

## 7. Training

Education and training are crucial to sustainable land management outcomes (Benson 1998). The lack of knowledge and or training in land management can lead to unsustainable practices. It is clear from the examination of most pastoral areas in the humid and semi-arid zones in the Northern Territory that major consequences of unsustainable land management includes land degradation by weeds.

Therefore appropriate training in land management to deal with the relatively recent introduction of weeds holds one of the keys to land sustainability. Education and understanding about weeds in land management will enable Aboriginal people to make more informed decisions concerning weed management on their country. To do this Aboriginal people need access to relevant, accurate and comprehensive information on which to base their decisions.

The delivery of training in the Northern Territory has traditionally centered around study at a University, TAFE college or rural colleges all of which are a long way from people in remote pastoral properties or Aboriginal communities. Increasingly the delivery of some courses in land management are conducted in the field on participants' own country or at local regional centres. However, this survey revealed some people who wanted training were not actively undertaking any because of the lack of appropriate delivery. Training that was conducted on site at communities or outstations was identified as the most appropriate form of delivery. Prospective students were reluctant to move to regional centres or main cities to undertake training because of community and family responsibilities. The lack of material available over the Internet was in a few cases raised as an issue that needs to be addressed for future delivery of courses.

Without appropriate delivery by educators skilled in cultural aspects of delivery it is difficult to see how the current range of nationally accredited modules can be usefully interpreted at the local level so as to meet the needs of local training needs. Further, it is of concern as modules will be taught from a non-Aboriginal point of view which can result in devaluing Aboriginal cultures. Currently there is a real lack of Aboriginal people providing training in weed and land management in the NLC region. Also, very few of the six principles of best practice training for Aboriginal communities as outlined in Arnott et. al. 1988 are being met. This needs urgent rectification.

*Recommendation 22:* NLC, through the CFCU, assists communities members to identify local individuals in communities who can be trained in delivery of weeds modules. This should involve the delivery of appropriate training at the Workplace Training Category 1 level and Assessor Training courses by appropriate people.

### 7.1 Training available

Predominately training available in the areas of weed identification and control in the Northern Territory are at the VET level. Delivery of VET courses is undertaken by approximately 100 public and private registered providers Arnott et. al. (1998). There are three main public providers of VET training in the area of weed control inside the study area: the Northern Territory University, Batchelor Institute of Indigenous Tertiary Education and the Northern Territory Rural College. The Northern Territory University has two campuses, one at Casuarina and the other at Palmerston which are both in Darwin.

Batchelor college is located about 100 km south of Darwin and the Northern Territory Rural college is just outside of Katherine. Both Batchelor college and the Northern Territory University have regional offices in most major centres. Following are modules that relate to weed identification and control as well as some modules relating to chemical use. Chemical use is linked with weed control and therefore was considered important enough to include in this section.

Some examples of training available outside the Territory have been included where it is known that students from the Northern Territory have enrolled in the modules listed or where it was considered important to show the level of depth that training courses offered interstate outside of the VET/TAFE sector. The listings from interstate are not meant to be exhaustive. The weed training modules have been listed firstly by provider and secondly within this category by course.

### **7.1.1 Degree or Postgraduate Level**

The University of New England offers a unit (subject) known as Integrated Weed Management which runs for second semester each year and is taught externally, i.e. via correspondence. The unit deals with the principles of weed identification and control and as such is relevant to people from around Australia. It can either be taken as part of an undergraduate or postgraduate degree or done as a 'standalone' professional unit for a fee of around \$700. The unit focuses very much on weed identification and management.

The Charles Sturt University offers Integrated Weed Management over one semester. This is studied by distance education with a three-day residential school workshop. The unit is one of the projects of the Weeds CRC. There are comprehensive study materials (quite a bit of reading) with assignments and an exam. The subject allows for some specialisation into weed ecosystems of choice. It is possible to incorporate case studies of weed situations relevant to northern Australia. The residential school is conducted at Wagga, however if there are enough students enrolled it can be run in the Northern Territory. Available in BAppSc Agriculture, Graduate Certificate, Graduate Diploma and Masters courses. It may also be taken as a 'standalone' professional unit for a fee.

### **7.1.2 Diploma Level**

#### **Diploma in Applied Science (Natural and Cultural Resource Management)**

- Level: Level 4
- Nominal Hours: 800 hours

Specific modules: Two modules relate to weeds in this course.

- 1. Title: Pest Species Management
- Code: NC106
- Hours: 100 hours

This is a core module with a duration of 100 hours. Provides participants with an introduction to issues relating to pest species and their management. Not restricted to weeds but covers animals and other pests.

Nationally accredited.

**Delivery:** This module is delivered in mixed with an at home component combined with a residential component.

- 2. Title: Introduction to ecology
- Code: NC102
- Hours: 100 hours

This is a core module with a duration of 100 hours. Provides participants with an introduction to ethno-ecological knowledge and western ecological principals. Not restricted to weeds but they are covered as part of the ecosystems approach to ecology.

Nationally accredited.

**Delivery:** This module is delivered in mixed with an at home component combined with a residential component.

Currently Offered by the School of Community Studies, Batchelor Institute of Indigenous Tertiary Education.

### **7.1.3 Certificate Level 3**

#### **Certificate 111 Land Management (Aboriginal Communities)**

This certificate is a one-year full-time or equivalent course.

- Level: Certificate level 3
- Specific modules: There are two modules that related to weed control Viz.

## **Training**

- Title: Weed Identification and control
- Code: TAE054
- Hours: 12 hours
- Title: Safe use of farm Chemicals
- Code: TAE052
- Hours:16

### **Nationally accredited**

**Delivery:** This module is delivered in mixed with an at home component combined with a residential component

Currently Offered by the School of Community studies, Batchelor Institute of Indigenous Tertiary Education.

### **Certificate 111 Lands Parks & Wildlife Management**

This certificate is a one-year full-time or equivalent course.

- Level: Certificate level 3
- Nominal Hours: 840 hours
- Specific modules: There are two modules related to weed control
- Title: Weed Identification and control
- Code: TAE054
- Hours: 12 hours
- Title: Safe use of farm Chemicals
- Code: TAE052
- Hours:16

**Delivery:** This course is available by full time and part time study modes. Classes are held during the day and evening. Not available externally.

Currently Offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLS) through the Palmerston Campus and Jabiru Campus. And also offered through the Northern Territory Rural College at the Second Street campus in Katherine.

## **7.1.4 Certificate Level 2**

### **Certificate 11 in Australian Land Conservation and Restoration**

- Level: Certificate level 2
- Nominal Hours: 390 hours
- Specific modules: No specific modules in this course that deal with weed control and identification however students do get broad introduction to weeds and their control through a range of modules, for instance;
- Title: Landcare
- Code: TAD093
- Hours: 50 hours

An elective module with a duration of 50 hours. Provides participants with an introductory knowledge of impacts of weeds in the local area.

**Delivery:** This module is delivered on site in conjunction with horticultural projects.

Currently Offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLCS).

### **Certificate 11 National Amenity Horticulture Traineeship**

- Level: Certificate level 2
- Nominal Hours: 400 hours
- Specific modules:
- Title: Chemical use
- Code: AHT027
- Hours: 20 hours

## **Training**

A 20-hour module that provides students with the skills and knowledge to use chemicals safely. The emphasis of this module is in personal and environmental safety.

**Delivery:** Much of the training can be done on the job.

**Nationally accredited.** Traineeship are now referred to as new apprenticeships.

Currently Offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLS)

### **Certificate 11 Rural Skills (Production Horticulture)**

This traineeship (apprenticeship) is designed to suit needs of employers who require skilled people to work in the fruit and vegetable production sectors of the industry.

- Level: Certificate level 2
- Specific modules:
- Title: Pest Control(non chemical)
- Code: Discipline code 1101530 /AG032?
- Hours: 20 hours

A 20-hour module that provides students with the skills to recognize weeds, insects and other pests common to their local area.

**Delivery:** Much of the training is done on the job. Nationally accredited. Traineeship are now referred to as new apprenticeships.

Currently offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLCS).

### **Certificate 11 Rural Skills**

This traineeship (apprenticeship) is designed to develop skills, knowledge and personal attributes for entry level rural workers

- Level: Certificate level 2
- Specific modules:
- Title: Chemical safety
- Code: AGD006
- Hours: Not known

**Delivery:** Not known

**Nationally accredited.** Traineeship are now referred to as new apprenticeships. Currently offered by Northern Territory Rural College, Katherine.

## **7.1.5 Certificate Level 1**

### **Certificate 1 in Land Management Skills (Aboriginal Communities Looking After Country)**

- Level: Certificate level 1
- Nominal Hours: 400 hours
- Specific modules:
- Title: Introduction to Weed identification and control
- Code: TBA
- Hours: 25 hours

An elective module with a duration of 25 hours. Provides participants with an introductory knowledge and skills in weed recognition in the local area as well as an overview of impacts of weeds in the local area.

Nationally accredited.

**Delivery:** This module is delivered on site as part of community training as part of community projects and workshops.

Currently Offered by the Faculty for Aboriginal and Torres Straight Island Studies, (FATSIS): School of Mathematics and Science, NTU.

## **Training**

### **Certificate in Horticultural Skills (Aboriginal Communities)**

This certificate is an on the job training program. Assessment is oral or by practical thus students do not need literacy or numeracy skills.

- Level: Certificate level 1
- Nominal Hours: 410 hours
- Specific modules: No specific modules in this course that deal with weed control and identification. However students do get a broad introduction to weeds and their control through a range of modules:
  - Title: Landcare
  - Code: TAD093
  - Hours: 50 hours

An elective module with a duration of 50 hours. In part provides participants with an introductory knowledge of impacts of weeds in the local area. Nationally accredited. However accreditation for this module for 1999 has not been assured.

**Delivery:** This module is delivered on site in conjunction with horticultural projects.

Currently offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLS), NTU.

## **7.1.6 Short Courses**

### **Pest Management Training Program**

A course which covers all aspects of licensing for the domestic, commercial and rural pest control industries. Modules required for a horticulture license (herbicide use only) include:

- TAE052 Safe Use of pesticide
- TAE054 Weed identification and Control
- TGD061 Senior First Aid
- Duration of Course: 12 months part time
- Delivery: External mode with compulsory attendance at workshops held throughout the Territory at various times of the year.
- Cost:TAE054 \$80 when run in town: \$180 when run out of Darwin.
- Currently Offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLS), NTU.

### **Farmcare Chemical Accreditation Program**

A course which covers all aspects of licensing for the domestic, commercial and rural pest control industries. Modules required for a horticulture license (herbicide use only) include:

- TAE052 Safe Use of pesticide
- TAE054 Weed identification and Control
- TGD061 Senior First Aid
- Duration of Course: 12 months
- Delivery: External mode with compulsory attendance at workshops held throughout the Territory at various times of the year.
- Cost:TAFE054 \$80 when run in town: \$180 when run out of Darwin.
- Currently Offered by the Faculty of Science; School of Horticulture and Landcare Studies (SHLCS), NTU.

### **CRC for Weed Management Systems' Workshops**

The Weeds CRC has developed some one or two-day workshops on weed identification, which focus on southern Australia and crop weeds. It is possible they could adapt something for the Northern Territory conditions if there was sufficient demand. The CRC runs some one or two-day workshops on weed identification using keys to identify weed seedlings, which focus on southern Australia and crop weeds. It is possible they could adapt something for the Northern Territory conditions if there was sufficient demand. This could then be run as a workshop at any location in the Northern Territory. The second is a short course on weed management.

## **Training**

This covers the principles of IWM, weed monitoring and developing IWM strategies for weed situations. It is basically a framework of two half-day workshops. There is a newly developed IWM Manual to back it up. The framework of the workshop is adaptable to any weed ecosystem.. Training is conducted by Charles Sturt University and CRC weeds.

### **Biological Control of Tropical Weeds**

An international short course offered by the Cooperative Research Centre for the Tropical Pest Management in Brisbane. Run over 10 days this course gives participants a balanced understanding of the theory of biological weed control as well as a practical exposure to procedures followed in a biological control program. Entry requirements: students should have a first degree in Agriculture or a related discipline with at least two years appropriate work experience.

## **7.2 Issues of confusion**

There appears to be some confusion from people in remote communities about the number of courses and choices. For example, in the TAFE sector in the Top End there are various courses and providers offering training in Land Management e.g. currently NTU offers seven certificate courses by two different faculties at Levels 1–4 that are competing for students. People need to be empowered to have the knowledge to make the right choices. Currently this is not happening and the need to rectify this was identified during this study. It appears there is a considerable bureaucratic maze that Aboriginal community representatives and providers are required to navigate in order to initiate, implement and maintain appropriate training programs. This makes choosing appropriate providers that will deliver the appropriate material a difficult one. There is an identified need for an organisation providing the various training packages to get together in communities and present information in appropriate ways and formats so Aboriginal people have enough information to make appropriate choices about the suitability and level of training that best suits their needs. It is recommended the NLC liaise with training providers and put together a leaflet on the training available.

## **7.3 Recommendations**

*Recommendation 23:* NLC to organise where appropriate those involved in the delivery of modules and courses to present offerings at one place e.g. give talks to prospective students in their communities. This will allow informed decisions to be made about the most appropriate type of training. There needs to be an overall commitment and coordinated approach to the delivery of courses so the best choice is made.

*Recommendation 24:* NLC to help communities identify those people considered appropriate for the delivery of weed training modules. NLC then to liaise with training bodies about the delivery of workplace training within communities to train selected trainers.