

## There's More Than One Way To Skin a Bug, Says Koval

Chemicals will probably always be used for insect control, according to Charles Koval, University of Wisconsin Extension insect control specialist, but in more refined techniques and in forms other than presently known insecticide sprays.

For example, use of attractants — food, habitat or sex or a combination of these — that draw insects from large areas into traps may replace insecticides, he says.

Artificial foods, substituted for natural foods, can be treated with non-toxic insecticides to kill insects drawn to a trap.

Habitat ammonia bait draws flies to a jar where they proceed to lay their eggs. In this manner millions of eggs can be destroyed, thus greatly reducing the popu-

lation of the next fly generation.

An example of using sex attractants can be seen in peach borer control. One female borer in a trap draws large numbers of males within a half-mile radius into the trap, says Koval. With the development of synthetic materials to replace live females as the attractant, this will be one of the cheapest insect control methods available, he predicts.

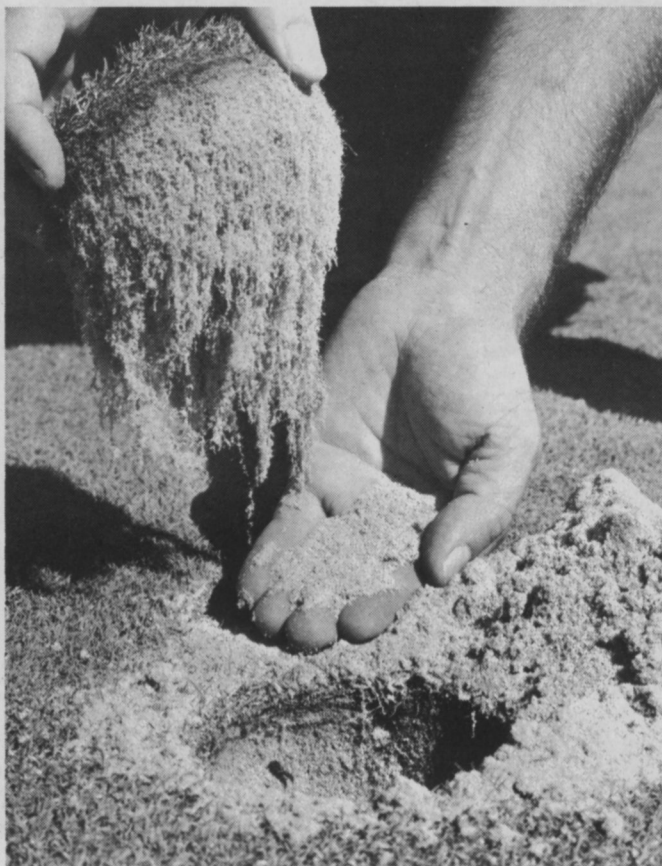
Sound waves can also be used to kill insects that would be difficult to control with other methods, especially those species in stored grain, says Koval. The frequency does the killing, not the volume.

Development of new plant varieties offers another method of insect control. Some plants "taste bad" to insects and others prevent young insects from developing. The ginkgo tree is an

insect-resistant plant virtually free of insect attacks, according to Koval.

Another method of control is to use systemic insecticides, which prevent a buildup of insect populations so that the situation never gets out of control, according to Koval. These insecticides are absorbed through plant roots and kill insects feeding on the plants. They produce no surface residue or wind drift to damage other crops and do not persist in soil, Koval points out.

A simple and cheap means of insect control for most homeowners is the washing method. A high-pressure stream of water from a garden hose knocks insects off shrubs and bushes, removing them from their food source and upsetting their life cycle so that they die, Koval said.



Plastic sheets buried 20 inches below ground level save moisture for golf green turf. Dr. W. H. Daniel, above, Purdue University turf specialist, examines core of turf-topped sand from test golf green. Plastic laid beneath ground surface serves as a "stopper" for moisture. Daniel says this is similar to the old kerosene lamp idea. The plastic barrier serves as the container, and water rather than kerosene seeps up through the sand which is the wick and helps maintain a healthy turf. Coarseness and depth of sand can be varied, according to Daniel. He finds that turf stays moist and green longer, needs less water, and develops deep roots. Also, the turf wears well. He suggests the barrier may be equally practical on athletic fields.