



Figure 1. Oxadiazon (Ronstar) + Simazine (Princep) in foreground (extended to black line) at 6.0 + 1.0 lb AIA applied 9-13-74. Picture taken 6-30-75.

As a result of this study it appears that preemergent treatments of oxadiazon applied singly or in combination with 1.0 lb AIA of simazine or alachlor at 6.0 lb AIA offers a means of achieving extended weed control with no phytotoxicity to field grown Skyline honeylocust.

In addition, repeated applications of glyphosate also offer an outstanding means of achieving postemergent control of annuals and perennials when applied at the proper time.

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INSECTICIDE INVENTORY AND RECOMMENDATIONS¹

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Like mother Hubbard's cupboard our pesticide arsenal may soon be bare too! There are numerous reasons for this present condition.

Some of the blame goes back to Rachael Carson and her best selling book *Silent Spring*. Her philosophy inflamed the American public and the impressionable rebellious youth to wage an anti-pesticide battle. It soon became a political advantage to be anti-pesticide. As a result, congress amended F.I.F.R.A. and established the Environmental Protection Agency.

Since the establishment of this governmental agency many of the chemical weapons vital to the profession of arboriculture have been banned and/or their use severely restricted. You all know what they are: DDT, dieldrin, aldrin, chlordane and heptachlor.

As a result of the restrictions, the Gypsy Moth has spread clear to the Gulf of Mexico and the

Pacific Ocean. There are now no effective chemicals for controlling the smaller european elm bark beetle, the vector of Dutch elm disease. The quarantine for the Japanese beetle has become a farce as there are no longer effective long residual soil insecticide treatments to control the larvae for more than a few weeks. The quarantine will have to be discarded unless some changes are made soon. We may have to use Milky Spores to inoculate our soils and it is only effective against high populations.

All of the insecticides which have long residual periods are being investigated with the avowed intent to remove them from our chemical arsenal. These include lindane, Thiodan, and even Vapona in the "no pest strips" is under indictment.

We must now use presently available pesticides only according to the label. As I'm sure you are well aware, many of the former uses no

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longer appear on the label. There are at least two reasons for this situation. First EPA has removed or eliminated the recommendations from the label. Secondly EPA now requires that all label uses be backed up by *new* research and to be valid, in their view, it must be from at least three different areas of the country. All previous research and evaluation has been discarded by EPA bureaucrats. This poses a very serious problem for the chemical manufacturers. Such research is expensive and since patents have expired on some familiar products, e.g. malathion and lindane, the manufacturers are not willing to spend the monies invested in their corporation on a material that is no longer their exclusive product. Further with reduced markets and profits, companies may discontinue manufacture in the near future.

What new products will the arborists have to use in the future? Not very many. There are some around like Pirimor for aphids, Carzol and Resmethrin. Chemical companies tell us that it costs several million dollars to provide all of the research data required by EPA before they will approve a product for use. If you were a member of the board of directors for a large corporation and you were asked to gamble several millions of dollars of your investor's monies in the hope that EPA would approve your product and allow you to market it, how would you vote? You would vote to spend those monies in a safer fashion where the odds of success were greater. Ornamentals are considered a minor crop compared to cotton, corn and soybeans. Since major crops use more pesticides, these areas will receive research attention first.

Ortho has an excellent new systemic insecticide, Orthene, which is effective on a wide variety of insects. In the United States it has label approval for use on gypsy moth and cankerworms. As a result, it is generally unavailable in our country. It is marketed overseas where the company can sell it and make a profit for their investors.

Most states now are gearing up to certify pesticide applicators so that they can purchase and use restricted pesticides. You'd better plan on taking the training, passing the test and paying the fees. General use pesticides will be the only ones available to those who are not certified. If I can read the hand writing on the wall these "general use" materials will be so safe and so dilute that you will not effectively control the insect pests and you won't be able to afford to buy and use the dilute chemicals and still make a profit.

Because of the difficulty of getting the needed labels for minor crops, a committee known as IR-4 has been formed to work with EPA and the USDA to fight for some of our needed usages. Only time will tell if the EPA lawyers will listen to their arguments.

As we all know the pendulum swings, and I begin to see some indications of a swing into a more favorable one. Last September EPA's budget was narrowly approved. This year the general public has become increasingly aware of what is going on in the pesticide area, e.g. the laymen can no longer get chlordane to control their roach, ant and chigger problems. They are beginning to complain to their congressmen and legislators.

This last week I heard on TV that Senator Barry Goldwater said the congressmen and the citizenry would be amazed at the bureaucracy established by EPA. They would be amazed, he said, at what EPA is doing in the name of cleaning up our environment, air and water.

Maybe in the near future a more rational reason will prevail in congress and EPA's excesses will be handled to all of our mutual satisfaction.

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