



Press Bulletin No. 158

Agricultural Experiment Station
Kansas State Agricultural College

Destroying Pocket-Gophers

The alarming increase in the numbers of pocket-gophers the past season and their rapid spread to new territory calls for more persistent and concerted action on the part of farmers in the infested districts of the State. This press bulletin will be followed by a fuller treatment of the subject in a regular bulletin of the station now ready for the printer. It is hoped that those who are interested in the matter will send in their names to the department unless they are already on the regular mailing list of the College.

We have two species of the pocket-gopher to contend with in Kansas, but, as their habits and methods of attack on cultivated crops are very similar, the same general discussion and recommendations will apply to both. The prairie pocket-gopher is the larger and darker colored species. It is common over eastern and central Kansas as far west as the ninety-eighth meridian. Correspondence and numerous trips to all parts of this range during the past few years have developed the fact that the species is rapidly increasing, largely on account of the increase in acreage of alfalfa. The area of greatest infestation includes the valley of the Kaw and the regions drained by the lower courses of its main tributaries—the Blue, Republican, Solomon, and Smoky Hill. In southeastern Kansas the pest seems to be giving little trouble as yet. The plains pocket-gopher occupies the western third of the State, perhaps intergrading with the eastern species along the common border of their respective territories. It also ranges down the Arkansas valley for some distance below the great bend. The species shows color adaptation to the lighter sandy soil of the region. It throws up smaller mounds of earth than the eastern form.

While the interests of the potato grower, truck cropper and orchardist suffer somewhat from the depredations of the pocket-gopher, it is the alfalfa raiser who has the most grounds for complaint. That crop furnishes the ideal conditions of an easy life for the gopher. The ground is not plowed up for a period of years, and the roots of the plant are thick and succulent, penetrating also deep into the soil, where they may be reached by the burrowing animal even in mid-winter. A neglected alfalfa field may be practically ruined in a season or two. More recently, also, prairie meadows and pastures have been invaded until some of them have the appearance of being plowed up.

Busy at any season of the year, the pocket-gopher is most active in the late fall and early spring. In the months of October and November, particularly, the whole tribe adopts the strenuous life. The nearly grown young are then rapidly extending their burrows, and all are laying up food supplies for the possible time of scarcity in the stormy periods of mid-winter. The animal does not hibernate, but is about in all the milder spells of winter, throwing up an occasional mound wherever the ground is not frozen so hard as to prevent digging.

Methods of destroying the gopher have been tested on the station grounds and in various parts of the State for several years. In connection with the work of exterminating prairie-dogs—which, to the credit of the station, is now practically complete—a vigorous warfare has been waged on the gopher, with the result that the numbers of the animal have been greatly lessened in all communities where vigorous and concerted action has been taken. It is extremely improbable, however, that the pocket-gopher will ever

share the fate of the prairie-dog, although there is no longer any question but that we can reduce its numbers to a safe minimum and actually secure local extermination.

As a result of much experimentation during the past five years, poisoning has been found to be the best method of getting rid of the gopher, especially if the area to be treated is extensive, or if a smaller tract is badly infested. The little animals do not possess the shrewdness and sagacity of the common rat, and will readily accept many kinds of poisoned bait. A poisoned syrup, prepared by the department issuing this bulletin and sold to the farmers of the State at actual cost, is now very generally used. More than fourteen hundred quart cans have been sent out, and the results as reported or investigated have been uniformly favorable. We, therefore, recommend this poisoned syrup as the best means known to us at present for the destruction of pocket-gophers. The syrup is intended to be used with soaked corn as a bait. A particular advantage in the employment of a poisoned syrup, instead of baits containing crystals of strychnine, lies in the fact that large quantities of the corn bait can be easily and quickly prepared by the former method. A quart can of the syrup sells for one dollar and ten cents, and should be shipped by express. It is not mailable. Full directions for its use are printed on the label of each can.

Small pieces of potato, sweet potato, or apple, about the size of the end of one's finger, poisoned with strychnine give excellent results. Make a slit in the bait with the point of a knife and insert a crystal or two of the poison; a bit of the latter as large as a grain of wheat is sufficient. Raisins or prunes treated in the same way are readily eaten by the gopher. In all these baits the intensely bitter taste of the strychnine is partially disguised until the fatal bite is taken.

No matter what kind of poisoned bait is used, the method of introducing it into the burrows is the same. Make an opening into the runway by means of a sharpened stick and drop in a few kernels of the corn or an equal amount of any of the other baits. A broom-stick sharpened at the end, or, still better, a spade handle shod with an iron point and having a foot bar bolted on about fifteen inches from the end, will serve to make the opening. Do not close the opening after dropping in the bait. Prod for the runway at a point near where the earth of the mound seems to have been thrown out, or on a line between two adjacent hillocks. Use the poison only where fresh mounds are being thrown up, and after treating the field, level the hills of earth in some way so that the work of any survivors may be readily detected. Give these another dose.

Trapping gives good results if one has the time to attend to it properly. If there are but a few gophers on the premises, the trap is a sure remedy. Experiments involving over seven hundred settings of the common steel trap, and also of special gopher traps, have demonstrated that an average catch of about twenty-five per cent may be expected—that is, at least one-fourth of the traps set will catch and hold the gopher. Sometimes we have made a fifty or seventy-five per cent catch. The special gopher traps give rather better results than the steel traps, and have the added advantage of being more easily and quickly set. The box trap of the California type is the best of these.

With us, fumigation methods or the use of carbon bisulphide, either on saturated rags or when evaporated and the gas forced into the burrows by means of a bellows, have given very poor results. The gas is absorbed so readily by the loose soil and the burrows are so long and intricate that in nine cases out of ten the gopher is unharmed. The method also involves a maximum of expense in materials and labor.

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