

grower must carefully consider before using. The cost must be justified by the anticipated benefits. And the benefits must be reliable and predictable. Moreover, availability of fumigants may decline in the future due to EPA restrictions and voluntary withdrawal by manufacturers. With this in mind, it is advisable to implement effective crop rotation plans and other soil management practices in anticipation of reduced availability of fumigants.

Weed Management General Notice

Certain herbicides listed in this publication may be discontinued by the manufacturer and thus no longer available. Use of remaining stocks on dealers shelves or farm storage is encouraged and legal provided the label directions are followed.

The primary goal of weed management is to optimize yield by minimizing weed competition. Weeds can reduce yields by competing with the crop for water, light, and nutrients. Weeds also promote pest injury by acting as alternate hosts for plant pathogens and insects, inhibiting spray penetration, and maintaining a high humidity in the crop canopy. Timely cultivations, wise use of herbicides and mulches, and not allowing weeds to go to seed are integral parts of a good weed management system. Many of the weeds found in small fruit plantings are difficult-to-control perennials that are not common in other crops. Do not expect chemicals to completely control weeds. Every herbicide does not control every weed species and the selection of a given herbicide should be made on the basis of specific weed species present in the field.

Herbicide rates listed on the product label are for broadcast applications. Reduce rates proportionally for banded or strip applications. For best results with herbicides follow the manufacturer's application directions regarding rates, additives, soil type, soil moisture conditions, time of year, crop age, stage of weed growth, environmental conditions, and product limitations.

It is unlawful to use any pesticide for other than the registered use. **ALWAYS READ AND FOLLOW ALL LABEL DIRECTIONS.** The user assumes all responsibilities for use inconsistent with the label on the product container.

Trade names are used for identification. No product endorsement is implied, nor is discrimina-

tion intended against similar materials not mentioned. Cooperative Extension and the participating universities make no warranty or guarantee of any kind, expressed or implied, concerning the use of these products.

Weed Management

Herbicides

Herbicides are chemicals designed to control weeds. The use of these chemicals must be exact for satisfactory results. Proper rate selection, timing of application, activation, and observance of all precautions on the label must be followed to obtain optimum performance. Each herbicide controls certain weeds or families of weeds. Therefore, knowledge of the type of weed species present in the field is essential for good weed control (see the "Weeds of the Northeast" reference in the Resource Materials section). Once the weed problem is known, select the proper herbicide. Certain considerations should be made in this process.

- Restrictions on rates, timing and crops for which the herbicide is approved.
- Degree of susceptibility of each weed to a specific herbicide.
- Limitations and special requirements of the herbicide.

General Principles for Safe Use

- Know the herbicide. Read the label.
- Check the output of sprayer frequently.
- Replace worn nozzles. It may be necessary to replace them several times a season if the sprayer is used constantly.
- Avoid skips and overlapping.
- Rinse spray equipment immediately after use. If possible, use one sprayer for herbicides and another for insecticides and fungicides.

Rate Selection

Always check the label to determine the proper rate to apply. For most soil-applied herbicides, knowledge of the type of soil and the percentage organic matter usually determines the rate. Generally, the more clay and/or organic matter present in the soil, the higher the herbicide rate necessary for good weed control. For postemergence herbicides, the type of weed as well as its size will usually determine the rate.