

A new national approach for vocational weed management training

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Summary The Conservation and Land Management Training Package will boost the skills of weed management personnel across Australia. The nationally endorsed Training Package includes specific training pathways for full-time weed officers as well as multi-skilled land management officers. The Training Package will allow for apprenticeships and traineeships in weed management for the first time.

A case study in NSW showed that by involving weed officers in the project and recognising their prior learning, they see the benefits of formal qualifications and adopt a training culture.

Keywords Weed, conservation, land management, vocational education and training.

INTRODUCTION

Weed science and technology have developed rapidly over the past fifty years. There is now a wide range of professional and technical weed management specialists.

Tertiary training through the Universities has developed through efforts of the Cooperative Research Centre (CRC) for Weed Management Systems and will continue through the CRC for Australian Weed Management. Vocational education courses in NSW, like in other states, have been available for local government weed officers for many years. However, in 1997, few weed officers in NSW undertook training courses such as a Certificate II in Weed Control Operations and Certificate IV in Weed Control Practice that were then available (Thomson pers. comm. 1999). There was also no nationally accredited vocational training available in weed management.

The National Weeds Strategy and NSW Weeds Strategy recognised the need for a relevant vocational weed management training program. The National Goal 3 is 'to provide the framework and capacity for ongoing management of weed problems of national significance'. The strategies include integrating and coordinating weed education and training programs throughout Australia. Similarly the NSW Weeds Strategy (Anon 1997) had specific actions of establishing competency standards and developing training programs for local government weed control staff.

A project has largely met this objective in the vocational education sector. The Conservation and Land Management (CLM) Training Package will

allow for the training and development of the thousands of weed management personnel in Australia. Shortly, apprenticeships, as well as formal training and recognition-of-prior-learning, will support weed management training.

The project had two strands. The first strand was to develop the formal training package to fit in the national training framework. The second strand was to encourage local government weed officers in NSW to see the benefits of formal qualifications and to adopt an on-going training culture. The first phase of the project was reported on earlier (Rural Training Council of Australia (RTCA) 1999, Carter *et al.* 2000 and Kidd *et al.* 2001).

We established the National Weeds Industry Steering Group under the Sustainable Land and Water Resource Management Committee. The Group included representation from each state and mainland territory (usually the peak weed control authority), a representative of vocational education providers (NSW TAFE), an ACTU nominee (Municipal Employees' Union), the Australian Local Government Association and conservation volunteer groups (Australian Trust for Conservation Volunteers), and a nominee from the National Weeds Strategy Executive Committee. The Group also established state and territory consultative groups involving a wide range of stakeholders appropriate to the jurisdiction.

In 1999 the Chairs of the State/Territory Consultative Groups agreed to the draft National Competency Standard in Weed Management (RTCA 1999). Rather than including the proposed competencies as part of the existing Agriculture or Horticulture training packages, the Steering Group supported incorporating weed management with a range of other land management areas. The Competencies were submitted through the Rural Training Council to the Australian National Training Authority (ANTA) for endorsement.

The second phase of the project involved integrating weed management training into broader land management training, gaining national endorsement, and further enhancing the adoption of training. Kidd *et al.* (2002) reports on a recognition-of-prior-learning case study of local government weed officers from two regions in NSW. In this paper we report on the broader objectives of the project.

MATERIALS AND METHODS

Strand 1. Integrating weeds training into other land management training The National Weeds Industry Steering Group that developed the draft Weed Management Competencies was reconvened as the Weeds Industry Reference Group. In late 2000, the Rural Training Council of Australia contracted a consultant, DNR Group Pty Ltd., to develop the Conservation and Land Management Training Package. The Industry Reference Group provided feedback to the consultant and reviewed the proposed training package. In early 2001, the consultant conducted 21 workshops throughout Australia, and subsequently revised the existing draft Weed Management Competencies (RTCA 1999) so that they were as generic as possible, but still covered the skills needed for weed management.

Strand 2. Encouraging training The second strand had three goals. Firstly, to identify the range of skills of noxious weed officers. Secondly, to encourage those who did not have the full range of skills to undertake further training. And thirdly, to boost the skills of all weed officers.

We undertook recognition-of-prior-learning to map the skills of a range of local government weed officers (Carter *et al.* 2000). As the National Weed Management Competencies were not accredited, we used the Vocational Education and Training Accreditation Board (VETAB) accredited Certificate II in Weed Control Operations and Certificate IV in Weed Control Practice. This enabled weed officers who had sufficient skills to be awarded a Certificate II or IV if they had the skills already.

From the recognition-of-prior-learning we identified training needs. We also surveyed local government weed officers to identify priorities for training from those officers. The Noxious Weeds Advisory Committee also identified gaps to meet the NSW Weed Strategy objectives.

We coordinated the delivery of training for the target group. We developed and delivered a range of training programs to meet identified needs. We delivered training in short blocks at central locations to fit with the work program of local government officers. We also developed training resources to assist in delivery of training.

RESULTS

Strand 1 In January 2002 the Weed Industry Reference Group accepted the CLM Training Package. The Training Package included a comprehensive set of training competencies (standards). In May 2002, ANTA endorsed the CLM Training Package.

The CLM Training Package includes other land management sectors as well as weed management.

The qualifications are a Weed Management specialisation in:

Certificate I in Conservation and Land Management
Certificate II in Conservation and Land Management
Certificate III in Conservation and Land Management
Certificate IV in Conservation and Land Management
Diploma in Conservation and Land Management.

There is also an Advanced Diploma in Conservation and Land Management that is not sector-specific.

As well as the Weed Management specialisation, other sector streams are available. These include Lands, Parks and Wildlife, Vertebrate Pest Management, Indigenous Land Management, Community Coordination and Facilitation, Bush Restoration and Management, Conservation Earthworks and General Land Management.

The Commonwealth's New Apprenticeships Scheme is now available to assist with training up to Certificate III of the CLM Training Package.

Strand 2 We developed training courses in Spray Drift Management, Setting Noxious Weed Priorities, Vegetation Survey and Assessment, Property Inspection, Presentation Skills for Weed Officers, Report Writing for Weed Officers and Pasture Weed Identification.

We organised delivery of existing courses including Meeting Procedures, SMARTrain Chemical Application, Managing Chemical Use, Managing Weeds in Pastures, 4-Wheel Drive Off-road Operation and Safety, Chainsaw Operation and Maintenance, Aquatic Weed Identification, Legal (Noxious Weeds Act), Environmental Weed Management, Conflict Resolution for Weed Officers and Plant Identification.

We also developed training resources for skill assessment, recognition-of-prior-learning and manuals to assist in delivery of the training courses.

In 2000–2001, 80 weed officers undertook skill assessment and 513 participated in training events in NSW. At the time of writing, a total of 66 officers have been awarded Certificate II in Weed Control Operations and 20 awarded Certificate IV in Weed Control Practice (see Table 1).

The enthusiasm of weed officers for the training and recognition-of-prior-learning is demonstrated by eight officers who completed Certificate IV requesting training in the Diploma in Conservation and Land Management (Weed Management Specialisation) in advance of the CLM Training Package endorsement.

DISCUSSION

The CLM Training Package contains new national competency standards that will set benchmarks for individual performance and guide the design and development of future training programs. For the first

Table 1. Local Government Weed Officers that obtained accredited qualifications.

Treatment	Certificate II ^A	Certificate IV ^B
2000–2001	24	6
2001–2002	42	14

^A Certificate II in Weed Control Operations (NSW).

^B Certificate IV in Weed Control Practice (NSW).

time weed officers, spray operators and plant protection workers will have training programs with nationally recognised awards from Certificate to Advanced Diploma level under the National Training Framework.

The Package includes pathways for full-time weed officers as well as multi-skilled land management officers. This will enable skilled officers to move from other land management fields into weed management and *vice versa*. It will also allow those officers whose roles include weed management and related skills, such as revegetation or vertebrate pest control, to have one qualification covering all the skills.

The CLM Training Package will also allow for portability. This allows officers trained in South Australia or Queensland to have qualifications recognised in NSW and *vice versa*.

The NSW Weed Strategy objective of establishing competency standards and develop training programs for local government weed control staff has been met. This training initiative will contribute to an effective and efficient system for the delivery of noxious weed control in NSW.

The National Weeds Strategy objectives for vocational training in weed management have largely been met. Now that the CLM Training Package is endorsed we will have the framework and capacity for ongoing management of weed problems. Specifically the national strategic approach of including weed management vocational training in the CLM Training Package will ensure weed management training will not only be appropriately recognised, but will also be integrated with other natural resource training programs.

The training delivered in the project included a wide range of levels and functional areas. This ensured that all officers could see some training that they actually wanted to complete. As weed officers helped to develop the training and set the priorities for what was delivered, they participated willingly.

The approach used to encourage training of weed officers could be used for other sector groups such as agricultural chemical resellers and spray contractors.

Accessing the New Apprenticeship Scheme will allow for assistance in training that was previously not available to the sector. Unlike previous arrangements, skills learned on the job will be recognised just as much

as the formal training.

The NSW case study demonstrates the value of a balanced industry led education and training program that includes skill assessment and recognition, targeted accredited training and quality resources. The success of this program, which has seen over 80 weed officers undertake skills assessment and over 700 participants in training events, is due to the active participation and support of all stakeholders (see Kidd *et al.* 2002).

The next stage, at least in NSW, is to develop and deliver training courses to address the higher level (Diploma) training needs of weed officers. The challenge is to maintain the enthusiasm for on-going training and to provide appropriate training opportunities and resources.

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