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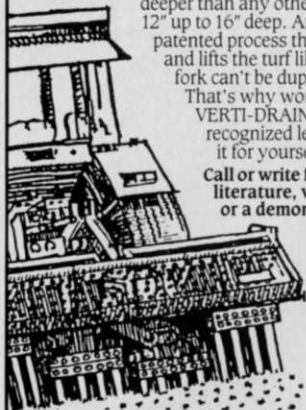
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# JOB TALK

## Inerts: the other ingredients

In any pesticide product, whether insecticide, herbicide, fungicide or rodenticide, there are two categories of ingredients. The first category includes active ingredients, the particular chemicals with active pesticidal capabilities. The second category includes inert ingredients, added to the formulation to help the active ingredient do its job, or to serve as a carrier.

The Environmental Protection Agency (EPA) defines inerts as "anything that is intentionally added to the pesticide product which is not pesticidally active." Inerts are used to increase the effectiveness of the active ingredients. For example, surfactants make herbicides stick to leaf surfaces better. In some cases, the inert ingredient is an emulsifier that helps keep the active ingredient in a liquid solution so that it can be spray applied.

Altogether, about 1,200 inert ingredients are used in pesticide formulations in the United States. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) contains regulations governing both active and inert ingredients. Currently, FIFRA requires that manufacturers conduct a full array of animal toxicological tests on the active ingredients in order to register a product. The tests are made to determine acute toxicity, the potential to cause birth defects, cancer and similar concerns.

According to Tom Hoogheem, environmental issues manager for Monsanto Agricultural Company, pressure has been put on the EPA to address this issue. "At present, only acute toxicity testing is required for inert ingredients," says Hoogheem. "That is prompting some people to ask questions concerning inert ingredients, since both product user and the general public could be exposed to the inerts as well as to the active ingredient."

As a result, EPA published a policy statement in the Federal Register on April 22, 1987. The agency's approach has been to classify the entire list of inert ingredients into four categories based on the chemical's known toxicity.

The first category includes some 50 chemicals, inerts of known toxicological concern. The second category includes about 60 inert ingredients that are believed potentially toxic because of their structural similarity to the substances in the first

category. About 800 inerts whose toxicity is unknown are placed in the third category.

Substances were included in this group if there was no basis for listing them on any of the other three lists. The surfactant for Roundup is in this category. The fourth category includes approximately 300 inert ingredients of minimal concerns, such as cookie crumbs, corn cobs and water,

*The EPA requires registrants of many chemical products containing an inert ingredient to amend their EPA registration, adding the toxic inert ingredient to labels.*

the carrier in Roundup, as well as other substances generally recognized as safe.

The first and second categories are obviously the ones that EPA gives the highest priority for additional testing. Any manufacturer with pesticide products on the market that include any of the ingredients in the first or second list will be asked to either find a substitute or agree to do substantially more toxicological testing.

The EPA is now requiring registrants of any product that contains an inert ingredient from the first category to amend their EPA registration and add the toxic inert ingredient to their labels. Additional exposure data, and in some cases, additional toxicity data may be required of many of these inerts. In addition, no new registrations involving these materials will be granted by EPA until further information can be provided.

This much activity is expected to raise the visibility of the question, "What are inerts and are they safe?" The issue of the toxicology of inert ingredients in pesticides deserves attention. The industry press will surely cover the topic, and even the public media will pay attention.

(Roundup uses water as a carrier, and the surfactant should not be of any concern.)

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