Developing Countries Farm Radio Network

Pack 10, Item 9

Type: Script

1985

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**Preventing insect pest damage to crops** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Information on this topic was requested by DCFRN Participants in Argentina, Colombia, Dominica, Dominican Republic, Ghana, Honduras, India, Mexico, Palau, Peru, Philippines, Senegal, Sierra Leone, Swaziland, Taiwan, and Thailand.

Presenter: George Atkins

**Special note**

Before using information in this item, please read the notes at the end concerning related DCFRN items.

**Suggested introduction**

We at this radio station are part of a worldwide information network that gathers farming information from developing countries all over the world. It's the Developing Countries Farm Radio Network, sponsored by the Canadian International Development Agency, Massey Ferguson, and the University of Guelph.

Through this Network, we bring you information on ways to increase food supplies for your family, or to sell—ways that other farmers have used successfully.

Here's George Atkins now with ideas about crop pests, and how to discourage them.

**ATKINS:** As farmers and gardeners, we all have problems—sometimes with flying insects, other times with insects in other forms like grubs and caterpillars. They attack our crops and reduce our yields. There are many ways to prevent these insect pests from damaging the crops we grow.

Today, let's think about how you can reduce or even prevent insect damage like this without using pesticides that you have to buy.

It's a good thing for everyone to remember that many chemical pesticides can be poisonous to people, fish, and livestock if they aren't used properly, and, of course, they cost money. Here then are a few useful hints to help you deal safely and cheaply with some of your insect pest problems.

To begin with, you'll probably have fewer problems with pests if you grow two or more different kinds of crops together at the same time in the same field or garden. You may know that different pests attack different crops. Because of this, if you grow one crop alone over a large area, a pest that attacks that crop can quickly spread throughout the entire field, moving from one plant to the next very easily. Growing different crops together makes it harder for pests to spread.

It's also very good to rotate your crops—that is, don't grow the same crops in the same place season after season. If you grow the same crop in the same soil time after time, you'll have more and more problems with pests attacking that crop. So after growing a certain crop one season, next time plant something else in that place, something that's not bothered by the same pests as the crop you grew there before.

It's also useful to cultivate or turn over the soil after harvest or before planting. This disturbs insects and insect eggs in the soil or in weeds and leftover crop residues on plant parts.

Turning over the soil buries some pests deep in the ground, and leaves others lying on top of the soil where they'll dry out or be eaten by birds. And of course turning over the soil also helps control weeds.

In general, it's good to disturb or destroy the places where insect pests may hide or lay eggs.

Whatever you do, don't plant any seed material that has insects or insect eggs on it or in it, because plants that grow from that seed could be attacked by that insect.

If you grow your own seed or planting material, take it only from good healthy plants that have not been damaged by insects—and before you plant, check the seed again to make sure there are no insects in it. Plant only clean seed!

Another thing: if you buy seed, try to get varieties that grow well in your conditions and are not easily damaged by the main pests in your area.

In general, you'll have fewer problems with insects if your crops are strong and healthy and growing well. Weak, sickly plants are more easily damaged by insects and diseases.

So take good care of your crops and your cropland. Improve your soil by adding compost and manure when you can. That adds good humus or organic matter, as well as plant food that keeps your crops healthy.

You should check your crops regularly for insects. Look carefully—some pests are very small. Look on the undersides of leaves, not just on top. If you do this, it may help you discover a problem before it causes much damage. You can then try to stop it from spreading. Here's an example:

When you look, some day, you may find some small larvae just starting to eat at the leaves of a crop you are growing. Some of these larvae can eat a lot in a day and they can grow very fast. After a few days, they could be much bigger and could have eaten a lot more. Now in a case like this, sometimes all you might need to do is to knock them off the leaves onto the ground when they're very small and they'd do no more damage to your plants.

Another possibility is that if you find insects, their eggs, or their larvae, you can sometimes pick them off by hand. Or you could try some other control method—for instance, trapping them, or letting your chickens eat them, or treating the plants with something the insects don't like. Some farmers make spray or dust to control the pests. They make it from onions, garlic, chili (hot pepper), pyrethrum, neem, or other plants they know of that grow nearby. Perhaps some of the old people in your area know of plants like this that you could use.

Now some insects are not harmful to crops; in fact, they may be good. Some attack pests that bother us, and others are useful for pollinating blossoms and flowers. So it's good to get to know the insects in your area. Learn which are pests and which aren't. And try not to bother the useful ones.

A big problem with some chemical pesticides that cost money to buy is that they may kill good insects as well as bad ones. For this and other reasons, many farmers deal with their pest problems in other ways if they can, and use chemical pesticides only if they really need to.

Remember, you'll have fewer problems with insects if you:

\* Grow two or more crops together at the same time in the same field or garden

\* Rotate your crops—that is, grow them in a different place each season

\* Do a good job of cultivating the soil—this will disturb places where pests might hide or lay their eggs

\* Grow good healthy plants, from good healthy seed, in good healthy soil

\* Check your plants often, and if you find a pest problem, try to stop it from spreading.

Serving Agriculture, the Basic Industry, this is George Atkins.

**Notes**

1. For maximum benefit to your audience, please use the information in this item (Item 9) after presenting the information in:

Knowing Insect Life Cycles Helps You Control Pests - DCFRN Package 10, Item 8.

2. Also, in association with this item, you might wish to use information from:

Crop Rotation - DCFRN Package 7, Item 1A.

3. Other items on protecting crops from insects are:

Pesticide Safety (Parts 1 and 2) - DCFRN Package 10, Items 10 and 11

Chickens Reduce Insects in Fruit - DCFRN Package 4, Item 9B

A Simple Crop Duster - DCFRN Package 5, Item 1C

Simple Solution to a Big Pest Problem - DCFRN Package 7, Item 9B (re controlling cutworms)