Is your milk safe from pesticide residues?

by Robert Dunaway

SOME of the hottest controversies in dairying arise when pesticide residues show up in milk. And it can happen to you or any dairyman who isn't careful with pesticides. Carelessness with these chemicals can mean no milk checks for awhile, or even getting out of dairying.

"It's tempting to blame pesticides when residues are found in milk. However, residues come from carelessness in using pesticides that actually are safe and often essential to dairymen," says Dave Mick, extension entomologist at Iowa State University.

In fact, agricultural chemicals have helped make "nature's most perfect food" — milk — even more perfect. They help produce a higher quality product more abundantly and efficiently than ever before. Safe use of the right pesticides won't cause any problem either.

When residues appear in milk, the financial loss can be shattering. The case of 13 Iowa dairymen who were forced to dump milk last year — in one case for 150 days — is a glaring example of what can happen.

Investigators found no obvious reason for these residues. Yet, somehow, small amounts of insecticide leaked into the milk.

Until researchers can expose the exact cause of these unexpected residues, Mick suggests that you take certain precautionary measures against "contamination points" that could cause pesticide residues in your milk. There are at least eight of these contact areas that should be watched to protect against residues appearing in your milk. These include feed, insecticide use, inhalation, replacement animals, bedding, pesticide storage, water, and pesticide disposal.

Feed. Check your feed supply to make sure it isn't now or can't become contaminated with pesticides. If a cow eats contaminated feed, residues are almost sure to show up

cows glean cornfields. Never let milk cows clean up fields that have been treated the same year with aldrin, heptachlor, or any other chlorinated hydrocarbon. This includes anything that might contain residues from often-used DDT.

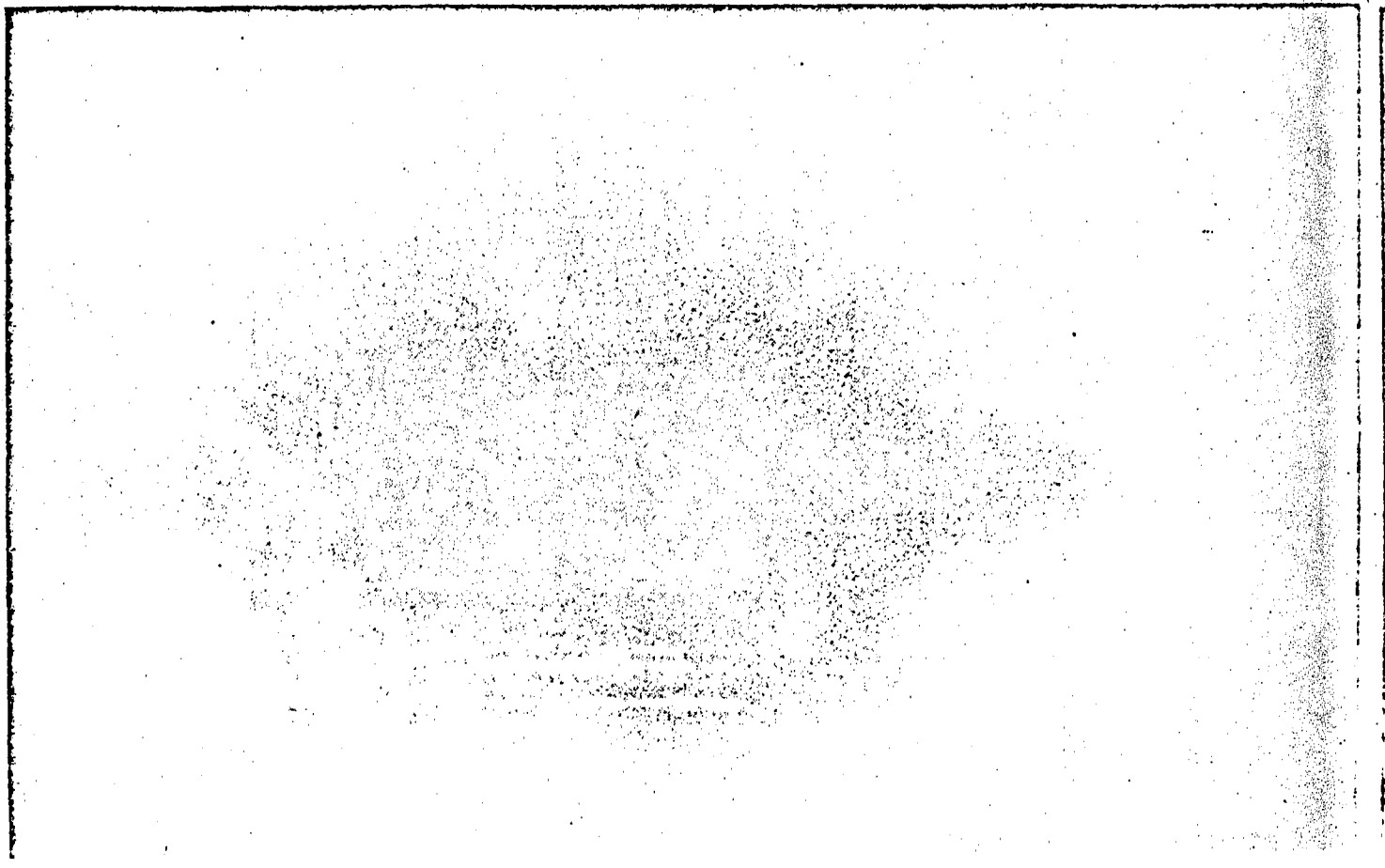
Chop corn silage 9 to 10 inches above the ground if the soil has been treated with aldrin or heptachlor. Also, oat silage from fields that were treated with these pesticides during the past year should not be used for dairy cows, if an untreated field is available. The soil holds these pesticides, and crops from fields treated with them could contain residues even a year after treatment.

Water. Always be careful with the water your cows drink. They may become affected with residues by drinking water that has washed from a field treated recently with aldrin, heptachlor, or other pesticides. Contaminated water can lead to contaminated milk.

If you have a pond for the cows to drink from and there is danger of pesticides washing into it, water your cows from a well you know is safe until you have a chance to have the pond water tested.

Use. The actual use of pesticides should have special significance for dairymen. It is wise to use insecticides around your dairy cows only when it is absolutely necessary. Then, use only those approved and recommended for dairy cows.

Be especially careful with pesticides in and around the barn and



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Feed. Check your feed supply to make sure it isn't now or can't become contaminated with pesticides. If a cow eats contaminated feed, residues are almost sure to show up in her milk. The tolerance level for pesticide residues in milk is zero.

If dairy feed has been stored close to pesticides or if spray drift has settled on it, the feed could be contaminated.

Aldrin and heptachlor are frequent problem-causers because they often are used and stay in the soil longer than other pesticides. They can be washed from treated fields and deposited on plants that dairy cows graze. Be alert to these pasture wash areas and keep your cows from grazing them after a hard rain.

One eastern United States farmer was forced to dump over 3,000 pounds of milk a day for several months after he fed sweet corn silage containing DDT residues. He had bought the silage. His big mistake was not having it tested.

The Wisconsin Alumni Research Foundation at Madison, Wis., is well-equipped to test feed and milk if residues are suspected. The Iowa State University Veterinary Diagnostic Laboratory also is well-equipped to test feed and milk on a smaller scale. So, if your feed is likely to have been contaminated with pesticides, have it checked. It's a lot cheaper than dumping milk.

It's best to buy, at one time, large quantities of hay that you know are free of residues. This will reduce the chance of buying some hay that is contaminated.

Another feed source of milk residues can result from letting your

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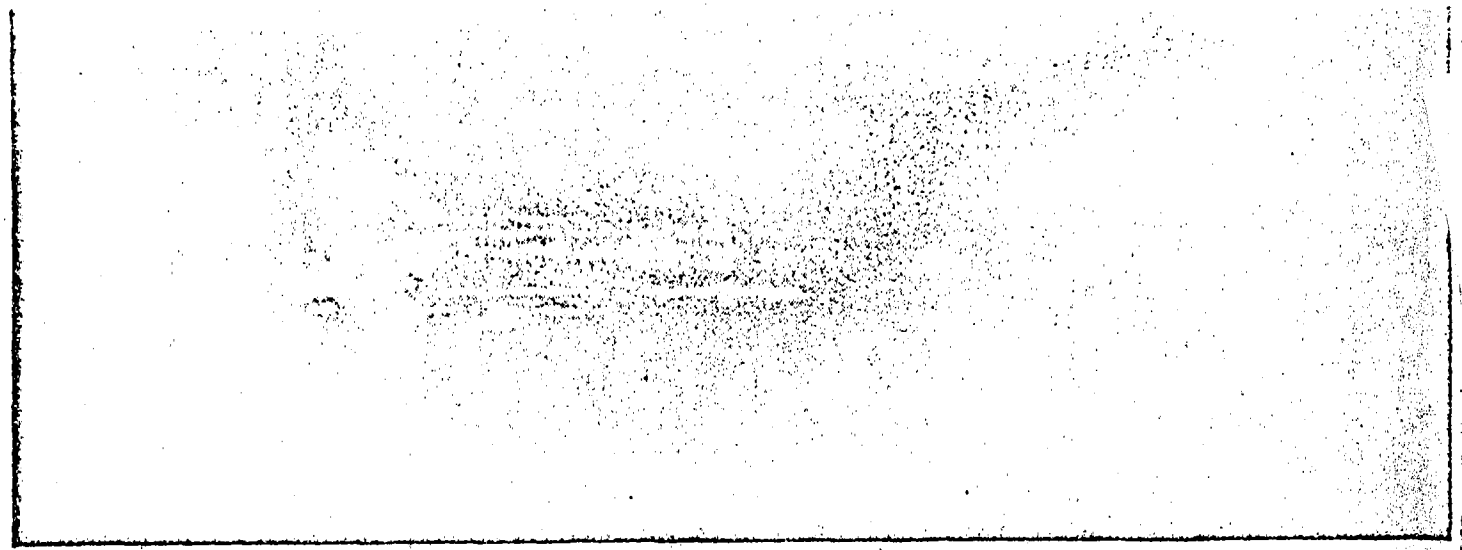

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milk house. Read the label on insecticides carefully.

It is essential to apply all nondairy pesticides away from where the cows will eat, graze, loaf, or be milked. Also, never use a pesticide near any dairy feed. As another safety precaution, store all applicator equipment, including field crop applicators, away from the cattle.

Pesticides may be carried by animals, insects, rodents, the wind, and, far too often, by man. Therefore, after you have used any pesticide, always remember to change your clothes and wash your hands before milking.

Records are essential in the milk residue problem. If you have application records to show that you used all pesticides properly, you are eligible for indemnity payments, if your milk becomes contaminated. A chemical application record form is available from several universities. Such a form makes it easy to record field pesticide applications. Usually, they can be adapted to livestock and building insecticide applications, too. And, in most states, these records are required by law.

Inhalation. Most pesticides can enter the body three ways — through the mouth, nose, and skin. Never let your cows breathe the spray or dust of any pesticide not recommended for dairy use. This, too, can be transferred to the milk and cause residues.

It is best to spray only on days when the wind won't drift pesticides around your cows if they are nearby. Preventing drift will protect you, too, since you can absorb many pesticides the same way animals do. The cost when you become poisoned is illness and possible death.

Bedding also plays an important part in avoiding pesticide residues. If you chop cornstalks for bedding, take them from fields not treated with aldrin or heptachlor the same year. Since these insecticides can enter the cow's body through the skin, contaminated bedding can pass residues into the milk.

It may save you many dollars to check all bedding materials carefully for pesticide residues before you buy them. Remember, not everyone is as careful with agricultural chemicals as you may be. Someone may unsuspectingly sell you contaminated bedding without knowing the trouble it can cause.

Replacements. The widespread use of insecticides and other pesticides makes selecting replacement cows especially important. One way to make sure the animals are free from pesticide residues is to have their milk tested at one of the testing stations. Another way to insure yourself is to buy cows with a guarantee that they are free from pesticide residues.

One cow can contaminate the milk from your whole herd. No matter how good a replacement is as a milk producer, it would take her a long time to repay the loss she would cause if her milk had to be dumped down the drain.

Disposal. Residues can result easily from your cows eating unused pesticides or licking insecticide bags or pesticide cans. To avoid this, bury all containers at least 18 inches deep in an area away from where surface water or leaching action could contaminate your drinking water or water for cattle.

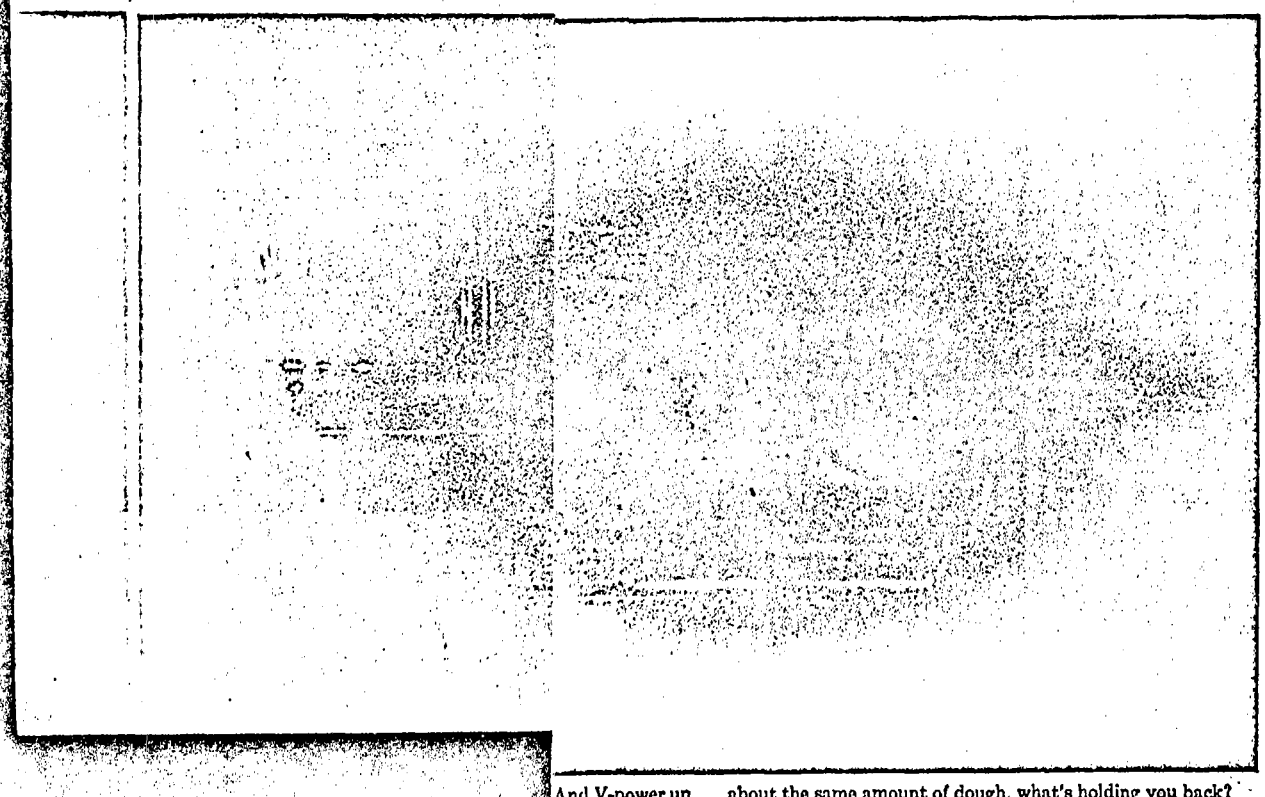
Be sure to get rid of all unused pesticides, too, if you don't have a safe storage area that can be kept locked. Old pesticides can cause much more damage than they are worth, if they aren't stored or disposed of safely.

Storage. Pesticides stored near other products, such as feed and bedding, can contaminate these materials. If you have any leftover chemicals, make sure they are stored away from all feed, bedding, water, and equipment that will come in contact with your cows. Keep storage area locked to make sure no animals, children, or irresponsible persons can get to them.

When one farmer mixed mineral in feed he was grinding for dairy cows, aldrin residues soon appeared in the milk. The feed was contaminated. The insecticide had been stored in used mineral bags and it was used instead of mineral. Residues still were showing up in this dairyman's milk two months after he stopped using the feed mixture.

You can see that mistakes can happen even when you're careful. If you happen to "miss" in following one or more of these recommendations, don't be like the ostrich and bury your head in the sand. Cooperate with federal, state, and local authorities. Mick urges that if residues occur in your milk, work with these people to whip the problem.

But, if you follow all these practices carefully, you can be confident that pesticide residues won't show up in your milk, and that you won't have to throw your dollars down the drain.



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