Maryland Agronomist Details Why Herbicides Don't Work

Why don't herbicides work all the time? Why does a herbicide work in one area and not in another?

These and other questions continually baffle applicators. According to Dr. James V. Parochetti, extension weed specialist, University of Maryland, herbicide failure can be explained in a number of reasons: 1. rainfall, either too much or not enough; 2. rate of application; 3. kinds of weeds; 4. application; 5. time of application; 6. pH level.

Activation of a preemergence herbicide takes place when rain falls within 10 to 14 days following application, says Parochetti. If it doesn't rain, the herbicide lays on the surface and weeds germinate and grow through the herbicide barrier.

Incorporated herbicides vitually eliminate the necessity of rainfall, he says. However, a word of caution: some herbicides should not be incorporated because it either destroys herbicidal activity or causes excessive injury.

Excessive rainfall can be detrimental to herbicide performance, too. On light textured soils, leaching occurs, often below the root zone of weeds.

The correct herbicide rate is important to insure adequate weed control, says the extension specialist. Reduction in rate may give acceptable weed control on light soils, but with heavier soils, weeds will not be controlled.

No one herbicide can control all weeds. Therefore, it's important to know that weeds are a problem before selecting a herbicide. Some herbicides are noted for their effectiveness as broadleave weed killers while others are known as grassy weed killers.

Application techniques can make the difference in the performance of a herbicide. Factors which contribute to poor application include: poor equipment, poor mixing, improper incorporation, and improper boom height or inexperience with a spray gun. Equipment that is worn — nozzles, pump, screens — will not deliver the correct rate of spray material on target.

Parochetti says that time of application can make the difference between good weed control and marginal weed control. A preemergence herbicide must be applied prior to weed seed germination.

Lastly, he says that soil pH can have an effect on herbicide activity. Triazine herbicides do not work well in soils with low pH, for example.

CONTINGENCY USE OF DDT GRANTED

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formance that this Agency is force to require USDA to initiate, without delay, a fully funded, comprehensive research program which, is successful, will support registration of effective and environmentally acceptable alternatives to DDT before next year." EPA specified that the research must be completed in time to submit the necessary documents to the Agency no latter than December 1, 1974.

Late last fall, Secretary of Agriculture Earl L. Butz, commented in a press conference that environmentalist had contributed heavily to the situation currently faced by our national forests. He said that "We've got our hands tied behind our backs" about the use of DDT. "We've got to do some trade-offs" if control of tussock moth is to be achieved.

In its caterpillar stage, the tussock moth, a native American insect, eats the needles of the Douglas and other fir trees. thus defoliating or killing them.

Train said that he is granting this request "reluctantly" but that, "A decision must be made at this time in order that planning and conthractual arrangements needed for the 1974 control program may be made." He noted the following as among the factors in his decision:

—emergency conditions do exist for severe defoliation and/or tree mortality from tussock moth larvae this spring.

—available evidence indicates that DDT will give better asurance of effectively controlling moth damage than any available alternatives.

—significant economic and health problems could occur without use of the pesticide. Particularly the local impacts could be catastrophic, for example, the Colville Indian Reservation depends upon forestry for 95% of its tribal income. Also, the probability of rapid spread of forest fires is greater in defoliated areas.

—the proposed use is temporary. EPA expects that alternative means of control will be available for post-1974 outbreaks. Restrictions on spraying will minimize adverse environmental impacts.

The EPA decision follows several months of investigation of the tussock moth problem, including five days of public hearings, four of which were held in the Pacific Northwest. □