

THE EXTERMINATION of PRAIRIE DOGS in KANSAS.

J. G. Worswick .

-§-

THE EXTERMINATION OF PRAIRIE DOGS IN KANSAS.

For the past ten or fifteen years the prairie dog has been a torment to the farmer as well as the stock raiser of the Great Western Plains. In Kansas this pest has annoyed the farmers beyond endurance and many attempts toward its extermination have been made, but the majority of such undertakings have been to a great extent unsuccessful. Perhaps the most satisfactory among early experiments was the use of carbon bisulphid gas. The work was carried on something as follows:

Carbon bisulphid is a very poisonous gas and when the liquid form is exposed to the air it soon passes into the gaseous state and fills all available space; experimenters found in this property an advantage and proceeded to make use of this simple fact. The work of destruction by this agent was done mostly by contractors who would go to the farmer and agree to kill all the dogs on his land for a certain sum of money; and the farmer seeing the advantage of being rid of the dogs, would usually accept the proposition. The contractor would then begin operations. He would appear in the field with a great quantity of cotton, flax straw etc, and a few bottles of carbon bisulphid; as he confined his work mostly to the larger towns it was not at all inconvenient for him to work from a wagon, driving a little distance when necessary in order to make his material available. A bunch of cotton about the size of a man's fist would be saturated with the liquid and immediately thrust into the burrow; an end-gate rod would be used to force it down a distance of two or three feet, and as quick-

ly as possible the opening of the burrow would be filled with the flax straw; this was the most essential part of the work, it being necessary to make the opening air tight so that when the gas escaped it would be forced back into the bottom of the burrow and the prairie dogs would soon be suffocated. This work could be carried on quite rapidly and many burrows would be visited in the course of ten hours by two men.

The above method of extermination was found to be quite successful and was, in most cases, comparatively practical. But in examining it closely we find its weak points. After a farmer had paid a contractor to kill his dogs he soon found that others were coming in and in the course of two or three years his pastures and meadows would again be in bad condition. The reason for this was that in some cases the dogs would not all be killed in the town and it would soon be repopulated. And in other cases the neighboring farmer would not think he had dogs enough to pay him to have them killed, so in this way the dogs were hanging on, although thousands had been killed in other localities; there were still enough left to torment the energetic farmer, and to cause thousands of acres of what would otherwise be valuable grazing land to be almost worthless.

New land was being broken and the necessity of destroying the prairie dog became a more important subject each year. The people felt the need of some reliable process that would be in the reach of every body, financially, and one that could be easily applied, and of such a nature that all the dogs would be destroyed; it was believed that this would encourage the pursuers of agriculture in the western plains of our great state. The question dragged along in this manner

for a number of years. Individual efforts had no effect and it became the general opinion that in order to help the matter the state would have to do something.

As cultivation became more necessary the importance of ridding the land of the prairie dog became more evident, and through the efforts of some energetic farmers the matter was laid before the legislature during the winter of 1901. At this time a bill was passed appropriating \$2,000.00 to be used for the purpose of carrying on experiments toward the extermination of the prairie dog in Kansas.

The work was put in charge of Prof. D. E. Lantz of the State Experiment Station. Upon looking into the matter it was found that some experiments in the State of Texas had proven very successful in a similar work, by the use of a certain poison. The State right for the use of the formula for this preparation was bought of the patentee for \$200.00 and preliminary tests were made with excellent success. After a thorough test of its efficiency the manufacture of the poison was begun and it was sold to the people of Kansas at actual cost of the materials used in the preparation, which was found to be \$3.00 per gallon. This amount was only sufficient to pay for the materials actually consumed in the preparation of the poison, the expense of the necessary labor of manufacture being met by the amount set aside by the state. In this way the poison was put in reach of every one.

In the preparation of a gallon of the poison the following materials are used in the proportions given below:

- The whites of two eggs;
- Four ounces of alcohol;
- Four ounces of potassium cyanide;

- Four ounces of strychnine;
- Four ounces of green coffee berries;
- One-half gallon sugar syrup.

These material are mixed with about three pints of water and the result is a thick, opaque syrup. The process of mixing is as follows:

the whites of the eggs are poured over the green coffee berries and allowed to stand for at least fourteen hours; the coffee is then placed in a coarse sieve, and hot water, in which the cyanide has been dissolved, is poured over it. To this is added the syrup, which has been heated to about eighty or eighty-five degrees; the strychnine is dissolved in boiling water, the alcohol added to this and the liquid poured into the vessel containing the rest of the mixture. The whole is then thoroughly stirred and drawn off into half gallon cans for convenience in handling and shipping.

The following are the directions for use: - Put two bushels of good clean wheat in a tub; after thoroughly shaking the contents of two cans of the poison, pour it over the wheat and stir until it is thoroughly distributed through the grain; then stir in a few pounds of corn meal to take up any extra moisture. Let the mixture stand in a shed over night and put it out early next morning if the weather is fine. Place about a teaspoonful in two or three little bunches at the outside of each burrow, inhabited by prairie dogs. Only occupied burrows should be poisoned. A gallon of poison on two bushels is sufficient for from 2,000 to 3,000 holes, if properly used.

As soon as Prof. Lantz had convinced the people of the state of Kansas that the work was no longer an experiment every one began to take an interest in it. Orders came pouring in from all over the

western part of the state where the prairie dog had reigned supreme for so many years, and during the winter of 1901 and 1902 there were used over the infested area between four and five thousand dollars worth of the poison, with such uniform success that reports fail to show a case where the party buying the poison was not well satisfied with the results.

The following winter, as soon as the weather was favorable for administering the poison, the work was renewed, and the orders were about as numerous as they had been the previous year.

When the State Legislature met in 1903 they were convinced that the experiment had been carried to success; and an appropriation was made for another \$2,000.00, this amount being sufficient to carry on the work for two years more. This Legislature also passed a bill compelling land owners to take steps toward destroying the pests on their own land and enacted that in case of their neglect to do so, the work should be taken up by the township trustees and the land taxed for the amount expended upon such work. This gave the enterprising land owner great assistance in his attempts to rid his land of the prairie dog as, with every one working in harmony, a much more noticeable result should follow than would otherwise have been possible.

The amount of this poison consumed over the state during the winter of 1903 was slightly greater than that of the previous winter, although the law making the killing of the dogs compulsory did not go into effect until the following June.

During the summer of 1903 the products used in the manufacture of the poison increased in value to such an amount that it was found necessary to raise the price of the prepared article from \$3.00 to \$3.50 per gallon, and it has since been necessary to maintain this

price in order to pay expenses.

The following winter proved to be an excellent season for applying the poison, and the amount distributed by the Station surpassed that of any previous year to the value of about \$500.00. During the summer of 1904 Prof. Lantz, having been appointed to a position at Washington, D. C., was compelled to resign his position here and the work was turned over to the Natural Science Department of the Kansas State Agricultural College, under charge of Prof. Popence. Since then the work has been carried on very effectively by this Department and during the winter of 1904 and 1905 the output has so far about equalled that of the previous year, and at this writing, March 15, 1905, orders for poison are coming daily.

In closing I am sorry to say that the State Legislature, which recently adjourned, saw fit to discontinue the appropriation, and if the work is continued it must be carried on entirely by the College. This, however, will probably be done.