

The bulk of our orders are shipped out on 4 × 8 ft skids with 2, 3, or 4 layers, depending on the type of stock to be loaded. These skids are filled right at the polyhouses. The plants are not handled again, thus giving a substantial saving of labour while keeping freight losses negligible. Six thousand pound forklifts are utilized to carry the skids to the assembly areas and to load the trailers. Eleven of these skids fill a 45 ft trailer.

In answer to the question, "are herbicides really necessary?", many people believe they are; but I wonder if these people calculate the cost of the herbicides and tally up the losses over the years in actual damage and/or reduction in growth, poor appearance, etc. In my opinion, if we can produce plants without herbicides and can continue to be competitive, I prefer to do without them and believe them unnecessary in our industry. To stay competitive we may have to develop systems that are much more labour saving to offset the added expense of cultivation and hoeing.

## **WILL THE PROPAGATOR HAVE THE PESTICIDES HE NEEDS NEXT YEAR?**

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Will you have the pesticides you need next year? My answer is maybe! Many of you will have the most of the pesticides you need for next year. However, some of you will not be able to obtain or use specific pesticides that you would like to have.

With the passage of the 1972 amendments to the Federal Insecticide, Fungicide and Rodenticide Act, nurserymen began experiencing difficulties in obtaining the pesticides they needed to: 1) produce healthy vigorous plants, and 2) to meet state or federal quarantine certification requirements. Keep in mind that under the first need, you, like other segments of agriculture, are only interested in efficient control of the common pests so that your nursery plants are healthy, vigorous, and of a good quality that will readily sell. In contrast, under the second need, you have to maintain your plants completely free of some hazardous pests. These are specific pests not widely distributed in the United States. Historically, the nursery in-

dustry has readily complied with these requirements because they recognize exotic pests might be moved on nursery plants to noninfested areas of the country. Quarantine pests such as the imported fire ant, golden nematode, and witch weed do not attack nursery plants. Other quarantine pests, such as gypsy moth and Japanese beetle, will attack nursery plants but are not normally serious pests in the nursery. Quarantines have been invoked to prevent the long distance or artificial spread of these exotic pests to protect other segments of agriculture.

Our greatest priority for pesticide needs in 1984 will be pesticides to meet quarantine requirements. Under the 1972 amendments to the Federal Insecticide Fungicide Rodenticide Act, the long residual pesticides which nurserymen had used to meet the quarantine certification requirements for Japanese beetle, white fringed beetle, European chafer, and imported fire ant were taken away when registration for use on general agricultural crops was cancelled. The extended hearing on the registration for dieldrin and aldrin terminated in April, 1976, with the manufacturer withdrawing the label and discontinuing sales in the United States. That hearing was promptly followed by the chlordane/heptachlor hearing which was terminated in a negotiated settlement in March, 1978. The signator parties in that settlement were: Velsicol Chemical Company, the manufacturer of chlordane and heptachlor; United States Department of Agriculture, who in cooperation with Velsicol defended the nursery industry uses of chlordane and heptachlor; Environmental Protection Agency; and Environmental Defense Fund. At the time of the settlement, the Agriculture Research Service of the U.S. Department of Agriculture indicated that alternate chemicals to chlordane for the nursery industry's use in meeting quarantine requirements should be on hand by January, 1980. Those two years plus three more have now elapsed, and the nursery industry still does not have a replacement for chlordane and heptachlor. In addition to periodically reminding the United States Department of Agriculture of this promise, in 1983 the American Association of Nurserymen (AAN) took that promise to the Congress seeking its support in pressing USDA to fulfill its promise. We do not see any relief as yet.

I am pleased to report that Harvey Ford, the Deputy Administrator of APHIS (Animal and Plant Health Inspection Service), USDA, assured AAN in early December 1, 1983, that his staff will work with the industry. For example, if a nursery is shipping plants needing Japanese beetle certification and, if the land was treated in the past with chlordane, and there is a reasonable likelihood that there is sufficient residue remain-

ing, his staff will work with the nurserymen and his state nursery inspectors in taking soil samples and running a bio-assay. This test would determine if the chlordane residual is sufficient so that the plants can be properly certified for shipment to Canada or to one of the four states requiring certification. AAN is also pressing for USDA's Agricultural Research Service to continue testing the pesticide Oftanol to determine whether or not this chemical can be approved for quarantine certification uses. Tests at USDA's Japanese beetle laboratory at Wooster, Ohio were initiated two years ago with both field and container grown nursery plants. The results to date are not sufficiently conclusive to authorize the use of this chemical for nursery certification purposes. For at least four years now that chemical has been used by APHIS in treating airports for Japanese beetle where there exists a serious risk of moving adult beetle via aircraft to non-infested areas.

I am also pleased to report that Mike, Inc., of North Carolina has notified EPA of their intent to continue their registration of EDB (ethylene dibromide) for emergency treatment of nursery plants to meet certification requirements. I was told this past week that the supplemental data for revising the label has been submitted to EPA. Their pesticide Mike Tox 434 is applied by injecting it into the soil ball or the container medium. As you can see, we still have need for pesticides to meet the imported fire ant and Japanese beetle quarantine certificate requirements. In the case of imported fire ant, it is recommended that you judiciously use any limited quantities of chlordane that you may have left. You may want to use it for treating only those fields or those batches of container media mix that may be used in producing plants that you expect to market in states where certification is needed. Also, it is suggested that you use the pesticides which have been approved for economic control of imported fire ant on other agricultural land, park lands and playgrounds for treating any fire ant mounds on your land that may be adjacent to your nursery production. By reducing the adjacent fire ant population to a minimum, you can reduce the risk of your nursery field becoming infested and hopefully get by until we do have a replacement for chlordane.

I'm pleased to report that much progress has been made in recent years in obtaining registration for nursery uses of those pesticides you need for economic control of insects, diseases, weeds and other pests. One of the 1972 amendments of FIFRA was Section 2(ee) which made it illegal to use any registered pesticide in a manner not named on the label. This meant that the pest and the crop both needed to be named on the label.

In 1977 at the request of AAN, IR-4 (InterRegional Project #4) initiated work to coordinate obtaining the data needed for registration of pesticides for nursery crops. IR-4 was initiated 20 years ago by the State Agricultural Experiment Stations and the USDA to facilitate registration of pesticides for minor agricultural crops. The Nursery Pesticide Needs Survey conducted by AAN in 1977 produced the initial list for IR-4 to develop their priorities for registration of nursery uses. Because of a late start in really zeroing in on the nursery pesticide registration needs, in 1981 there was still a delay of 5 to 7 years from the time a pesticide was first registered for use on a food or feed crop before a registration was being obtained for use on nursery crops.

In 1978, the AAN, in cooperation with other agricultural groups, sought and obtained a Congressional amendment to Section 2(ee) to permit the application of a pesticide against any target pest not specified on the label if the application to crop, animal, or site was specified on the label. This helped but did not give the total relief that the industry needed. This modification in the Act plus the work being done through IR-4 and special funds made available by USDA's Agriculture Research Service for nursery pesticide research has reduced the time lag between first registration for use on a food or feed crop and registration for nursery use to 3 to 4 years currently. The average lag should soon be reduced to 2 to 3 years. Now as soon as a new pesticide is made available for experimental research, IR-4 cooperators are setting up experiments to obtain data for nursery crop use registration. It is anticipated that the lag will not be reduced to less than an average of 2 years. Because of the high value per acre of nursery crops, and the many kinds of plants that we are growing, there is a higher potential for phytotoxic liability problems than with other agricultural crops. It is understandable that chemical manufacturers do not want their new pesticides to be registered for nursery use until there has been plenty of opportunity to observe if any toxicity problems might arise.

AAN, your extension specialists, and pesticide manufacturers recommend that no matter how highly recommended a new pesticide may be when it has been registered for nursery use, try it on a very limited scale under your cultural conditions and practices to assure yourself that you will not be exposing your crops to phytotoxicity problems. In the past, there have been nurserymen who have not followed this advice and have applied a new pesticide for the first time on their whole crop. Unfortunately, such a lack of precaution has resulted in serious economic crop damage. Some growers have made claims against the pesticide manufacturer. The cost to

settle such liability claims can quickly erase the manufacturers profit from nursery sales of that product. As a businessman you can see why some chemical companies are not anxious to have early registration for nursery use. Therefore, if you want the early use and in fact, any use of a pesticide, cooperate with the chemical manufacturer by testing on a limited basis to determine any peculiarities that may arise when a pesticide is used on your crops under your cultural conditions and practices. If any problems arise, the chemical company, or the extension specialists in your state, can assist you in adjusting your practices to avoid toxicity problems.

There is a provision in the 1972 amendments which is helping nurserymen obtain the legal use of pesticides needed for effective control of common pests. It is outlined in Section 24(c) of the Act. It is a state registration, known as a 24(c) or special local needs registration. A pesticide which has already been federally registered for some other use may be a candidate for state special local needs registration. When the State Pesticide Registration Authority grants such a registration, EPA is notified by the state and, unless EPA disapproves that registration within 90 days, the state registration stands. Such a registration is only good in the state in which it has been granted. A recent example is the 24(c) registrations obtained in California, Oregon, Michigan, and Ohio for Furadan 4F to be used on nursery plants to control black vine weevil. If you want information on a 24(c) registration, check with the extension specialist at your land grant university to make sure that the pesticide you want to use is legal in your state and learn of any restrictions which may exist in the registration. Keep in mind that because Furadan 4F is legal in California, Oregon, Michigan, and Ohio it does not mean that it is legal in any other state.

A 24(c) or state special local needs registration is an exception to the rule that pesticides with national nursery use registration are also registered in your state. Another exception to this rule is that some states, such as California, Massachusetts, Connecticut, Wisconsin, and Colorado, have at times chosen not to register a pesticide in their state for nursery use even though there is a federal registration for the same use. States do have that right and you need to be aware of it.

AAN is endeavoring to bring to your attention, in its publication *UPDATE*, additional nursery uses as the pesticide labels are expanded. Check with the extension specialist in your state to determine if these added uses have been registered in your state. If your extension specialists cannot answer the question call me at the AAN office in Washington, and I will give you the name and telephone number of the State Pesti-

icide Registration Official in your state so that you can check for yourself.

As you can see the 24(c) or state special local needs registration provides an opportunity for registrations to protect crops that may be important in your state but are not that important throughout the country.

In the months ahead it is going to be very important that the nursery industry and other segments of agriculture speak out in opposition to the "Harper's Ferry Bill" introduced by Congressman Harkin of Iowa. This bill would greatly revise FIFRA. It would restrict EPA and state discretion to grant "special local needs" registrations. Another proposed change would be that the person applying the pesticide would have to be a certified applicator to apply restricted pesticides. At the present time, the applicator, if he is not certified, must be under the direct supervision of a certified applicator. Other objectional revisions would: allow any affected person to request a public hearing on a registration; amend the procedures for becoming a certified applicator; require you as a private applicator to keep additional spray records; restrict EPA discretion in granting emergency registrations; transfer farm worker jurisdiction to OSHA; etc. These and other modifications were developed by a coalition of anti-pesticide groups which met at Harper's Ferry early in 1983. Action on this bill was deferred by Congress in November 1983, at the request of EPA Administrator Ruckelshaus who as a new appointee had not had time to fully analyze the bill. It is sure to arise again in 1984, probably somewhat revised from the 1983 version. Such legislation is expected to receive considerable discussion during the 1984 election year. When the legislation is introduced, we will alert you to it and to those portions which, if enacted, would be detrimental for the nursery industry.

Early each year, IR-4 headquarters contacts AAN asking if there are new pesticide registration needs of the nursery industry that should be incorporated into their work scheduled for that year. Keep this in mind and let us know of your special needs.

In closing, remember just because another nursery legally uses a pesticide in its state does not necessarily mean that it is legal for you to use it in your state. Before using a pesticide make sure that it is registered in your state. Whenever you are using a new pesticide make sure that you test it on a very limited basis with your soils, climate, and cultural practices. If you will follow this advice you will help greatly in making sure that the nursery industry will have the legal use of the pesticides it needs.