

3 MANAGEMENT OF PESTICIDES – PLANNING AND EDUCATION INSTRUMENTS

Chapter three and chapter four of this report outline the various instruments available to the government and the community in managing pesticide use. These two chapters combined comprise the majority of the report, and in so doing reflect upon the number, nature and complexity of instruments implemented to manage pesticides in New South Wales.

Chapter three encompasses considerations of the following pesticide management instruments:

- regulatory and policy matters relating to planning;
- industry self regulation practices; and
- education and training.

A significant number of submissions expressed the view that successful management of pesticides required the use and integration of a number of instruments rather than reliance any one particular instrument.

3.1 Planning as a management instrument

The Standing Committee received a considerable number of submissions and public hearing evidence advocating the use of appropriate planning instruments in the management of pesticides. Implementation of an effective land use planning strategy at the local level provides an important means of avoiding land use conflict. During investigations for this report and its concurrent inquiry into the international competitiveness of agriculture in New South Wales, the Standing Committee familiarised itself with the benefits that planning provides. Used effectively, planning provides a mechanism to minimise the loss of prime agricultural land and to enable the grouping of similar land uses that reduces the circumstances for incompatible land use between rural and urban land holders. Concerns arising from residential land holders regarding incompatible land use with rural land holders relate to noise, odour, pesticide use, and operation of machinery for 24 hour periods. Conversely rural land holders take issue with any move to restrict farming practices and operation of the business unit.

One of the major challenges facing local government is managing the change in land use over time. Submissions received by the Standing Committee give reference to instances of conflict that may arise between similar agricultural land use types. Such instances arise from a rural land holder who chooses to subdivide land, or where a mixed farmer, bounding a cattle property decides to intensify agricultural practices and incorporate greater use of pesticides.

As the agency responsible for monitoring and investigating instances of pesticide drift, or non target pesticide exposure in the community, the New South Wales Environment Protection Authority made the following comments in relation to the cause of many pesticide related conflicts:

In many cases pesticide conflict stems directly from the proximity of incompatible land uses, for example the location of a property which applies pesticides on a regular basis next to one where there is sensitivity about pesticide use...In many instances, where incompatible land uses are co-located, issues associated with the use and management of pesticides are unlikely to be resolved by controls over the use of pesticides, which are only able to treat the symptoms.¹

3.1.1 Implementation of planning instruments

The Standing Committee took note of the positions taken by various state government agencies and local councils with respect to establishing the conditions of land use for land zoned agricultural through environmental planning instruments as defined under the *Environmental Planning and Assessment Act 1979*.

3.1.1.1 Dubbo City Council local environment plan

The Standing Committee examined the local environment plan approach taken by the Dubbo City Council as a consequence of receiving submissions, and developing an understanding of community opposition to a development application lodged with Council for alteration of use of land zoned agricultural. Alteration of agricultural activities in this instance related to the replacement of previously irrigated cereal crops including lucerne, soya bean, wheat and sorghum with irrigated Ingard® cotton.²

To investigate the issue further the Standing Committee conducted a public hearing at Dubbo canvassing views from local government, industry and interest group perspectives. Mr Greg Geoghegan, Manager, Strategic Planning, Dubbo City Council, outlined to the Standing Committee the process by which the Council prepared its rural local environment plan in 1997.

The history of this goes back about four years. The process of preparation of what is now the 1997 rural LEP began in 1995 with a series of three rounds of community meetings throughout the rural area. There were about 25 meetings in all. We went out with a quite open mind as to where we were going to go ultimately, initially with a strategy and then the LEP which would give expression to that.

¹ Submission No.37, NSW Environment Protection Authority, p.1.

² Evidence of Mr Cone, Cotton Australia, 26 July 1999, p.101.

The issues raised by the community ultimately drove many of the provisions of the LEP. Perhaps the most unique of those is the ultimate status of having defined cotton farming as a specific use and assigning it a consent status. That came specifically from the repeated concerns expressed by the rural attendees at those meetings – for the most part, people who lived on the land or who worked the land. Their concerns derived principally from pesticide use and practices related to their use, and their concerns about conflict – conflict with their own agricultural enterprises; and, secondly, but I guess more by reputation than by any specific scientific evidence that was available to them or to us, the allied concerns relating to health and so forth.

So, as a result of those concerns, we drafted an LEP which identified cotton in the manner you see. That is ultimately what was exhibited. At the time of the exhibition of that LEP we received no expressions of concern as a consequence of that exhibition relating to that proposed status of cotton farming.³

Mr Doug Herd, Director, Environmental Services, Dubbo City Council in evidence to the Standing Committee highlighted the potential problem the Council faced in:

- foreseeing the diversity of activities that may be conducted as an “existing use” on land zoned rural;
- preparing local environment plans for such diversity; and
- achieving a resolution by the Council.

...Dubbo City Council ultimately recognised that cotton farming was not currently a part of existing “agriculture” or “intensive agriculture” in Dubbo, and resolved that, before it could become so by de facto means – that is, through being introduced – to define cotton farming independently of those generic terms.⁴

From a rural land holder’s perspective the proposed cotton development at Dubbo provides a reflective case study of the potential conflicts that can arise through the subdivision of rural land and development of incompatible land use over time. In his opening statement to the Standing Committee, Mr Peter Cone, Cotton Australia, representing the proposed developer Mr John Furney spoke of historical subdivision of land in the area.

John Furney acquired his property in the Rawsonville area back in 1976. It was one of a larger properties in that area. Most properties at that time were larger. Subsequently, a number of them have been

³ Evidence of Mr Geoghegan, Dubbo City Council, 26 July 1999, p.120.

⁴ Evidence of Mr Herd, Dubbo City Council, 26 July 1999, p.115.

subdivided. John's property, Oakben, remains whole by comparison.⁵

3.1.1.2 Cessnock City Council local environment plan

The Standing Committee takes note of the measures taken by the Cessnock City Council in its Vineyards district local environmental plan and development control plan to minimise the occurrence of land use conflicts arising from viticultural application of chemicals. Initiatives involve dedicated planning policies for the vineyards district that includes:

- Allocation of a specific category within the agricultural land zone for the vineyards district, 1(v) Rural (Vineyards) zone;
- Minimum lot size of 40 hectares for subdivision of land; and
- Provisions for setback and spray drift separation distances between dwellings stated as:
 - A minimum of 75 metre spray drift / noise front building set back;
 - A minimum 50 metre side building set back;
 - For new developments, a front set back of 50 metres will apply from a common boundary with no existing or approved commercial vineyard. Where a commercial vineyard exists the set back will be 100 metres will be required from the boundary;
 - Alternatively land holders can implement an 80 metre set back which incorporates a minimum 30 metre vegetation spray drift buffer; and
 - Instances where the building set back cannot be met due to land constraints, the appropriate set back will be subject to Council decision.⁶

3.1.1.3 Right to farm legislation

The NSW Farmer's Association outlined its policy with respect to "right to farm" legislation to the Standing Committee during its inquiry into the international competitiveness of agriculture in New South Wales. The policy is presented below:

The Association seeks the enactment of "Right to Farm" legislation, which would recognise the rights of established farmers to carry out their normal farm operations, unimpeded by restrictions on matters such as noise and odour. The Association proposes that this could be achieved by setting aside common law action for nuisance in respect of non-designated agricultural activities.

The Association is also seeking that Local Government authorities develop a 'buyer beware' statement and policy that can be used by local government across the State to make prospective buyers of

⁵ Evidence of Mr Cone, Cotton Australia, 26 July 1999, p.101.

⁶ Correspondence of Cessnock City Council, 22 December 1998.

property in semi-urban rural areas aware of the potential impact of farming operations.⁷

Mr Ian Campbell, representative of the Banana Industry Committee raised the issue of right to farm in the context of determining appropriate buffer zones to minimise nuisance:

Buffer zones obviously are a very good thing. The unfortunate thing is that we have inherited a lot of problems. I suppose local government has a lot to answer for too. But, I suppose if they had had a crystal ball they would never have approved residential sites close to existing banana plantations. You have the ridiculous situation now that you can have a plantation, and if the neighbour sells out and that property is subdivided, you can build very close to that plantation.

So, what is the farmer supposed to do? Is he to destroy X number of metres of his plantation to accommodate the law as it stands? I think there is a great responsibility for local government, before it gives approval, to look at existing land uses. The right to farm also comes into the question. We do have to feed ourselves. We tend to forget that.⁸

Department of Urban Affairs and Planning reported to the Standing Committee that almost all states in the United States had enacted right to farm legislation. The legislation did not however provide legal protection for breaches of federal or state anti-pollution laws resulting from harm or pollution caused by use of agricultural chemicals.⁹

3.1.1.4 Buffer zones

The implementation of buffer zones to minimise non target exposure to pesticide spray drift was a persistent theme in submissions and public hearing evidence received by the Standing Committee. NSW Health, in its submission stated that:

Investigation of planning controls and buffer zones need to be considered as priorities.¹⁰

The Standing Committee received varying views relating to the appropriate nature and distance that buffer zones should be established. Ms Kate Hughes, private citizen advised the Standing Committee that buffer zones should be implemented

⁷ Submission No.27, NSW Farmers' Association, p.18, (Standing Committee's inquiry into the international competitiveness of agriculture in New South Wales).

⁸ Evidence of Mr Campbell, Banana Industry Committee, 4 August 1999, p.332.

⁹ Submission No.73, Department of Urban Affairs and Planning, pp.16-17.

¹⁰ Submission No.33, NSW Department of Health, p.6.

on a site specific basis with consideration given to individual land holder activities and neighbouring property requirements.

It is silly to put a blanket on it and say it has to be 150 metres or it must be two miles. With all this regulation on toxics it must be site specific. That will help resolve it for all stakeholders, for the grower who has to grow his crop.¹¹

As detailed previously in section 3.1.1.2 of this report, Cessnock City Council's approach to buffer zones for the viticultural district local environment plan provided a degree of flexibility in the distance and types of buffers, including provisions for a vegetation buffer to stop spray drift.

An important matter for consideration with buffer zones relates to who should provide the buffer. The right to farm legislation outlined in the previous section emanates from the perspective that agricultural activities were the original land use type. Consequently the onus is on subsequent land holders to recognise, at the time of purchasing a nearby parcel of land, that activities and specific nuisance are associated with agriculture.

Cr Richard Staples, Byron Shire Council, outlined to the Standing Committee his ideological perspective of buffer zones during the Committee's Lismore public hearing as follows:

The overriding principle, to my mind, should be that if you are going to pollute your property you should provide the buffer and not expect your neighbour to provide it.¹²

The Department of Urban Affairs and Planning, in its submission to the Standing Committee opposed the introduction of buffer zones where such action would contribute to isolation of land. The Department cited the following material published as part of its EIS Guideline series for potentially polluting industries:

As the establishment of "buffer" areas around facilities can lead to unacceptable land sterilisation, separation distances should not be viewed as a primary means of ameliorating impacts... The role of site separation as an impact mitigation measure should simply reinforce the impact mitigation measures provided by other means.¹³

The Department of Urban Affairs and Planning considered that the implementation of property plans, best management practices and environmental management systems provided the greatest potential outcomes at farm level to minimise non-target pesticide exposure.¹⁴ The establishment of buffer zones within

¹¹ Evidence of Ms Hughes, private citizen, 5 August 1999, p.355.

¹² Evidence of Cr Staples, Byron Shire Council, 4 August 1999, p.282.

¹³ Submission No.73, Department of Urban Affairs and Planning, p.14.

¹⁴ Submission No.73, Department of Urban Affairs and Planning, p.ii.

the confines of a pesticide user's land holding to achieve these farm objectives was supported. In the Department's view, there was no scope for the reliance by pesticide users on buffer zones beyond their boundary without first, agreement from a neighbour and possible compensatory measures.¹⁵

3.1.1.5 Department of Urban Affairs and Planning agricultural planning strategy initiative

The Department of Urban Affairs and Planning provided a detailed submission to the Standing Committee outlining, amongst other things, an agricultural planning strategy initiative applicable not only to matters considered in this inquiry, but also to the Committee's inquiry into the international competitiveness of agriculture in New South Wales.

The Department of Urban Affairs and Planning prefaced its approach to an agricultural planning strategy by documenting a number of objectives that it perceived could be realised through such a framework. These objectives include:

- Implementation of the *Policy for Sustainable Agriculture in New South Wales*¹⁶ as a strategic plan.
- Enable the strategic plan for agriculture to be sufficiently flexible to incorporate regionally specific agricultural industries;
- Recognise the importance of agriculture in New South Wales; and
- Ensure that the *Policy for Sustainable Agriculture in New South Wales* is implemented at the regional level rather than reliance on its introduction through local environment plans.

The Department of Urban Affairs and Planning has recommended the development and introduction of Regional Agricultural Plans to operate as a statutory regional environmental planning instrument (REP) under the *Environmental Planning and Assessment Act 1979*. The plans enable agriculture to be recognised in regional and local environmental planning instruments as a dedicated "industry" type.¹⁷ The Department envisages regional agricultural plans, in comprising policies derived from the *Policy for Sustainable Agriculture in New South Wales* and regional specific agricultural policies, would also be an appropriate mechanism for ensuring the following matters are given attention in environmental planning instruments:

- Ensure appropriate separation of pesticide users and non pesticide users in a region;
- Establish performance criteria for the acceptable use of pesticides by particular industries in certain areas;

¹⁵ Submission No.73, Department of Urban Affairs and Planning, p.15.

¹⁶ New South Wales Government, 1998.

¹⁷ Submission No.73, Department of Urban Affairs and Planning, p.9.

- Ensure all prime agricultural land is not contaminated by pesticide residue, which is particularly important for the future of organic farming industry;
- Require pesticide users to develop property management plans or environmental management systems to ensure sustainable long term use of pesticides;
- Provide a framework for other government policies to be introduced including native vegetation and water reform policies;
- Identify land best suited for agriculture and retain lands for such a purpose in the future; and
- Ensure efficient allocation of land resources between industries.¹⁸

This initiative outlines what local councils would be required to consider to ensure local environment plans are consistent with the operation of regional agricultural plans as regional environmental planning instruments. The Department indicates that this approach would enable a consistent application of New South Wales sustainable agricultural policy across local council area.¹⁹

Recommendation 4

The Standing Committee recommends that adequate additional financial resources be provided to the Department of Urban Affairs and Planning to enable the expeditious development of Regional Agricultural Plans. In formulating these plans, the Department of Urban Affairs and Planning should consult with the community and, move to incorporate provisions for:

- **A minimum lot size that can result from a subdivision of prime agricultural land, unless development consent provides otherwise;**
- **Identification of prime agricultural land with a view to maintaining land use strictly for agricultural purposes;**
- **Identification of areas incompatible with pesticide use, eg. schools, organic farms;**
- **Inclusion of accredited environmental management systems and best management practices for agricultural operations, particularly in relation to pesticide application. Such mechanisms should include:**
 - **Site specific buffer zone measures; and**
 - **Calibrated weather and wind monitoring equipment operated at the time of professional and commercial pesticide application.**

¹⁸ Submission No.73, Department of Urban Affairs and Planning, pp.9-10.

¹⁹ Submission No.73, Department of Urban Affairs and Planning, p.11.

For determining prime agricultural land the Standing Committee suggests consideration be given to both the land capability classification system adopted by the Department of Land and Water Conservation²⁰ and the land suitability classification system adopted by NSW Agriculture.

3.2 Industry self regulation and co-regulation

3.2.1 Industry self-regulation

The Standing Committee observed a consensus from industry, government, interest groups and the community advocating that the most effective approach to managing pesticides, incorporated industry self regulation practices as one of a number of pesticide management instruments. This view was expressed to the Standing Committee by Mr Michael Nicholls, Chairman, Agricultural Chemicals Committee, NSW Farmers' Association, concerning the components that would best achieve a pesticide risk reduction outcome:

The harder question is how do we as a community manage an issue...I think it is a blend of education, industry self-regulation and government statutory legislation.

The approach taken in providing appropriate weighting and balance between instruments of education, industry self regulation and government legislation was a point of difference between representations received by the Standing Committee, especially between environmental and industry groups.

The Standing Committee heard evidence in support of industry self regulation schemes including the adoption of best management practice, accreditation programs, integrated pest management programs and environmental management systems including ISO 14000.

Mr Peter Cone outlined to the Standing Committee, the nature of best management practices that were designed for implementation on a proposed cotton farm development in the Dubbo area.

As part of the best management practice process, a spray and drift management plan is required to be put in place. It is a very comprehensive document, but a very practical one, that systematically identifies areas of risk to his neighbours, to the environment and to any other relevant area. It specifically sets out procedures to minimise risk to those neighbours, et cetera. It also specifies individual people, be they regulatory authority people, be

²⁰ Land capability, Department of Land and Water Conservation, unknown publishing date and location.

they agronomists, be they farm workers, et cetera. It specifies the responsibilities that each of those people has on the farm. Above all, it involves...approaching neighbours and discussing the proposed spraying regimes, et cetera, with them prior to the spraying season commencing.

In addition to that, the spray and drift management plan sets out specific parameters for monitoring things such as wind direction, wind speed and other meteorological data. It also specifies buffer zones for specific blocks on the property. In addition to areas of risk with respect to the riverine environment, the best management practice plan also identifies these in particular.²¹

A number of environment and community groups raised concern with the concept of industry self regulation pointing to past and present activities where pesticide misuse has occurred. Amanda Pahl, Secretary, Mudgee District Environment Foundation stated in evidence to the Standing Committee:

Industry self-regulation of safe, legal chemical use does not work and is failing rural communities and threatening export industries. Industry standards must ensure fair and reasonable attempts to manage chemical safety. Industry standards must not require local communities to protect, monitor, regulate and enforce appropriate behaviour.²²

Similar sentiments were expressed by Mr Jeff Angel, Director of the Total Environment Centre in the Standing Committee's Sydney public hearing:

One of the reasons that we believe that the cotton industry and other intensive users have failed is that they are incapable of controlling the cowboys in the industry. Unlike the views of New South Wales farmers and the cotton industry, we do not believe that there are a few cowboys; we believe there are a lot of cowboys, and that is symptomatic of the lack of best practice which the industry cannot adopt voluntarily. For that reason we have rejected the self-regulation policies of the New South Wales Farmers' Association and the cotton industry. We have examined the best management practices manual of the cotton industry which became public a few months ago. That manual espouses voluntary compliance with minimum standards for environment protection and management without real consultation with stakeholders about the standards. There is no vision for the industry to minimise reliance on pesticides in the future or even acknowledge that the pesticide load must be reduced.²³

²¹ Evidence of Mr Cone, Cotton Australia, 26 July 1999, p.102.

²² Evidence of Ms Pahl, Mudgee District Environment Foundation, 26 July 1999, p.171.

²³ Evidence of Mr Angel, Total Environment Centre, 21 June 1999, p.4.

3.2.2 Co-regulation

The issue of co-regulation was raised by two significant industry groups, Cotton Australia/Australian Cotton Industry Council and Avcare during public hearings before the Standing Committee. The Hon. Gary Punch, Chief Executive Officer, Cotton Australia and Executive Director, Australian Cotton Industry Council, explained to the Standing Committee the cotton industry's vision for co-regulation as related to use and management of pesticides in New South Wales:

What we are talking about in terms of policing and sanctions we think is truly termed co-regulatory because we are seeking to take delegated regulatory authority in the case of New South Wales from the Minister for the Environment, probably under section 7 of the Pesticides Act, to enable the appointment of officials from our industry who will have the right of inspection. We have to discuss what other rights the State Government may or may not allow. In the context of Mr Cohen's comments, this should give the public greater surety that the industry is out there policing itself and banging a few heads together. That is in addition to existing governmental controls.

The use of regulatory powers under authorisation by the Australian Competition and Consumer Commission was also discussed by The Hon. Gary Punch as a means of industry imposing penalties on transgressors. The Standing Committee heard evidence from Avcare concerning its experience with co-regulation, and its support for the application of a co-regulatory approach in conjunction with the *Pesticides Act 1978*.

Avcare has played a leading role in pioneering the concept of co-regulation with its Agsafe program. Agsafe is a fully owned subsidiary of Avcare, both of which operate at arms length from each other. Agsafe was started by our industry in 1987 and today enjoys a good reputation based on a successful performance in raising the level of professionalism within the industry. Most importantly, Agsafe has an ACCC authorisation that gives it teeth to impose trade sanctions for non-compliance...

Avcare feels strongly about the role of co-regulation in achieving a modern and responsive pesticides Act in New South Wales. Co-regulatory programs with adequate teeth can make a significant and lasting contribution towards our more sustainable agricultural sector.²⁴

²⁴ Evidence of Mr Gauchat, Avcare, 5 August 1999, p.358.

The reasoning behind cotton industry interest in co-regulation stems in part from the desire to improve community perception of the industry as a pesticide user. The cotton industry considers that it is in their best interests to alter activities of those transgressing the *Pesticides Act 1978*.²⁵ During evidence before the Standing Committee, The Hon. Gary Punch outlined the advantages that a co-regulatory approach would achieve through supplementing existing legislative measures and augmenting the number of inspectors in the field.

We are seeking delegated powers to help police ourselves on the ground, not to the exclusion of existing provisions, but as a supplement to them. We recognise that one of the problems with the existing law is that there is just simply not enough bodies - not enough eyes and ears - to carry it through.²⁶

The co-regulatory approach was viewed by cotton industry representatives as the most effective instrument for catching transgressors within rural areas, where an ethos exists of not making a complaint against another farmer to a government agency.²⁷

The Standing Committee supports the right for industry to seek authorisation via the Australian Competition Consumer Council to restrict trade or commercial activity within its own sphere of commercial business.

The present regulatory system at Commonwealth and State level affords the responsibility for administration of legislation to government agencies. The system is designed to ensure legislation is administered in an unbiased and apolitical fashion with government agency decisions open to appeal through government or judicial mechanisms. Under this regime there is a clear separation of roles between the regulator and the regulated. The involvement of industry in the regulatory process would tend to mitigate these advantages.

The Standing Committee supports the development of industry self regulated programs including best management practice and environmental management systems as a non regulatory instrument for pesticide management. The Standing Committee considers that industry self regulation measures be reviewed by the Department of Urban Affairs and Planning, in consultation with industry and community groups, for incorporation into regional agricultural plans.

²⁵ Evidence of Hon. Mr Punch, Cotton Australia, Australian Cotton Industry Council, 21 June 1999, pp. 47-48.

²⁶ Evidence of Hon. Mr Punch, Cotton Australia, Australian Cotton Industry Council, 21 June 1999, p.48.

²⁷ Evidence of Hon. Mr Punch, Cotton Australia, Australian Cotton Industry Council, 21 June 1999, p.47.

Recommendation 5

The Standing Committee recommends that no amendment be made to the *Pesticides Act 1978* delegating regulatory authority to industry.

3.3 Community based agreements

Community based mediation, discussion and education provides an additional mechanism to manage pesticides. This approach attempts to facilitate workable solutions to concerns regarding pesticide use at the local level, involving local representatives and local issues.

The Standing Committee supports the approach taken by a number of communities such as Narromine and Gunnedah to address the management of pesticides through chemical liaison committees. The Standing Committee heard evidence from Ms Sandra Strong, President of the Gunnedah Chemical Liaison Committee who outlined the charter of the Liaison Committee:

To reduce community concern in the use of agricultural chemicals by developing and promoting “best practice” procedures in the Gunnedah and surrounding districts.

This will be achieved by:

- (a) Adopting and promoting the use of the Chemical Use Spray Guidelines.
- (b) Assisting in the education of the community, of growers and chemical users in the use of chemicals with the aim of minimising community concern through ensuring best practice procedures are complied with.
- (c) Informing the community of the role of the Committee.
- (d) Formulating a fair and standard procedure, for incidents to be reported by the community.
- (e) Identifying “sensitive areas” and determining a suitable resolution process for these areas.
- (f) Providing advocacy for the community and for individuals in its and their dealings with Government authorities and other bodies on pesticide issues.²⁸

Ms Strong in evidence to the Standing Committee, outlined the Chemical Liaison Committee’s achievements in relation to pesticide management:

...I believe, the Gunnedah Chemical Liaison Committee has been responsible for a huge attitudinal and behavioural change of users of

²⁸ Tabled document No.45, Gunnedah Chemical Liaison Committee.

agricultural chemicals. As previously stated, basic communication between neighbours has been the basic change.

Aerial applicators note a marked shift in farmers accepting accountability for their practices, and in farmers working within the guidelines as set down.

We now find that the majority of farmers have undertaken best management practices education...

The Gunnedah Chemical Liaison Committee has been responsible for education of operators – raising community awareness. This is an attitudinal and behavioural change. An example of that is a pest control operator locally who now places alert signs around the perimeters when he is spraying for spiders in houses, raising the awareness of the community.²⁹

The Gunnedah Chemical Liaison Committee advised that these achievements had been made with only limited funding from Gunnedah Shire Council for administration.³⁰

The Standing Committee recognises that assistance to community monitoring groups is required to meet operating costs of activities. Accordingly, the Standing Committee urges the NSW Environment Protection Authority, to examine funding mechanisms that assist community groups such as the Gunnedah Chemical Liaison Committee conduct pesticide related monitoring, education and mediation activities.

3.4 Education and Training of Pesticide Users

3.4.1 Present Training Initiatives

The Australian Environmental Pest Managers Association, in its submission to the Standing Committee, advised of a push from within major sections of the agricultural chemicals industry to develop a national standard, based on national training competency standards for licensed pest management technicians.³¹ These initiatives are envisaged to be industry driven and participation is non-compulsory.

Avcare, the peak national agricultural chemical industry organisation representing 38 major manufacturers and 4 distributors of agricultural and veterinary chemical

²⁹ Evidence of Ms Strong, Gunnedah Chemical Liaison Committee, Gunnedah, 27 July 1999, pp. 214-215.

³⁰ Evidence of Ms Strong, Gunnedah Chemical Liaison Committee, Gunnedah, 27 July 1999, p.223.

³¹ Submission No 38, Australian Environmental Pest Managers Association (NSW Branch), p.2.

products in Australia³², advocated the use of industry-driven competency training and codes of best practice supported, where necessary, by government intervention.³³ Avcare submitted that their Agsafe accreditation program ensures that people who sell or offer advice on crop protection and animal health products have appropriate training.³⁴

The WorkCover approved industry Code of Practice, in accordance with the provisions of Section 44A of the *Occupational Health and Safety Act 1983*, commenced on 1 September 1998³⁵ and requires that a training program should cover:

- Duties under the *Occupational Health and Safety Act 1983*;
- The *Occupational Health and Safety (Hazardous Substances Regulation)* and this code;
- Advice regarding the pesticides that may be stored or used in the workplace
- The legal significance of a label and any restrictions resulting from it
- Relevant and up-to-date legislation or guidance material relating to the transport, use, storage and disposal of pesticides.³⁶

At present TAFE New South Wales runs training modules on a variety of pesticides-related subjects pitched at various levels of difficulty and subsequent accreditation, including:

- Farm Chemical Use;
- Soil Monitoring and Management;
- Sustainable Farm Practices; and
- Environmental Awareness.³⁷

The Open Training and Education Network (which delivers distance learning), also offers pesticides-related subjects including:

- Weed Control;
- Pest Control (Urban);
- Pest Inspection (Timber);
- Trade Waste Treatment;
- Transportation of Dangerous Goods;
- Water Industry Operations (Wastewater Treatment); and
- a range of subjects on Environmental Principles and Environmental Practices.³⁸

³² Submission No 40, Avcare, Executive Summary, p.v.

³³ Submission No 40, Avcare, p.39.

³⁴ Submission No 40, Avcare, Executive Summary, p.xi.

³⁵ Submission No 2, WorkCover, Code of Practice for the Safe Use of Pesticides in non-agricultural workplaces, p.1.

³⁶ Submission No 2, WorkCover, Code of Practice for the Safe Use of Pesticides in non-agricultural workplaces, p.43.

³⁷ www.tafensw.edu.au/handbook.

Rapid Solutions' submission outlined the pesticide industry's initiative and progress towards national competency-based training:

At the last Pest Industry and Government Seminar (PIGS) conference held in Melbourne it was agreed that all States and Territories would change to the new skills based learning program established under the National Pest Control Competency Training Scheme established under ANTA... It has been agreed that the standard licence will require a trainee to be assessed against the National Units of Competency by a qualified Assessor.³⁹

3.4.2 End Users of Accredited Training

The Standing Committee received a number of representations advocating that all pesticide applicators, including farmers, should be formally trained in the use of pesticides to a national standard. Various stages of formal training may need to be established to ensure the differing needs of end users are encapsulated. Ms Jo Immig, Chemical Campaigner, Total Environment Centre referred to this issue in evidence to the Standing Committee:

...certain levels or categories of chemicals require more stringent training. For example, schedule 7 chemicals should be restricted to certain people who have attained a certain level of training with those materials. That training should be mandatory, not voluntary, as it is at the moment.⁴⁰

Recommendation 6

The Standing Committee recommends that education and training in the use and management of pesticides be compulsory for applicators who conduct application activities for professional purposes and that other commercial applicators undertake education and training regimes that correspond with user needs and toxicity of chemicals applied. The mechanisms to implement an education and training program may include pamphlets, video instruction or course attendance where appropriate and be funded by a levy on agricultural chemical sales.

An education and training system that reflects the needs of pesticide users provides a flexible and efficient approach for disseminating information concerning pesticide management. Pesticide applicators that only use softer pesticides may require the lowest levels of education and training in pesticide management. Conversely, high

³⁸ OTEN Enrolment Information Manual 1999, pp.32-48.

³⁹ Submission No 28, Rapid Solutions, p.15.

⁴⁰ Evidence of Ms Immig, Total Environment Centre, 21 June 1999, p.10.

volume users of pesticides, such as contract pesticide applicators using Schedule 7 pesticides, are likely to require the most detailed education and training regime.

3.4.3 The essentials of formal training

The three critical areas of formal training for pesticide use identified in submissions and public hearing evidence were:

- Application;
- occupational health and safety principles; and
- storage and disposal.

3.4.3.1 Application

A consensus was discernible both from submissions and witnesses representing industry, community and interest groups of the need for continued training and education in pesticide application. The Hon. Gary Punch of Cotton Australia stated:

We need to continually educate people both in technologies and chemicals that they are using in the application process.⁴¹

Another witness, Mr Peter Howat, Nufarm's Research and Development Manager for Australia, said:

I think you need to make people very much aware of application. Application is one area where there has not been a lot of direct information supplied to the users of the product... It is an area in which there has not been a lot of development of expertise... A lot of farmers who have grown up with application, but who have not, in a sense, been adequately trained in it, may not be as familiar as we would like with the total theory of what is actually occurring when they are applying a pesticide. I think there is a lot of training that should go on, and I would certainly like to see that.⁴²

3.4.3.2 Training in the principles of occupational health and safety

Dr Fragar, Director of the Australian Centre for Agricultural Health and Safety, made the following connection with respect to the operation of Farmsafe Australia's "Managing Farm Safety" course:

⁴¹ Evidence of Hon. Mr Punch, Cotton Australia, Cotton Industry Council, 21 June 199, p.47.

⁴² Evidence of Mr Howat, Nufarm, 26 July 1999, p.191.

Within that program the whole issue of hazard identification, risk assessment and risk control for pesticides is considered along with the other hazards that farmers are required to manage under occupational health and safety legislation. The Managing Farm Safety course for farmers and farm managers has been developed after analysis of hazard and risks within each commodity organisation. However, it is not within agriculture as a whole, but with particular commodity groups.⁴³

Amanda Pahl, of the Mudgee District Environment Foundation, outlined her concerns with the absence of workplace safety practices in the viticultural area of Mudgee:

Young, inexperienced or needy workers are often used in these rural areas, with little or no training,...protective clothing, or...washing facilities. The importation of non-English speaking casual workers doing night spraying work creates further risks if they are unable to read or understand basic requirements.⁴⁴

3.4.3.3 Storage and disposal

The question of storage and disposal of pesticides is as much an occupational health and safety issue as it is an environmental protection issue.

In its submission to the Standing Committee, Avcare detailed its new **drumMUSTER** initiative, which, as a joint initiative of the National Farmers' Federation, Avcare, the Veterinary Manufacturers & Distributors Association and the Australian Local Government Association, is proposed as the national solution for the waste generated by empty one-way farm chemical containers. In an open letter to stakeholders, the **drumMUSTER** program was referred to as:

...the Container Management Program (**drumMUSTER**)...an industry funded...collection and disposal scheme for all rigid non-returnable containers of over 1 litre/kilogram content that have been properly rinsed and cleaned.⁴⁵

drumMUSTER is not devised to collect old or unwanted chemicals, which is dealt with under a one-off government collection of unwanted and unused chemicals called the National Collection Storage and Destruction Scheme but, rather, to take certain designated containers out of the waste stream process and, where appropriate, recondition, reuse or recycle them.⁴⁶

⁴³ Evidence of Dr Fragar, Australian Centre for Agricultural Health and Safety, 27 July 1999, p.229.

⁴⁴ Evidence of Ms Pahl, Mudgee District Environment Foundation, 26 July 1999, p 169.

⁴⁵ Submission No.40, Avcare, Foreword, p ix

⁴⁶ **drumMUSTER**: An Open Letter to **drumMUSTER** stakeholders – What To Do With Your Empty Farm Chemical Containers, The Land, Advertisement, Thursday 1 July 1999, p.16.

drumMUSTER does however necessitate full implementation of several critical steps:

- farmers begin to pay a **drumMUSTER** levy of 4c a litre from 1 February 1999 on “recognised non-returnable plastic and steel containers”;
- farmers are required to properly clean their empty farm chemical containers on their own properties. “Please clean your farm chemical containers as soon as they are emptied, using one of the Avcare-approved cleaning processes, and put the rinse materials into your spray vat”;
- farmers are next required to store their clean containers on their properties until the moment of operational collection, which “will be publicised extensively when completed. Keep an eye out, and mark the times in your diary”;
- Councils are asked to make their tip or waste depot facilities available for farmers for a designated period to bring in their clean drums. (**drumMUSTER** pays Councils for their participation);
- when the operational collection is announced, farmers are required to transport their clean containers to the local council;
- **drumMUSTER** pays processors who then prepare these drums and take them away for recycling.⁴⁷

Mr Davis, Manager, Environment and Health, Dubbo City Council raised the issue of the practical application of the **drumMUSTER** program and provided an insight into difficulties the Council have experienced with this particular program:

We are not getting involved with the Drum Muster program at this stage because of an incident recently that we were told about in Gunnedah, where a number of drums were collected and shredded and were found to be still contaminated and not useable in another form. So the Drum Muster program, for all its good intentions, is very difficult at this particular point to implement. It is a pretty important issue...We have got to ensure that the chemical containers are cleaned to a standard that is suitable for their proposed use⁴⁸

When asked to clarify what was defined as suitable cleaning, Mr Davis indicated it to be triple rinsing and piercing the drums although the process did not seem to be operating sufficiently. The Standing Committee later raised the issue of the effectiveness of the triple rinsing in the **drumMUSTER** with Mr Peter Howat of Nufarm, who responded by stating:

...most of the spray booms that farmers have now actually have attachments on them to allow them to do the triple-rinse. They actually

⁴⁷ The Land, Advertisement, Thursday 1 July 1999, p.16.

⁴⁸ Evidence of Mr Davis, Dubbo City Council, 26 July 1999, p.118.

put a spike in the drum and it pushes the chemical out and rinses the drum at the same time... That will make a significant difference.⁴⁹

Another of the concerns expressed by Dubbo City Council in regard to the drum*MUSTER* program is outlined below:

We intended...to offer the Drum Muster organisation the opportunity to work directly with contractors who could provide a use for the shredded and processed material, but Drum Muster has said it cannot deal directly with contractors because of controls within the Environment Protection Authority and that it is necessary for local government to be involved.⁵⁰

Mr Davis explained that the drum*MUSTER* program required local councils to be part of the process, to act as the middle men to provide the collection facilities and to work with the contractors. Mr Davis concluded that:

Local government is not in a position to provide those end markets for these products ... we have a situation where we are being asked to collect the drums, process those drums, but, at the end of the day, the product cannot be used.⁵¹

An alternative approach to resolving the problem of storage and disposal of pesticide containers was described by Mr Peter Howat of Nufarm who informed the Standing Committee that Nufarm was the first company to be involved in the use of returnable 110-litre drums (Envirodrum) or 1,000-litre tanks (Envirotank).

The Envirodrum itself is a 110-litre tank that is a returnable container. It is fully sealed. It has a lot of benefits. One of the first is that it has reduced operator exposure. He does not actually take the top off the container to tip it out; he actually affixes a hose to that and he can fill his tank straight away... There is no drum disposal; they can return these 110-litre drums or 1,000-litre tanks. They don't have to triple-rinse them because they don't actually open the container at all.⁵²

Mr Howat advised that Nufarm colour-coded the drums to reduce confusion, producing different products in different coloured containers. Additionally, to prevent cross-contamination of chemicals, the design of the fixing point for the hose from a drum that has herbicides in it is three prongs and, for an insecticide, four-prongs. These returnable drums are exempt from the drum*MUSTER* levy of 4c a litre but do attract an upfront deposit of \$80 each, refundable when the drum is returned.

⁴⁹ Evidence of Mr Howat, Nufarm, 26 July 1999, p.186.

⁵⁰ Evidence of Mr Davis, Dubbo City Council, 26 July 1999, p.118.

⁵¹ Evidence of Mr Davis, Dubbo City Council, 26 July 1999, p.118.

⁵² Evidence of Mr Howat, Nufarm, 26 July 1999, p.181.

Mr Howat pointed out to the Standing Committee that:

Another initiative that Nufarm has taken and which I believe has helped in the management and use of pesticides in New South Wales is this move into dry products.. Obviously, there is a reduction in the use of solvents; a change in packaging form, going to a form of packaging that can be disposed of; increased safety in handling; ease of measurement; and a whole range of other things...[As a result] In 1998 we had 341,000 less 20-litre containers out there, by replacing them with either refillable Envirodrums or dry products.⁵³

Mr Howat affirmed that:

...the real bonus to the farmer has been in the handling of the chemicals. Most of the surveys that have been conducted, where pesticides contamination has been a concern of farmers, has been the emptying of the drums into the spray tank, which is not an easy task to do. With this, they can actually do it from the ground. You just click the fitting in, and it pumps the chemical straight into the tank.⁵⁴

3.5 Conclusion

While the Standing Committee acknowledges the considerable education and training material prepared by industry such as Avcare under their Agsafe program, additional suites of training modules may be required. The objective would be to achieve sufficient course content for formal accreditation. Stakeholders in this process might well include the Environment Protection Authority, TAFE, the Universities, NSW Agriculture, Agricultural Colleges, Farmsafe Australia, industry associations and environmental organisations.

Delivery of this accredited training could be spread across the current providers, such as TAFE and OTEN, the Universities, industry groups and the Agricultural Colleges.

Accreditation of formal training may be the best situation under the Vocational Education and Training (VET) system by the NSW Vocational Education Training Accreditation Board (VETAB), which is a registered training authority under the Australian National Training Authority (ANTA). This process would ensure that education and training is undertaken to a suitable standard.

drumMUSTER has documented difficulties for both farmers and Councils in its implementation and processing. Each container attracts a levy of 4c a litre.

⁵³ Evidence of Mr Howat, Nufarm, 26 July 1999, p.183.

⁵⁴ Evidence of Mr Howat, Nufarm, 26 July 1999, p.185.

Collection times and locations are arbitrary. Creation of a useful end product is dependent on outside factors. The program deals with chemicals in liquid form only. The potential user compliance appears low. Achieving an overall reduction in the amount of empty unused chemical storage drums on the farm would appear to be difficult.

Envirodrums and Envirotanks are sealed. A wide variety of drums can be used in this scheme. Each carries a returnable deposit of \$80 per drum or tank. Collection is by return to the purchase point. There is no end product as the drums are genuinely recyclable as chemical containers. The program deals with chemicals in both dry and liquid form. The end-user does have to purchase a pump (minimum outlay of which would be \$250). The design parameters appear to facilitate safe use. Compliance with the scheme appears to be more achievable. A measurable overall reduction in the amount of empty unused chemical storage drums on the farm in the environment would appear to be a beneficial outcome.