

Poster Articles

Educating and Training Pesticide Applicators in Australia

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Abstract

Education and training of pesticide applicators in Australia has undergone significant changes in the last 15 years in response to a range of drivers. There are national and State regulatory requirements for pesticide user training although State-based control-of-use legislation varies from no requirement to compulsory training for all commercial users. A variety of government and private training organisations train to standards set within nationally endorsed competency levels. Informal local industry seminars and extension programs are provided for various industry clients by consultants, education institutions and government agencies. Although many pesticide users undertake training to assist in meeting obligations and for the benefits of improved skills and technology, the level of adoption is variable. The national agchem industry requires training of all personnel in the distribution and product sale chain. Vocational education and training sector courses in agriculture, horticulture and environmental management incorporate competency-based pesticide user training while university courses rarely embrace significant studies in pesticide application technology and management. Improvements in educating and training pesticide users and managers are needed through better coordination, integration and funding, harmonisation of legislation, development of more trainers and knowledgeable advisors, and adoption of training and technologies by all industry sectors.

Introduction

In Australia over the past 15 years there have been enormous changes in the pesticide applicator training environment with a move from an absence of coordinated training to the introduction of highly successful voluntary training programs, and more recently to the legislated requirement for mandatory training.

There are many drivers for training. However, industry sectors are inconsistent in their adoption of training. There is also a shortage of trained instructors to deliver the training and a more coordinated and integrated approach is required to ensure adequate competency at all levels.

Drivers for Training

The importance of competent pesticide users is highlighted in the National Strategy for the Management of Agricultural and Veterinary Chemicals (ARMCANZ 1998) reflecting a number of factors pressuring spray applicators, including a range of regulatory requirements at national and State levels. There is also an increasing demand from spray applicators for access to high quality training at both basic and advanced levels to equip them with the skills to meet their obligations as well as to enhance their application technology to improve results and minimise problems of spray drift.

National regulatory requirements

The national authority regulating pesticide sale (the Australian Pesticides and Veterinary Medicines Authority) mandates training for users of specified high risk pesticides (APVMA 2004). This requirement is detailed on product labels. As well, under the National Code of Practice for the Control of Workplace Hazardous Substances, the National Occupational Health and Safety Commission also requires training for all persons who could be exposed to hazardous substances (including many pesticides) at work, with the training to be appropriate for the level of risk to health. Employers must keep records of the training for 5 years (Comcare 2002, NOHSC 2004).

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State regulatory requirements

States are responsible for legislation covering control-of-use, occupational health and safety, environmental protection, and transport and storage of dangerous goods. **Control-of-use** legislation varies considerably between States from no requirement to compulsory training for all users other than home gardeners. Those States which require training vary in the competency level at which this is to be undertaken. Some States require contractors to be trained and licensed, others do not. States' **Occupational Health and Safety** legislation pick up the requirements of the National Code of Practice for the Control of Workplace Hazardous Substances.

Duty of care, due diligence and better practices

Growers and spray applicators see a range of benefits from obtaining higher levels of skills and adopting good technology. Completion of training demonstrates due diligence and helps to fulfill Common Law Duty of Care and other regulatory obligations thereby minimizing liability in the event of litigation. It also assists them to avoid spray drift incidents, to achieve better pest management, to reduce the costs of wastage and loss of quality of produce, to improve profits, and to meet market requirements and community expectations. Despite these advantages, studies have indicated that adoption of better practices does not always occur on completion of the training (Pike 2000, Moriarty et al. 2001). As well as for these benefits, contractors undertake training to give them a competitive edge. In some cases training is required in order to be able to access insurance although many spray applicators are unable to obtain insurance. Spray contractors are now being required to demonstrate good practice and have documented pesticide management plans to be able to tender for contracts.

Community expectations

With heightened awareness of environmental and human health issues in the community, there comes an increased expectation that pesticides are used in a manner which protects people, the environment and the safety of food and fibre. There are very active lobby groups demanding higher standards and greater accountability.

Industry requirements

The national agchem industry requires training of all personnel in the distribution and product sale chain to ensure they meet regulatory requirements and industry standards. Many of these people provide advice to growers and spray applicators.

Many industry **Quality Assurance** and **Environmental Management System** schemes require those using pesticides to be trained to minimum standards.

Industry Training Programs

Agchem industry personnel

In 1987, a national farm chemical industry training program was introduced for all industry personnel who handle, sell, recommend, advise and/or take responsibility for the safety of agricultural and veterinary chemicals. This is coordinated by Agsafe, a division of AVCARE, the national farm chemical industry association, with training delivered by contracted trainers. Accreditation is based on completion of basic training and commitment to a Code of Conduct. The basic training covers an introduction to pests and pest management, the agchem industry, the product label, safe transport of farm chemicals, toxicity health and first aid, fire, spill and transport emergencies, and farm chemicals and the environment. Accreditation must be renewed every three years by undertaking further training and assessment. Agsafe also requires retail and wholesale premises to meet statutory standards. The Australian Competition and Consumer Commission (ACCC) have authorised the industry to levy sanctions against companies not complying with requirements (Agsafe 2004).

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Pesticide user training

Coordinated pesticide user training was introduced under the umbrella of the National Farmers Federation in 1990 with a national, voluntary industry program now called *ChemCert* Australia (ChemCert 2004).

Training is now also delivered by a range of other competing government and private Registered Training Organisations based on nationally endorsed competency standards set at levels for:

- those working under supervision
- independent operators
- managers and supervisors

The level of training required under State Control of Use legislation varies although most training for growers and spray operators is delivered at the level for independent operators. A major challenge which is encountered is how to tailor training for those who are from a non-English speaking background or who have low levels of literacy and numeracy. A range of programs are in place to overcome this.

The leading *ChemCert* Australia industry accreditation program has delivered training to over 200,000 people through a national network of approved trainers. The basic training for independent operators incorporates the principles of integrated pest management, legislation, label interpretation, safety, environmental protection, spray drift management, adjustment and calibration of application equipment, record keeping and risk management. Reaccreditation is required every 5 years. While the training is tailored to the needs of participants and meets legislative requirements for trained operators, specialist programs are also available e.g.

- Spray application in Cotton and Grain
- Spray application in Vineyards
- Spray application in Horticulture

In some States spray contractors are required to complete a specialist contractor's training program.

Vocational Education Sector Programs

Most vocational education and training sector courses in agriculture, horticulture and environmental management incorporate competency-based pesticide user training at a level which ensures successful participants meet regulatory requirements. Usually this is based on a standard pesticide user training program.

Tertiary Education Sector Programs

University courses rarely embrace significant studies in pesticide application technology and management. Of 17 Universities in Australia offering agricultural, horticultural or environmental management degrees, only one has comprehensive studies in pesticide management while a further 6 have components incorporated into other studies e.g. Integrated Pest Management (DEST 2004).

Informal Training Programs

Informal local industry seminars and extension programs are provided for various industry clients by consultants, education institutions and government agencies. While these meet a demand for specialist knowledge or awareness, they do not meet regulatory requirements.