

the employment of a mixture consisting of: shorts, 50 pounds; molasses, 1 gallon; water, $1\frac{1}{2}$ gallons; and Paris green, 1 pound.

The shorts and Paris green are mixed while dry. The molasses is then dissolved in the water and the solution is added slowly to the shorts mixture, which is stirred constantly with the hands in order that any lumps which form may be broken up.

The mixture is spread broadcast at the rate of 20 pounds of the shorts to the acre, and by preference should be applied as late in the afternoon as is convenient.

Where the soil is wet the shorts may be replaced fairly satisfactorily with bran, or half bran and half shorts, but wherever possible the shorts should be used. On perfectly dry land bran is almost useless. The reason for this is that bran, under prairie conditions in southern Alberta, appears to have very little attraction for cutworms when it is dry, even though it be flavoured with molasses. Shorts, when similarly flavoured, however, are almost as attractive when dry as they are while moist.

When bran is used the water should be increased to 6 gallons to every 50 pounds.

When obtainable, cheap crude beet molasse should be used, such as that which is made by local sugar factories. This is more attractive to cutworms than cane molasses, and is incomparably cheaper.

TRAP FURROWS.

Broadcasting is an expensive means of checking cutworm devastation, and on account of the migratory habits of the species we are considering, the benefit derived from it may be temporary.

Wherever possible, therefore, we would advise that farmers utilize trenches, in which to trap and kill the Army Cutworm.

In our description of the life-history of this pest, we stated that the larvæ are seen first soon after the frost is out of the ground. At this time farmers are beginning to prepare their seed-beds. They may find that an enormous number of cutworms are present in, and on, the soil of the fields they intend to sow.

Our experience is that it is safe to proceed, and to sow the crop on such an infested field, provided that it is cleared of all growth, and that efficient furrows are made around, and in some cases, through it. Such furrows, when made and poisoned in the manner described below, prevent practically all fresh incursions of larvæ, and will in a short time capture most of those already in the field.

We have already shown that the general movement of larvæ is north and west, and that even when allowance is made for temporary variation the migration is, on the whole, in one direction.

In the early spring the period intervening between the time when the preparation of the seed-bed is begun and the time when the crop first appears above the ground is from one to two weeks. We have thus at least a week in which to take advantage of the migratory habits of these larvæ.

When the land is freed from green growth there is no food left for the larvæ, and they migrate at maximum speed, sooner or later to enter one of the trap furrows prepared for them. If, on the other hand, the spring cultivation has not killed or buried all green growth, migration will be much retarded, and the crop may be up before the larvæ have been destroyed. In this event, expensive broadcasting of poisoned bait alone will ensure the crop against serious damage.

It is essential, therefore, that an infested field be thoroughly cleaned before the crop is sown.

Construction of trap furrows.—Usually the soil is very dry during the seeding period in southern Alberta, and for this reason it is very difficult, and often impossible, to construct a vertical-sided trench of the type usually advocated