

# EDITORIAL COMMENT

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## Pesticides and Pollution

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No domestic issue since the depression of the 1930's has generated so much concern and emotion as "pollution." Like it or not, we as horticulturists are being swept along in an accelerating tide of public opinion against anything which may seem to add another gram of contamination to our earthly environment. In the public mind, pollution and pesticides have become synonymous. That is, pesticides are environmental poisons regardless of form, use or purpose. This unfortunate fear has been very effectively promoted by certain special interest groups who believe in strict protection and preservation of the environment, but only in accordance with their viewpoint.

This is not to say that the public has been duped in all cases. All of us should be concerned about indiscriminate use of any chemicals which will have an unfavorable effect on ourselves or our neighbors. We should recognize past abuses and work to correct them. We do not need total annihilation of every insect or weed in an orchard. We do not need to sterilize the atmosphere or the soil. Overuse of chemicals sometimes adds to a problem rather than corrects it. For 40 years, apple growers of the Northwest tried to drown codling moths in concentrated solutions of lead arsenate. Now, many of these soils are so poisoned with arsenic that new orchards cannot be economically re-established.

Unfortunately, however, too many of the anti-pesticide claims, so dramatically presented on TV and other news media, have been emotional misrepresentations of fact. According to Emil Mrak, Chairman of HUD's Pesticide Advisory Committee and Chancellor Emeritus, University of California - Davis, emotionalism regarding pesticides has resulted in proposed regulations, which if put into law, would mean many of our present foods would be discarded. Even more unfortunately, too many scientists and educators appear to have been swept along. It is easier to drift with the popular position of the day rather than take a stand that may seem contrary to public acceptance.

There is evidence that some public officials, educators, and researchers have

taken weak and apologetic positions when confronted by the anti-chemical forces, regardless of any evidence or lack of evidence that may have been presented. It is easy for anti-pesticide forces to make sweeping indictments against use of pesticides or other chemicals. They are given the public platform and they do not have to substantiate any claims or prove any facts. Often such claims are without foundation and the individuals making the charges are not professional authorities. Frequently, our research and education programs are redirected, at considerable expense, to defend against such accusations. Somehow we must protect ourselves, and society, against such irresponsible individuals and their claims. In doing so, however, we should not take dogmatic stands for or against chemical use. But we should try to be honest with our profession and with the horticultural industries that we serve. We need straight forward research and educational programs to insure the progress necessary in horticulture for continued production of high quality commodities and for the beauty and enjoyment of a clean environment.

What can we do, as individuals or as a Horticultural Society, to provide enlightenment rather than polluted opinion to the pesticide issue? First, we need an accelerated program of positive public relations. We should present strong and factual reasons why pesticides are, and will continue to be necessary. The consumer must be made to realize that her abundant, high quality and economic food for all seasons will not be produced without pesticides. Some have high expectations for various forms of biological control, but the public should not be misled into believing biological control of most pests is coming up soon.

We certainly should stress past activities and accomplishments with biological control, or combinations of biological and chemical control. For years, ways have been sought to use insect predators, parasites and diseases for control of various pests. Notable successes have been achieved, for example, with the control of cottony-cushion scale of citrus with vedalia beetle, cabbage looper by a

polyhedrosis virus, and water-hyacinth (alligator weed) with an Argentine flea beetle. An example of integrated biological and chemical control is that of McDaniel mite, a major pest of apple orchards in the Northwest. Sexual sterility, attractants and insecticidal hormones are other forms of biological control which the public should know are being diligently pursued.

The public should be made aware of the long and arduous history of breeding insect and disease resistant fruits and vegetables to eliminate dependence on chemicals. As indicated in the April, 1970 issue of *HortScience*, host plant resistance may have the greatest potential of any biological method for reducing insect and disease problem.

In addition to positive public relations, we need accelerated research and education programs to determine and disseminate factual information on the effects of chemicals in the biosphere. There is much to be learned about the accumulation, degradation, and movement of chemicals in soils, water, and the atmosphere. As facts are accumulated they should be presented to the public in an unbiased manner. Why should "information" on pesticide "pollution," for example, emanate from radio personalities or environmental league lawyers, rather than those who do the work and know what they are talking about?

We must continue diligent programs in developing varieties, cultural systems, and techniques which will reduce dependence on chemicals for pest control. And, at the same time, we should develop chemicals and methods to use them which will continue to reduce possible contamination of the environment.

Finally, in spite of all the emotions involved, it is probably preferable to live with a little chemical residue rather than put up with the natural pollutants of the past. The dominating presence or deteriorating remains of insects, disease, rodents and weeds are symbols of the past we should be happy to forget. We cannot go back to 1800 conditions in this country. If we are to live at all, we must learn to live with a certain level of pollution, including pesticides. Somehow we must rationally establish acceptable levels, and then all new developments would have to be measured against, and operated within, these standards.