HERBICIDE REGULATIONS IN AUSTRALIA

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The use of herbicides is not as closely regulated in Australia as it is in some overseas countries. Our chief concern in Australia is with the registration of herbicides before use; but, in recent months, we have become involved in proposed legislation to regulate aerial application of chemicals.

Some idea of the types of regulation, with which we are not familiar in this country, can be gained from a study of the legislation existing in several of the States of the U.S.A.:

In 14 States, the use of ester formulations of phenoxy herbicides is prohibited or restricted.

In 11 States, other forms of phenoxy herbicides are prohibited or restricted.

In 3 States, a farmer must obtain a permit before purchasing phenoxy herbicides. Also, the dealer must have a permit to sell these chemicals and keep records of all sales made.

In many States, aerial operators must have a permit before applying these chemicals from the air, and, in 16 States, ground contractors are required to have similar permits. In 5 States, the farmer must have a permit before treating his own land with phenoxy herbicides. In Texas, the permit costs the farmer 10 cents per acre.

Legislation in 9 States provides for the inspection of contractors' aircraft, and, in 5 States, similar inspection is carried out on ground contractors' equipment.

The purchaser of phenoxy herbicides in some States must sign a statement that he is aware of dangers of the chemicals before the dealer is permitted to supply.

In several States, spray contractors, both aerial and ground, must hold assets or insurance policies to a certain value to cover public liability and property damage.

In Mississippi the tail of any aircraft used for spraying phenoxy herbicides must be painted purple, or have 2,4-D painted in contrasting colours on both sides of the fuselage; such planes are not permitted to be used for the application of insectides, or other materials, to cotton or other susceptible crops.

It can thus be seen that other countries have placed much more restrictive conditions on the use of herbicides than we have in Australia. The only comparable controls in Australia are those imposed in W.A. under the Noxious Weeds Act. These require that approval be obtained to use phenoxy herbicides for aerial spraying

in the Geraldton area, and that prior notification be given of all other spraying in the area with phenoxy herbicides. This legislation also requires that 2,4-D (2,4-dichlorophenoxyacetic acid) ester should not be used within 1 mile of tomatoes grown for commercial purposes.

A. REGISTRATION IN AUSTRALIA

Before a herbicide can be sold in Australia it must be registered by the appropriate State Department. This is usually the Department of Agriculture, but, in W.A., registrations are handled by the Department of Health. Each State has its own legislation and, although there are many points of similarity between the State Acts, there are also many dissimilarities. Basically, each Act requires that, before a pesticide may be sold, registration must be granted by the appropriate body, and that there is power to refuse registration, whereupon the sale of the product is prohibited.

1. Power to register - In most States, the permanent Head of the Department of Agriculture has the power of granting registration, but, in Tasmania, a Pesticides Board has been established consisting of six members, five of whom are officers of the Department of Agriculture and specialists in various fields, and the sixth the Government Analyst. The board is required to report to the Minister of Agriculture on every pesticide submitted for registration.

   Similarly, in Queensland, there is an Agricultural Requirements Board consisting of eight members, the Chairman of which is the Agricultural Chemist of the State, and the other seven members are specialist Departmental Officers in various fields. In W.A., registration is carried out under the Health Act and an advisory committee, representing the Health Department, Agricultural Department, Government Analyst Branch, and Pharmaceutical Council, advises the Commissioner of Public Health.

   In some States, committees, not necessarily provided for in the legislation, have been set up to advise on various aspects of registration. In Victoria, for instance, an interdepartmental committee has been established with representatives from each Department with an interest in pesticides - Agriculture, Health, Water Supply, Lands (Vermin and Noxious Weeds), and Fisheries and Wildlife. This committee thus includes persons concerned not only with the use of pesticides and their possible effect on human health, but also with indirect side effects on wildlife, fish, etc. The committee has no statutory standing, but the Departments represented have agreed to follow recommendations of the committee.

In other States, the Director of Agriculture would not act alone but would be advised by specialist officers either alone or in committee as in South Australia.

2. Application for registration - Most States require similar information for registration; some require a sample of the material to be submitted (Tas.), but others do not (Vic., W.A.).
3. Date of registration - Registration of a pesticide is made on a yearly basis in each State, but the date by which the application must be made varies from State to State. In Victoria it is the last day of February; Tasmania, 1st July; Queensland, 31st January; South Australia and Western Australia, 30th June; and New South Wales, 30th September. There seems little excuse for such variation, and there are moves at present to achieve some uniformity.
4. Definition of active constituent - Some legislation (S.A.) defines the active constituent in such a way as to include materials which influence the effectiveness of the basic chemical. This would seem to include surfactants and activators, but data on these have apparently not been sought.

   Other legislation defines active constituent in broad terms, while some give no definition.
5. Grounds for refusal to register - All legislation places some sort of onus on the Departments to register a new material. In Tasmania, every application for registration is successful unless it is refused within 1 month.

   The South Australian legislation states that the Minister shall register unless he is satisfied that:

   (a) The material is substantially ineffective for any purpose mentioned.
   (b) There may be substantial risk of injury to members of the public.
   (c) The distinctive name of the substance is misleading.
   (d) Label statements are false or misleading.
   (e) Material does not comply with particulars on the label.
   (f) The material does not comply with a set standard.
   (g) A constituent substance which is not claimed as an active constituent ought to be so claimed.

   This really implies a prima facie right of registration and places an onus on the Department to prove the material ineffective or unsafe before refusing registration, whereas it would not be unreasonable to shift this onus to the manufacturers, as was done in the U.S.A. in 1954 with the Miller Pesticide Residue Amendment.

   In the N.S.W. and Victorian legislation it is stated that no pesticide shall be registered unless the Director approves,

yet no criteria are set down as grounds for registration or refusal of registration. Tasmania is a little more specific by declaring that a pesticide is not to be registered if the Board is not satisfied that claims of efficiency can be substantiated.

In Queensland, registration may be refused if the pesticide is considered by the Board not to be efficacious for the purpose for which it would be used.

6. Right of appeal against refusal to register - The Victorian and Western Australian legislation does not provide for the lodging of appeals against the refusal of the Director to register a material, but the N.S.W. legislation provides that the Director shall advise the applicant of the refusal within 7 days, giving the grounds of the refusal. The applicant then has the right to appeal to a District Court Judge. It is provided that the judge shall be assisted by two assessors from the University of Sydney and appointed by the Minister. The decision of such judge is final.

   In Tasmania, an appeal can be made to a police magistrate and his decision is final and without appeal, except on questions of law. In South Australia, it is provided that, before refusing an application for registration, the Minister shall give an opportunity for the applicant to be heard.

7. Publication of lists of registered products - In only one State (Victoria) is it required that the list of registered products be published. In Queensland, Western Australia, and New South Wales such a list may be published, but this is not required by law. The Queensland legislation also provides that a list of products, for which registration has been refused or cancelled, may also be published.

8. Method of cancellation of registration - It would appear to be a simple matter to cancel a registration without delay where the circumstances were justified, but this cannot be done under the Victorian legislation. The only method of cancellation is by refusing to register the product when registration is sought at the end of the year. In contrast, cancellation in South Australia is made by writing to the original applicant and by publication in the Government Gazette. Cancellation can only be made where the product does not comply with the registered label.

9. Wording on labels - Each piece of legislation provides, by regulation, for certain cautionary wording to be incorporated on pesticide labels. This can cover a wide range of requirements about which there is very little uniformity.

   Only one State (N.S.W.) specifies by legislation the inclusion of certain wording on labels. This is 'Registered under the Pest Destroyers Act 1945 (N.S.W.)'. Another State

(W.A.) will not register a pesticide labelled 'non-poisonous' or 'harmless to humans'. Victoria holds similar views.

10. Size of container - The legislation in Victoria allows the Department to prescribe the size of container in which the pesticide is sold. No such provision is made in the other States. In Victoria it has been prescribed that DNBP (4,6-dinitro-o-sec-butyl phenol) shall not be sold in containers of less than 1 gallon.
11. Taking of samples - Most legislation provides for the taking of samples for analysis for the publication of the results of such analysis. In Victoria, Queensland, and South Australia, the purchaser of a pesticide is entitled to have a sample analysed by the Government Analyst at his own cost, providing certain procedures have been followed. The South Australian legislation requires that the sample be taken in the presence of a Justice of the Peace or policeman.
12. Testing of product - Under Queensland legislation a manufacturer can ask for an investigation into his product, for which a fee is payable. The Department is not bound to carry out such an investigation if it decides that no useful purpose would be served. Even if an investigation is carried out, it is not bound to publish the results.
13. Secret formula - In two pieces of legislation, there is provision for the non-inclusion of the active ingredients on the labels to protect a 'secret process or formula'. However, there are no cases where this has happened with herbicides.

B. HERBICIDE RESIDUES

The problem of herbicide residues is dealt with under the Health Acts in the various States. The Federal Department of Health has no direct jurisdiction in this matter.

On the recommendation of the Food Additives Committee of the National Health and Medical Research Council (N.H.M.R.C.), maximum residues have been set for a considerable number of pesticides and these are being included in the Food Standards Regulations in all States. The only herbicide dealt with in this list is 2,4-D, where a tolerance of 5 p.p.m. has been set on fresh fruit and vegetables. It is intended that the tolerances set be uniform throughout Australia, and they are based largely on those established overseas, particularly by the United States Food and Drug Administration. These tolerances apply only to fresh fruit and vegetables, but an all-embracing clause provides that, apart from the pesticides for which a tolerance has been set, no food shall contain any poisonous substance and no residue is allowed in respect to any other poisonous pesticide. It is of interest to note that 'poisonous' in this sense is not defined.

The whole question of pesticide residues has recently been reviewed by the Food Additives Committee and it has determined the maximum amount of residue for a wider range of pesticides (including arsenicals, PCP (pentachlorophenol), monuron (N-(4-chlorophenyl)-NN-dimethylurea), diuron (N-(3,4-dichlorophenyl)-NN-dimethylurea), and 2,4-DES (2,4-dichlorophenoxyethyl hydrogen sulphate)) on a wider range of food products.

It is anticipated that the tolerances recommended by this committee will be endorsed by all States and become legal standards throughout Australia.

C. POISONS REGULATIONS

Poisons legislation is designed to protect people by seeing that they are adequately warned of the dangers of using certain chemicals. The N.H.M.R.C. has produced a set of schedules listing various poisons, and the precautionary wording recommended on the label in each case. This set of schedules is produced as a guide which it is hoped the various States might follow in their own Poisons Acts. Although this pattern of schedules is now accepted and has become uniform in Victoria, South Australia, Queensland, and Western Australia, there can still be anomalies between States. For instance, one of these States may not agree with a certain poison being in the schedule suggested by the N.H.M.R.C. and may place it in another schedule. From the point of view of the industry, this makes labelling difficult on an Australia-wide basis, but is nevertheless a big improvement on the previous set-up.

Of the other States, it is understood that N.S.W. is at present considering the adoption of the N.H.M.R.C. schedules. The herbicides listed in the N.H.M.R.C. schedules are: DNBP, PCP, arsenicals, sodium chlorate, methyl bromide, chloropicrin, CDEC (2-chloroallyl-NN-diethyldithiocarbamate), and CDAA (2-chloro-NN-diallylacetamide).

D. CONCLUSION

No matter what is written into legislation and regulations, no system can be stronger than its administration. It is essential, if the registration of herbicides is to have any real meaning, that sufficient competent staff be provided to investigate applications thoroughly, to call for and evaluate supporting evidence, and to carry out a certain amount of field work on some materials. Similarly, the residue legislation has little meaning unless adequate samples can be collected and analysed without delay.

The use of surfactants and other additives is becoming more and more widespread, and many claims are being made for their effectiveness. It is well established that they can materially alter

the properties of herbicides; in addition, little is known of their toxicity. From both these aspects, it would seem reasonable that their composition and concentration should be declared in the same way as other active ingredients.

As has been pointed out, there are many anomalies in the various State Acts. But there is no good reason why uniform legislation throughout Australia could not be adopted. This would probably require an Australia-wide committee to handle requests for registration and it would be understood that the various States would adopt the committee's recommendations as occurs with tolerances under the Health Acts.

No attempt has been made to compare the registration requirements and procedures in Australia with those of overseas countries. This would be a profitable study before recommending any form of uniform legislation.

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