

'Off-label' use of herbicides – the consequences

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Summary

Off-label use of herbicides has been practised for over 40 years as users sought to optimize the value of these products. Changes in attitudes to herbicides have seen an increase in litigation even for use in conformity with product labels. Some specific legislation in the last 15 years has sought to tighten control over agricultural chemicals, including herbicides, and recent amendments have continued this trend. Environmental legislation, in the broad sense, has also had an impact on the use of these chemicals. All have increased the responsibilities of the user.

Introduction

'Off-label' use of a herbicide occurs when the product is used for a purpose or in a manner inconsistent with the directions on the legally approved label or advice document.

Off-label use of herbicides has been practised for over 40 years. Users of herbicides in the years after the Second World War continually experimented with the products of the day and many legitimate uses arose from off-label use. At that time, the requirements of the regulatory system were simple and it was relatively easy to have new uses added to labels. Today, the community is more sensitive to litigation following use that is often in accordance with the label.

In the 1950s – 1960s new insecticides, fungicides and herbicides were being introduced into farming systems at a steady rate. These products tended to have restricted claims with respect to both target weeds and situation in which they could be used. Industry and Government both developed data to expand label claims through independent field research. Most of this research was aimed at crop rather than environmental weeds. There were occasional instances where research on environmental weeds was carried out because of the relatively high number of researchers employed by both the Government and the private industry sector. Unfortunately, it was also a time when work was duplicated as the private sector was not trusted to produce data that were acceptable to all regulatory authorities of the day.

In the 1950s – 1960s herbicides were commonly applied in off-label situations to derive maximum benefit from what was then a new production tool. Simi-

larly, control of environmental weeds with chemicals became an economic issue as the cost of labour put manual control techniques beyond use in all but a few specific situations. Large-scale reforestation became possible with the use of herbicides and initially involved off-label use of herbicides. In many cases these off-label uses did not appear on labels for many years, even after they had become common practice, but the chemicals, rates and weeds controlled were common knowledge.

In the 1970s a greater concern for environmental issues developed. With the advent of the United States Environmental Protection Agency (EPA) attitudes to biological problems based on legal principles became accepted by some groups in the community. This development heralded the introduction of legislation which was couched in terms which did not account for the variability evident in nature and was, therefore, inflexible and mechanistic. Restrictive legislation controlling the use of herbicides was introduced in California and remains to this day.

Changes in legislation

In Victoria and New South Wales, legislation was introduced to control use of agricultural chemicals; the Pesticides Act 1978 in New South Wales and an amendment that created the Agricultural Chemicals Act 1958 in Victoria. However, the philosophy behind the two Acts were quite different.

In New South Wales, the Pesticides Act was the first and only attempt in Australia to introduce legislation adopting principles espoused by the EPA (USA) and in particular the principle that every act is illegal unless the law says it is legal. In effect the Pesticide Act says that no product can be used in any manner, which includes rate, timing, target pest and application equipment, not precisely consistent with the label. A permit or order can be issued by the New South Wales Department of Agriculture through the office of the Registrar of Pesticides to allow uses outside the label.

In Victoria the approach taken was different. It was considered to be more practical to restrict the use of specific active constituents based on assessments of risk for particular situations. It was also believed that this approach could be more easily policed. The Agricultural Chemicals Act Section 10A lists active constituents

that may either not be used as an agricultural chemical, or for which specified uses are permitted, or in certain situations or by certain equipment. Use contrary to the limitations specified in the Act is an offence.

Queensland's Agricultural Standards Act has had a section in it which prevents use except in accordance with the label as a general 'catch-all' action since 1980.

In South Australia, amendments in 1989 to the Agricultural Chemicals Act have prohibited use of agricultural chemicals in excess of label rates and timings.

Environmental weed control and off-label use

In the 1950s and 1960s, finance and labour were readily available and the laws governing the sale and use of agricultural chemicals less restrictive than those today. Developing a new agricultural chemical product may now cost up to \$80 million. Uses of new agricultural chemicals outside major crops such as cotton, rice, oilseeds, soy beans and corn are of little economic significance to agrochemical industries. A major barrier to label extension exists if residue data are required for setting of a Maximum Residue Limit (MRL) for minor uses. An MRL is the legally allowed residue of a chemical in water or foodstuffs following application of that chemical by acceptable agricultural practices.

In the past, setting MRLs has not significantly affected environmental weed control. With the increase in sensitivity of the community to chemicals in the environment, setting of MRLs for all agricultural chemicals is becoming accepted practice. Thus, environmental weed control will be influenced by these restrictions in the same way as herbicide-use in food crops.

Chemical control recommendations for wetlands rarely appear on herbicide labels. Therefore, a herbicide used in that situation may involve off-label use. However, this use would not be an offence unless it has been specifically prohibited under the Act in Victoria. In New South Wales, Queensland and South Australia this use would be illegal.

The Victorian Government has a policy of not allowing its employees to use, or recommend the use, of an agricultural chemical except in strict conformity to the label. However, there is an exception to this policy if the use is approved by the Department of Agriculture (D of A) or Department of Conservation and Environment. Procedures are available to enable approvals of off-label use to be sought by individual officers or operational sections of those Departments.

Permits

The Agricultural Chemicals Act allows permits to be issued for unregistered

products to be used for research purposes.

Permits were issued by the Agricultural Standards Branch (D of A) to allow off-label use by government agencies after advice on the proposed use had been provided by the Agricultural and Domestic Chemical Review Committee. The use-agency was required to supply precise information on target areas, conditions of use, monitoring procedures to ensure use was as requested, total area to be treated, amount of product to be used, dates when use would take place and procedures to advise adjacent landholders. Research data that could support the proposed use were also to be submitted.

The Agricultural and Domestic Chemical Review Committee

The Agricultural and Domestic Chemical Review Committee was established (initially the Pesticides Review Committee) in 1967 following the enquiry into pesticides in Victoria in 1966.

The Committee had representatives from the Department of Agriculture (2), Department of Health (2), State Rivers and Water Supply Commission, Department of Fisheries and Wildlife and the Department of Crown Lands and Survey, and reported to the Premier.

Prior to the development of a regulatory system that involved the States and the Commonwealth in 1969, this Committee reviewed all data provided by registrants and would recommend to the Director-General of Agriculture whether a product should or should not be registered in Victoria.

Although its role changed over time it played an important role in setting regulatory standards for agriculture chemicals. This Committee initiated two voluntary schemes, which were supported by the agriculture chemical industry:

1. To require approval of all large scale chemical applications by air to non-agricultural land;
2. To advise the Committee of large scale trial-use of unregistered chemicals.

Risks of off-label use

Unless a user contravenes the conditions set out in legislation no offence is committed against the relevant Acts. However, notwithstanding the very comprehensive provisions of the Acts governing use of agricultural chemicals, there still remains the duty that a user must not affect

neighbours by actions carried out on the user's property. If so, legal action by the affected person can be instituted under the provisions of Common Law.

The adviser

A person normally seeks advice on the basis that the adviser is regarded as having knowledge that can assist the inquirer. In providing advice the adviser takes on a duty of care to the user. The adviser, therefore, must take a share of the responsibility for the outcome of advice particularly when off-label use of a herbicide is involved. Adviser responsibilities may include ensuring that the allowable residues in water for domestic use or stock use are not exceeded, preventing poor efficacy and damage to native fauna and flora.

The user

The user cannot be absolved from responsibilities for effects caused by off-label use by claiming that they were directed by others to use the product in a particular manner. The user must ensure that actions undertaken will not cause injury to others either directly or indirectly. Environmental contamination is now regarded as a serious offence against the community and in New South Wales, in particular, carries very heavy penalties including gaol terms. Other States have penalties for similar breaches but not yet of the magnitude of those in New South Wales.

An example of neglect by the user would be the death of a fish following use of a herbicide for weed control in a National Park. Another example would be where herbicide residues in water resulting from weed control in a forest cause the death of a sensitive crop irrigated with the contaminated water.

Another problem that may arise from off-label herbicide use is the contamination of food crops or animals. Contamination of food stuffs with a compound for which there is either no MRL or the use causes the MRL to be exceeded means that the food would not be accepted on local or export markets.

Research results

It is important that research into use of agricultural chemicals, both new and existing, continues and the results are communicated to other workers and the community. The communication of research

results to potential users has some risks. It must be emphasized to potential users that these results come from use conducted under carefully controlled conditions and must be confirmed by further work under realistic field conditions. Research data must be evaluated through the established regulatory process for applicability as a label claim. The data required to establish a label claim in Australia are set out by the Commonwealth Department of Primary Industry and Energy in 'Protocol for the Clearance of Agricultural and Veterinary Chemical Products' (Anon. 1989). This includes efficacy, residue, environmental impact, and degradation and toxicology data.

Proposed legislative changes

The Victorian Government has recently introduced the Agricultural and Veterinary Chemical Bill into Parliament. Debate on the Bill is expected in the budget session of Parliament this year.

The Bill proposes a number of changes to the existing use legislation for agricultural and veterinary chemicals. This important proposal will allow rates lower than those on the label to be recommended and used, as well as recommending a reduced number of applications or varying the timing of an application provided that such timing does not alter the withholding period stipulated on the label (The withholding period being the number of days that must elapse between treatment and harvest to ensure the MRL is not exceeded).

Discussion on the implementation of a national registration scheme for agricultural and veterinary chemicals is also in progress. Some proposals in this scheme attempt to find a resolution of minor-use patterns. These include herbicide use in national parks, native forests and similar situations.

The amount of data required to satisfy regulatory requirements for many minor use situations is a continuous issue between Government agencies and agro-chemical industries. Much of the debate centres around products which are already being sold in the retail market. Complicating the matter is the issue of propriety rights to data that could have a significant impact on the use and availability of chemicals in this country.

References

- Agricultural Chemical Act* 1958. No. 6257: Victorian Government Printer.
 Anon. (1989). Protocol for the Clearance of Agricultural and Veterinary Chemical Products' 101 pp. (Commonwealth Department of Primary Industry).
 Victorian Government Gazette: g12 27 March 1991 pp. 771-4.