

AGRICULTURAL EXPERIMENT STATION.
KANSAS STATE AGRICULTURAL COLLEGE.

ZOOLOGY DEPARTMENT.

The Prairie-dog Situation.

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METHODS OF COMBATING PRAIRIE-DOGS.

After a few months of experimentation, in 1901, Mr. D. E. Lantz, then of this Station, adopted poisoning as the cheapest and most easily applied method of ridding our western lands of prairie-dogs. The right to use a certain formula, protected by letters patent, was purchased for the state. This formula has since been followed pretty closely in the preparation of the poison mixture. That it does the work as efficiently and thoroughly as any substance or means which has been discovered or devised is attested by the almost universally favorable reports on its use and by the disappearance of the hordes of prairie-dogs from the farms and cattle ranges of the West.

The poison mixture is in the form of a syrup, prepared as follows:

Ingredients for One Quart of Syrup.

- 1 oz. strychnia sulfate (powered).
- 1 oz. potassium cyanide.
- 1½ oz. alcohol.
- 1 pt. syrup.

PREPARATION.

One ounce of green coffee berries is mixed with the white of one egg and allowed to stand fourteen hours or more. The strychnia is dissolved in a half pint of boiling water. The potassium cyanide is dissolved in a quarter pint of hot water and allowed to cool.

A little warm water is then added to the mixture of coffee and eggs and mixed with the potassium cyanide. Strain this mixture through a coarse sieve into the mixing vessel and add the syrup. Mix the alcohol with the hot solution of strychnine and add it to the other mixture. Stir all thoroughly.

* Abridgment of Station Circular No. 4, by T. H. Scheffer.

This mixture is put up in cans of two sizes, quart and half-gallon. It is intended to be used with wheat or kafir as bait.

HOW TO OBTAIN THE POISON.

The Station has undertaken the preparation and sale of prairie-dog poison. This is done without profit, in pursuance of the policy of the institution to extend its usefulness along as many lines as possible. The price, which covers the cost of materials and preparation, is \$2.00 per half-gallon can, or \$1.10 cents per quart can. Orders may be sent direct to the Zoology Department, Kansas Agricultural Experiment Station, Manhattan, Kan., but all remittances, except in currency, should be made payable to the financial secretary of the College. Poison will not be sent to persons unknown to us unless the order is accompanied by remittance. We make an exception to this rule in the case of orders sent in by the proper officers, such as county agents or township trustees.

HOW THE POISON IS SHIPPED.

Single cans of poison are securely wrapped and sent by express unless otherwise ordered. Two cans may be wrapped together and sent in the same way, but larger orders are boxed. Shipment of poison by mail is contrary to postal regulations. The purchaser should always state whether he wishes the poison sent by express or freight. In ordering poison, both your post-office address and nearest shipping point should be given. Advice by mail is given the day that shipment is made. If there is delay in receiving the shipment, or if any of the cans are damaged and leaking, the Zoology Department should be notified at once.

MIXING AND PUTTING OUT THE BAIT.

Failure to get good results has been traced in every case to carelessness or neglect of specific and simple directions in using the poison. The following directions for use are printed on the label of every can:

Directions for Use.

“For every quart of syrup take a half bushel of clean wheat or kafir in a large metal tub. After thoroughly shaking and stirring the contents of the can, pour it over the grain and stir until every part is thoroughly wet with the poison. Then stir in two or three pounds of fine corn meal to take up the extra moisture. Let the mixture stand in a shed over night, and put

it out early the next morning if the weather is fine. Place half a tablespoonful or less of the bait in two or three little bunches at the outside of each burrow occupied by prairie-dogs. Only occupied burrows should be poisoned. A half bushel of grain should poison from 500 to 600 holes.”

STIRRING THE SYRUP. Special pains should be taken to see that the contents of the can are thoroughly mixed before being poured over the grain. The two poisons, strychnia and potassium cyanide, are insoluble in the presence of each other, and settle to the bottom of the can like the lead in mixed paints. When used in cool weather, as is usually the case, the cans should be set in hot water for a short time and then shaken thoroughly while in an inverted position. It may even be necessary in some cases to stir the contents of the can with a stick.

WHEN TO POISON. While some degree of success may be attained by putting out our prairie-dog poison at any season of the year, we do not advise its use except in winter and early spring. When fresh grass or other vegetation is to be had the prairie-dogs do not take the poison bait readily. Any bright sunny day in January, February or March is favorable, provided it warms up enough to bring the “dogs” out for an airing. The very best time is a period of thaw following stormy weather, especially when the latter was accompanied by snow. When the thaw succeeds the storm the prairie-dogs wake up and crawl out “hungry as bears” and ready to eat anything in sight. The person who has the poisoning in charge must use his judgment as to favorable days for work. It is of no use to put out poison when the “dogs” will not come out. Much money has been wasted in certain townships by keeping a gang of men steadily at work poisoning for two or three weeks at a time, when some of the days were rainy or stormy. Under such conditions the potassium cyanide rapidly deteriorates, and, if rainy, the strychnia is also dissolved out and lost. Then, too, for the sake of our valuable birds, the poison ought not to be put out except at times when it is likely to be quickly taken by the animals for which it is intended.

TOWNSHIP METHODS.

DUTIES OF THE TRUSTEE. In all townships infested by prairie-dogs the trustee is required by law to purchase poison and to have the oversight of putting it out, or to use such

other materials and appliances as he may deem necessary to destroy the "dogs." He is allowed \$2 per day for this supervision, and may hire as many helpers as he needs, paying them \$1.50 per day. In the exercise of this latter function the trustee ought to use the same judgment and care that he would in hiring men to work for himself. Taxpayers have stated that young boys or irresponsible men were sent out to do work that required the maximum of care and judgment. The poison bait is often disposed of in a way to get rid of it instead of being deposited carefully in little piles about the entrance to the prairie-dog burrows. It is often left in situations where the lives of valuable birds and domestic animals are endangered.

GIVING OUT THE POISON. In some townships the trustee adopts the plan of distributing the cans of poison among the residents of his township and letting them put it out on their own lands without compensation. This plan is hardly within the contemplation of the law, but it has some advantages, as well as disadvantages. It enables the scattered settlers in large townships to clear the prairie-dogs off their own lands and adjoining borders of the lands of nonresidents. Some of these western townships are very large—twelve miles square, or even twelve by twenty-four miles in size—and trustees protest that the expense of hiring men to put out poison over such an extensive tract would more than bankrupt their treasury. Another advantage of the plan lies in the fact that men will ordinarily exercise more care in putting out the poison on their own lands than might be expected of persons hired by the trustee. Objections to the plan are, first, that the lands of nonresidents are left as breeding grounds for the prairie-dogs. Sometimes these lands constitute the bulk of the territory in a township or county. Again, by giving out a half-gallon can of poison to each landowner who requests it, much of the poison is wasted or allowed to stand around for years to deteriorate. Often the few "dogs" on an individual farm could be destroyed by the use of a pint or less of the poison.

GIVING OUT THE BAIT. If the plan of giving out the poison to residents of the township is followed it is well to order some cans of the smaller (quart) size. A few trustees have said, however, that they can get more and better results for the township's money by carefully mixing the poisoned bait themselves and giving it out ready for use to those who need it.