting for Richardson ground squirrels may be precluded.

Also, the above recommendation would be essentially unenforceable. The time and manpower needed to enforce this regulation will be beyond the scope of the regulatory agency.

The proposed modification was based on the threat of strychnine exposure to the black-footed ferret. The relationship between the black-footed ferret and ground squirrels is speculative at this time. Ferrets do have a close relationship with prairie dogs and remain within the limits of a town during the spring and summer. At this time of year, migration does not occur and the one mile buffer is unnecessary. However, in late summer, the young-of-the-year ferrets disperse for unknown distances, most likely greater than one mile.[1] It is at this time that black-footed ferrets would be most susceptible to secondary poisioning from strychnine killed ground squirrels. However, it is during late summer and early fall that ground squirrel control is usually ineffective because of

[1]Dennis Flath, Montana Department of Fish, Wildlife, and Parks, Personal communication.

aestivating adults and is not recommended.

A logical alternative to the one mile buffer would be a more manageable buffer, 100 to 200 yards, during spring and early summer when ferrets remain within the prairie dog towns. During the period of black-footed ferret dispersal, late summer and early fall, the 1 mile buffer may be more meaningful. Strychnine poisoning of ground squirrels in late summer to early fall should also be discouraged. This change in the recommendations will make it possible for growners to control more rodent colonies while assuring that black-footed ferrets occupying prairie dog towns are not secondarily poisoned. This regulation would also be easier to enforce.

Economic Importance

The economic importance of ground squirrels and prairie dogs cannot be understated. Their damage to crops has necessitated extensive control programs in the past and continues to do so. In terms of an economic loss to agriculture, a Montana Department of Livestock (1973) survey estimated $4,927,210 damage due to ground squirrels and $718,000 due to prairie dogs. Pallister (1979) calculated, from an exclusion cylinder study, that $1,417,607 worth of damage in hay and small grains was caused by Columbian ground squirrels in 12 Western Montana counties. Other forms of damage include that occuring to farm implements striking mounds, erosion of ditchbanks, and dissemination of weeds.

Because of these economic effects, ground squirrels and prairie dogs are among the most important agricultural pests in

Montana. If EPA's proposals leave producers without effective methods to control rodents, the damage to Montana agriculture will be severe. Despite EPA's economic conclusions, any cancellations or modifications that preclude control will have a definite impact on Montana agriculture.

It is recommended that EPA seriously consider the economic issues and how they will be affected by the proposed recommendations.

RECOMMENDATIONS

In order to mitigate the effects of strychnine on non-target species, yet provide agricultural producers with effective rodent control, the Montana Department of Agriculture has the following recommendations concerning EPA's recommendations in Strychnine Position Document 2/3:

1. Forego the one mile buffer between the nearest prairie dog burrow and sites of strychnine baiting for ground squirrels and replace with the following modifications:
   a. 100 to 200 yard buffer between any active prairie dog burrow and strychnine applications during spring and early summer.
   b. Require a 1 mile buffer between strychnine baiting for ground squirrels and active prairie dog burrows each year beginning in mid-August. Discourage strychnine applications to control ground squirrels after mid-August.
2. Leave strychnine concentrations and rates to control Richardson and Columbian ground squirrels at the known efficacious rate of 6.2 g. per burrow and concentration of 0.44%. Rates should

eventually be standardized for individual rodent species and based upon field efficacy testing.

3. In view of the poor performance of alternative rodenticides, retain strychnine for control of prairie dogs in croplands, pasture, and range, where biological surveys indicate that endangered species are not present.
4. Because the timing of strychnine applications is critical, agencies conducting surveys for endangered species should be aware of this. If biological surveys are conducted, they should be done as expediently as possible, so that baiting will not be delayed.

In conclusion, the Montana Department of Agriculture, in addition to its agricultural responsibilities, is concerned with adverse effects to non-target species. It is difficult to rebut the effects of strychnine, or any of the alternative poisons for that matter, on non-target species. We approve of attempts to protect these wildlife as long as agricultural interests are also protected. Strychnine has been our most effective tool to control the ground squirrels and blacktail prairie dogs. The proposed modifications may decrease its effectiveness or leave producers without reasonable alternatives. If the recommendations of EPA concerning strychnine are imposed, we are concerned that agriculture will be left without reasonable alternative rodenticides. We know that, if left uncontrolled, rodents will be economically damaging to Montana's basic industry - food and fiber production.

The recommendations we have proposed will, hopefully, protect against non-target mortalities. We appreciate your thoughtful consideration of these comments. We also would like to invite EPA representatives to Montana to view our ground squirrel and prairie dog problems and to visit with producers and agencies involved in control programs. Any questions conerning this document should be directed to the Montana Department of Agriculture, Environmental Management Division.

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