PESTICIDE USE: AN APPROACH TO CONFLICT RESOLUTION

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SUMMARY

Pesticide use is a topical area of environmental conflict. Attempts at resolution of the issues can be by various means such as citizen's initiatives, commissioned reports, and public hearings. These approaches tend to polarise opinion rather than seek common ground. In Washington state, a workshop was run that brought together most of the groups that had concerns about pesticide use in apples. The structure of the workshop is outlined. It was successful in initiating dialogue and there was a strong desire to continue further discussion prior to establishing new policies regulating the use of pesticides.

Keywords: pesticides, policies, conflict

INTRODUCTION

Pesticide use is an emotional issue, be it from the perspective of the farmer who fears the loss of pest management tools or the urban dweller who is concerned about food safety and environmental degradation. Food safety was recently highlighted by the 'Alar' issue in the USA where media campaigns led to the eventual removal of that product from use in the apple industry (Anon. 1989). Science was not the only factor in this issue: it was a complex interplay of emotions, politics and science that led to changes in pesticide use.

Agricultural interests no longer have a monopoly on regulation of pesticide use. The general public have become increasingly involved in attempting to change policies and regulations. Simplistic demands for removal of some pesticides may not recognise the reality of current use patterns. Potentially valuable products for Integrated Pest Management (IPM) may be withdrawn, with alternatives not necessarily available or as benign as the original chemicals.

Changes in policies will be increasingly driven by urban interests. As these interest groups change policies overseas, we may find valuable products foreclosed from IPM programmes. Cancellation of a pesticide registration overseas will likely lead to its own removal from use in New Zealand. Our evaluations may indicate no cause for concern given our use patterns, but the need to comply with the requirements of importing countries will dictate our use of pesticides. The implications of this have been presented elsewhere (Penman 1990).

Agricultural interests need to recognise, and respond to, the forces that are shaping pesticide use policies. They include:

1. Environmental concerns: Issues such as groundwater contamination, effects on wildlife, aquatic insects and other nontarget organisms, spray drift injury to plants, and ecosystem simplification from herbicide use are but a few examples of the environmental effects of pesticide use.
2. Urbanisation of society: Rural communities can no longer expect to dominate the pesticide use debate. The agenda of the urban voter is different with concerns of food safety, public health and the environment increasingly dominating discussions. If we are to be truly 'market-driven' in our production practices, farmers will need to change production practices to meet the demands of the urban consumer.

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3. Values and perceptions: We must recognise that values, and the perceptions influenced by those values, will influence policy formation. The values articulated by the urban consumer will be particularly important. Facts can influence values and vice versa. All sides in the debate have been guilty of the selective use of facts to influence public perceptions and values. Overlaying the uncertainties in some toxicological assessments with consideration of risks and benefits further complicates the issue. The National Research Council (1989) has produced a seminal book outlining the nature of this controversy:
- (a) The distinction between 'actual' and 'perceived' risk is misconceived.
 - (b) Lay people and experts are speaking different languages.
 - (c) Lay people and experts are solving different problems.
 - (d) Debates over substances may disguise battles over form and vice versa.
 - (e) Lay people and experts disagree about what is feasible.
 - (f) Lay people and experts see the facts differently.

Other forces influencing the debate include technical advances in the detection of smaller quantities of residues and the use of residues and phytosanitary concerns as technical barriers to agricultural trade (Hillman 1991). Recognition of the complexities of the issue is only the first step: methods to resolve any inherent conflicts in the position of interest groups are required. This paper examines some strategies used to seek solutions, concentrating particularly on recent experiences in Washington state.

OPTIONS

The regulation of pesticide use is being reviewed or challenged in many countries, with different methods being used. In New Zealand, the Ministry for the Environment commissioned a discussion paper from Lincoln University to act as the focus for debate (MacIntyre *et al* 1989). This was followed by interest group briefings, a period for public submissions, further review by a panel of experts and interest group representatives, followed by recommendations to government for changes to legislation. This process was limiting in that insufficient resources were available for wide public consultation prior to release of the report. The need to meet legislative deadlines also proscribed the debate. The ensuing debate was parochial, further polarising the interested parties.

The Canadian Government has reviewed pesticide regulation. Their approach was to assemble a panel of 'stakeholders' and prepare an initial report. Hearings were held through the country for comment by other interested parties prior to the publication of a final report (Canada Agriculture 1990). This process widened participation in the early stages of issue identification. The 'stakeholders' were also asked to 'buy into' the report, but with the ability to disagree on some aspects. Agreement was largely achieved with the exception of the labour representatives. This process was an improvement on that in New Zealand, but more costly and time-consuming.

Resolution of these issues can also be approached through direct citizen action as in the recent attempts to regulate environmental concerns by ballot initiatives in California. While the Environmental Protection Act 1990 was defeated, along with the alternative initiative promoted by agriculture interests, the use of such approaches remains a powerful tool for other groups to constrain agricultural practices. This process clearly polarises viewpoints and is very costly. The money spent by all sides could well have been applied to other approaches for conflict resolution or to seeking alternatives to pesticide use.

Promoting dialogue and trust between interest groups before changes to current policies is recommended as an alternative approach. Developing an understanding of positions, constraints and future needs is essential if conflict is to be minimised. This approach was recently tested in the state of Washington.

THE WASHINGTON EXPERIENCE

Washington State University recently conducted a series of statewide workshops identifying key concerns of citizens which the College of Agriculture and Home Economics should be addressing (Schrader 1989). Pesticide use as it affects the safety and abundance of the food supply was an important issue. Meetings to determine

priorities for environmental activities were also conducted by the State Department of Ecology under the auspices of 'Environment 2010' (Wash. Dept of Ecology 1990). Again, pesticide use was a significant concern.

This growing demand for action, led the authors to approach Washington State University for support to conduct a workshop to bring interest groups together to start the process of dialogue and identify some of the key issues for further debate. Support was forthcoming and a workshop was planned for 16-17 November 1990, under the title 'Agricultural Pesticides: Issues and Options for Washington State'.

Goals and Objectives

The workshop had the following goals:

1. To establish a dialogue between the various sectors of society which have expressed concerns over the use of pesticides.
2. To identify the issues of concern arising from the use of pesticides and establish some priority for further action.
3. To discuss options for the resolution of key issues surrounding the regulation/management of pesticides in Washington.
4. To prepare a document to assist the legislature, Washington University, state agencies, and other interested parties in preparing policies for implementation of solutions.
5. To develop a mechanism for continuing dialogue between interest groups to ensure that sound pesticide use policies are developed to maintain a healthy agricultural industry, ensure the health of residents and protect the environment of the State of Washington.

Within the overall goals, the workshop had several objectives:

1. To develop a framework for continuing debate over the development of policies guiding the future use of pesticides in Washington agriculture.
2. To determine the requirements for rational pesticide use consistent with demands for profitable agriculture.
3. Promote practices which ensure a safe food supply and open new markets for agriculture.
4. Use the Washington tree fruit industry as a case study from which to develop some key issues.

We concentrated on the issues from the perspective of the tree fruit industry since it is our area of expertise, it is an industry not distorted by subsidies so is market-driven, and because a recent survey was available on the extent of pesticide use in Washington apple production (Brunner and Willett 1990). We did not imply that problems in the tree fruit industry were any greater than in other sectors but it provided a model on which to focus the debate. Tree fruits also rank second in value of agricultural production in the state.

The Process

Identifying issues and considering potential solutions may be limited in conventional forums. The issues inherent in pesticide use are complex and may be best elucidated in an environment free of lengthy formal presentations and with the maximum opportunity for participation. The workshop was planned to elicit participation from a wide range of interest groups. Participation was by invitation with those invited expected to both contribute and listen to the various points of view. There were 65 participants and we aimed for approximately equal representation in the areas of university/regulatory/state groups, agricultural producers/agrochemical interests and consumer/environment/farm labour interests. The opportunity for formal presentations was limited but short issue identification papers were solicited for advance circulation in eight areas:

1. Consumer viewpoints and concerns
2. The future role of the agricultural chemical industry
3. Environmental concerns
4. Grower viewpoints and concerns
5. The role of regulatory authorities
6. Labour concerns

7. Marketing perspectives
8. University research and extension perspectives.

These papers formed the basis for working group deliberations. Each author had the opportunity to summarise the paper beforehand and participants were allocated to groups, based on prior expression of interest, in the above areas. Each group had a facilitator and the initial paper author present at all times. Participants attended two working groups before reporting back to the full workshop. Participants selected a third working group within their preferred area of interest. The initial papers were then redrafted prior to their incorporation into the proceedings of the workshop (Brunner and Penman 1991).

Outcomes

The workshop was an outstanding success. It did not necessarily achieve closure on identifying the issues for further action or attain all of our objectives, but it did succeed in opening lines of communication between the various interest groups. There was a strong desire to continue dialogue under the auspices of a neutral party such as the university. Participants came away with a much clearer understanding of the background to various positions and a more human perspective to the resolution of these complex issues. Future discussion can now focus on some areas of common concerns such as:

Communication: the need to obtain and coordinate the scientific and anecdotal information pertaining to pesticide use.

Farm safety: training and monitoring needs of farm workers to reduce health risks from pesticide exposure.

Alternative pest control strategies: many concerns about current pesticide use would be lessened if more benign alternatives were available. The workshop can play an important role in influencing the debate about research priorities. Also a joint coalition of interest groups may succeed in reducing regulatory restrictions on testing some new technologies such as mating disruption and insect growth regulators as pesticides.

CONCLUSIONS

Fostering of dialogue between interest groups before policy changes are implemented offered an alternative approach that was far more satisfying than media debates or the debilitating process of citizens' initiatives. The approach taken in Washington state has begun the process of open dialogue which may yet lead to significant changes to pesticide use and regulation.

The workshop succeeded because of (1) the willingness of Washington State University to provide the necessary neutrality and finance for the meeting, (2) participants willingness to give up 2 days for discussions, (3) preparation by the organisers in gaining the trust of potential participants that their positions would not be ignored or ridiculed, (4) minimal costs to participants, particularly those without institutional support, (5) an excellent team of facilitators committed to the success of the process, (6) position papers circulated in advance to prepare participants for debates, (7) agreement on ground rules that respected the diversity of viewpoints, and (8) a venue that encouraged interchange between all participants.

Resolution of these complex issues will never be easy. The interactions between people, their emotions, politics and science will ensure that a consensus will be difficult to achieve. Our experiences offer an alternative approach.

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