

Chemicals in Agricultural Use

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Who determines what chemicals are used in agriculture? Conversely, who determines what chemicals are not used in agriculture? Who is the guiding light? Who exerts the greatest influence?

The above questions are partially answered in a conclusion found in the Report of the Secretary's Commission on Pesticides and Their Relationship to Environmental Health (1). The conclusion was that the final decision regarding the usage of pesticides must be made by those governmental agencies with the statutory responsibility for public health and for pesticide registration. Do you agree with this conclusion?

Who within the governmental agencies should be entrusted to make decisions concerning the use of agricultural chemicals? What technical information should they consider in arriving at a decision? How do these officials make a decision when no technical solution is evident?

Some insight might be gained from an article that appeared in the Scientific American (2) and relates to nuclear war. The information may not be directly applicable to the agricultural chemical business, but the general theme should make us think. The authors state that:

"both sides in the arms race are confronted by the dilemma of steadily increasing military power and steadily decreasing national security. If the great powers continue to look for solutions in the area of science and technology only, the result will be to worsen the situation. It is our considered professional judgement that this dilemma has no technical solution."

One example that parallels the preceding philosophy is the spraying of roadsides with herbicides. Some agencies and individuals say that we no longer have to blanket spray the roadsides in the state. They advocate spot spraying for noxious weeds only because they feel that the weeds have been suppressed to the point that continued blanket spraying is more detrimental to desirable vegetation than it is to the weeds. Some complain that blanket spraying of roadsides is causing the disappearance of the wild rose and other wild flowers. This decision is coming mostly from an aesthetic viewpoint, not from any scientific research. Perhaps there is no technical solution. It is difficult to scientifically measure aesthetics.

An article by Laski³ was published in the thirties, but it contains some information that is applicable today. It mentions that the day of the plain man has passed -- common man is being pushed into antiquity. He isn't able to judge the adequacy of the decisions today because the world has become so complex. Laski wrote that:

"no one could seriously deny that in fact none of our social problems is capable of wise resolution without formulation of its content by an expert. But it is one thing to urge the need for expert consultation; it is another and very different thing to insist that the expert's judgment must be final. For special knowledge and the highly trained mind produce their own limitations. Expertise too often fails to see round its subject. It sees its results out of perspective by making them the center of relevance to which all others must be related. Too often, also, it lacks humility; and this breeds in its possessors a failure in proportion which makes them fail to see what is before their very noses. It has, also, a certain caste-spirit, so that experts tend to neglect all evidence which does not come from those who belong to their own ranks. Above all, the expert fails to

see that every judgment he makes not purely factual in nature brings with it a scheme of values which has no special validity. He tends to confuse the importance of facts with the importance of what he proposes to do about them.

The expert, in fact, simply by reason of his immersion in a routine, tends to lack flexibility of mind once he approaches the margins of his special theme. He is incapable of rapid adaptation to novel situations. He unduly discounts experience which does not tally with his own. The expert rarely understands the plain man. What he knows, he knows so thoroughly that he is impatient with men to whom it has to be explained. The danger which confronts us is the quite fatal one, that, by the increased complexity in civilization, we may come to forget the humanity of men. A mental climate so perverted as this would demonstrate at a stroke the fragility of our social institutions. For it would reveal an abyss between rulers and subjects which no amount of technical ingenuity could bridge. The material power that our experts multiply brings with it no system of values. It can only be given a system related to the lives of ordinary people to the degree that they are associated with its use. To exclude them from a share in its direction is quite certainly to exclude them also from a share in its benefits. We must ceaselessly remember that no body of experts is wise enough to be charged with the destiny of mankind."

An example where the experts listened to others involved publication of the Occupational Safety and Health Standards for Farm Workers Dealing

with Pesticides in the Federal Register of March 11, 1974. Included was the statement:

"no pesticide shall be applied while any person not involved in the application is in the fields being treated."

If Iowa farmers adhered to this, they would have to break the law to get their crop planted on time.

The EPA said that the response to the proposal was unusually heavy with approximately 1,000 written statements submitted and several conferences were held with interested parties. Written statements were received from growers, grower-organizations, farm-labor organizations, pesticide manufacturers, representatives of federal, state, and local governments, the academic community and the general public. This input resulted in a more acceptable revision of the proposal which now reads that there is a prohibition against applying pesticides when unprotected workers are in the area being treated.

The authorities in the federal government listened to the people directly involved in the situation. And that is the basic theme of this presentation. It's about the limitations of experts, particularly concerning agricultural chemicals. Just because somebody has a good technical background and considerable knowledge at hand doesn't mean that the person shouldn't listen to others. Furthermore, it is important to remember that in some situations there is no technical solution to the problem.

References

1. Report of the Secretary's Commission on Pesticides and Their Relationship to Environmental Health, U.S. Department of Health, Education, and Welfare, 1969.
2. Wiesner, J.B. and York, H.F., Scientific American 211:27, 1964.
3. Laski, H.J., Harpers 162:101, 1930.

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