ROHWER, S.A.

CUTTING COSTS OF INSECT CONTROL

A radio talk by S. A. Rohwer, assistant chief, Bureau of Entomology, delivered Monday, February 6, 1933, in the Department of Agriculture period of the National Farm and Home Hour, and broadcast by a network of 49 associate NBC radio stations.

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Hello, everyone.

Our friend Edler has just suggested, in his comments on the supplies and prices of hay and pasture seeds, that these times are forcing many changes in the organization and the practice of farming. We are shifting away from the basis of the past 10 years. We are carrying through a hundred and one small changes in our ways of living and working and spending that altogether make up what the economist calls "readjustment."

We entomologists, whose job is to find ways of winning the eternal warfare between man and the insect pests that trouble him and destroy his crops and take away the efficiency of his livestock, are working out newer methods for controlling insect pests that will contribute to this readjustment that farming and gardening are going through. I want to talk with you today about one sort of readjustment of insect pest control methods -- readjustments that reduce cash costs for commercial growers and home gardeners, and also enable them to realize a crop.

Now of course one readjustment would be to cut out all insect control methods. But that is not practical. In many instances, no insect control means no marketable crop -- a waste of the labor and money put into its production. Two weeks ago, Corbett of Rhode Island and Rowe of Massachusetts described to you adjustments that fruit and truck growers in the northeastern section of the country are making in their businesses. They both commented that growers are to be more vigilant than ever in controlling diseases and insects. These growers are going to get maximum production of good produce for their expense and labor. The adjustment made by growers in this section of high labor costs is to put in more equipment in order to reduce the expenditure for labor. But the reverse may well be true in other sections where labor costs are lower.

So please take these comments of mine today with the understanding that general statements may not always apply to your specific conditions.

Now, as to methods of cutting costs of insect control. One certain way to cut costs is to be very, very cautious about buying nostrums offered by itinerant vendors who promise miraculous results in control of insects for a small expenditure of money. Believe only the statements printed on the labels of the containers. And if the vendor is operating within one State only, you may not be able to believe even the label statement for all states do not have laws requiring accuracy in labeling of insecticides and fungicides.

Be sure you are not wasting money before buying any material claimed to have near-miraculous powers of exterminating insects. And then, in order to cut down

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your cash expense for applying needed chemical controls for insects that affect your crops, take advantage of the cultural methods and low-cost supplemental operations recommended by the entomologists. I shall outline a few of these methods but the list will not be exhaustive by any means.

Here are two simple operations that can be carried on right now by apple growers to cut down the cost of controlling the codling moth. First, scrape the loose bark from the tree trunks and burn the scrapings. Second, destroy the cases of the hibernating worms found in picking boxes and crevices in packing sheds and outbuildings in or near the orchard. These operations will cut down the numbers of overwintering moths. Then when it comes time for the first sprays do a thorough job, applying the schedule recommended by your State entomologist. Thorough and effective control for the first brood will further lessen the numbers in succeeding broods and you should not have to make so many heavy sprays to control the codling moth during the remainder of the season.

Here is an instance of a cultural method that proved effective in averting damage by grasshoppers last season. It also brought about better crop yields. Under conditions of last year, fields in the Valley of the Red River of the North that had been well plowed and planted early escaped noticeable grasshopper damage. On the other hand, the method of "stubbling in" grain rather late in the season often seemed to bring on grasshopper damage. The reason for the difference was that the plowing destroyed the grasshopper eggs laid the previous fall.

Now that method of good plowing and early planting is good cultural practice anyway, regardless of grasshopper conditions. Last year it helped ward off grasshopper damage as well as bringing better yields because of its good influence on the growth of the crops. In another year under different conditions, it might not prevent the grasshopper damage, but it is good practice for the sake of the increased yield. And it is considerable insurance against the insect attacks. However, there is no substitute for early, effective, community wide poisoning to control grasshoppers in sections where widespread damage threatens and weather conditions favor the 'hoppers.

Another instances of cultural methods of control of insect pests that all of you know about is the method of cleaning up corn refuse and plowing under the remains of the corn plant left in the field for the control of the corn borer.

The list could be lengthened indefinitely. But I shan't do that, as indefinite time is never given to a radio speaker. But let me call your attention to a few more specific instances of low-cost methods of preventing or controlling insect damage -- methods that involve small labor expense and no expense for chemicals.

For instance, the new way of protecting the seed pieces of potatoes from injury, by the seed corn maggot. This type of injury occurs mainly in the Middle and South Atlantic seaboard section where the second-early potato crop is produced. The method of protecting the seed pieces from injury is to cut them about 10 days before planting, store them in a warm moist room, and let the cut surfaces cork over or "suberize." This corky layer over the cut surfaces seems to baffle the boring efforts of the seed corn maggot and save the seed pieces from injury.

The results of some recent experiments with control of the sand wireworm in South Carolina have shown that the damage by this pest decreases greatly when the quantity of humus in the soil is increased and the winter hosts plants destroyed. In cases where it is feasible, fallowing the land for one season will also reduce wireworm infestations under South Carolina conditions.

Clean-up measures hold the key to control of the strawberry weevil in North Carolina. The weevil hibernates near the strawberry fields in uncultivated waste lands. Cleaning these of debris during the dormant season reduces the number of weevils that survive, and thus eliminates or cuts down the number of chemical treatments to kill the next year's crop of the weevils.

While we're speaking of control of weevils, let's not forget that perennial enemy of the sweet potato crop of the south -- the sweet potato weevil. The standard methods for control of this pest are to choose only uninfested tubers for the slip bed, clean out all vines and crop remnants from last year's field, destroying them by burning, and to plant the new field as far from the old one as possible.

Grape growers will be interested in a new method for control of the grape berry moth. This modifies the cultural practices of vineyardists so as to expose the cocoons of the moth during the winter, then cover them with soil during the normal emergence period in the spring.

These random example will I think serve to indicate that the control of many insects can be brought about, at least partially, without going to heavy expense for chemical treatments. However, many insects can not be controlled -- nor can crops of salable stuff be produced -- without practicing some chemical control. Your county agricultural agent will have full information for you upon the latest recommendations from the Federal and State entomologists on how to control the most destructive insects at the lowest cost.

Finally, a word to home gardeners. We shall have to go back this year to strict sanitation and clean-up of last year's crop remnants, and weed control in order to produce many of the crops that the home garden can contrinute to the family living. For instance, just cleaning up the remnants of last year's planting may make it possible to grow cabbage without having it ruined by the cabbage worm. Keeping the garden free of weeds will cut down the numbers of plant lice. The old method of using tar-paper shields around the base of the newly set plants will keep the cabbage maggot from the roots.

You experienced gardeners know more devices for control of insects, without resorting to chemicals, than I can give in this radio talk. To you inexperienced gardeners, I offer the suggestion that your State agricultural college can give you information on how to obtain, at little or no expense, bulletins giving concise directions for control of insects which attack garden vegetables.

With that reminder, I bid you good-day, and thank you for your attention.