



REGIONAL WEED MANAGEMENT PLAN

1.1 PLAN TITLE: **African Boxthorn**

1.2 PLAN PROPONENTS

Regional weed advisory committee: Macquarie Valley Weeds Advisory Committee

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1.3 NAME OF PLANT(S)

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Botanical name: *Lycium ferocissimum*

Common name: African Boxthorn

1.4 PLAN PERIOD (not to exceed five years)

Starting date: 01/07/2008

Completion date: 30/06/2013

1.5 AREA OF OPERATION

All Local Control Authorities (LCA's) and Rural Lands Protection Boards (RLPB's) of the Macquarie Valley Weeds Advisory Committee.

1.6 AIM:

To successfully manage African Boxthorn in the Macquarie Valley.

1.7 OBJECTIVES

1.7.1 Considerably reduce impacts of existing weeds

1.7.2 Prevent new weed problems

1.7.3 Improve coordination and cooperation

1.7.4 Raise awareness of weeds issues within region

2.0 STAKEHOLDERS

2.1 SIGNATORIES

Participating Councils (LCA's):

- Bogan Shire Council
- Bourke Shire Council
- Brewarrina Shire Council
- Cabonne Council
- Cobar Shire Council
- Dubbo City Council
- Mid-Western Region Council
- Narromine Shire Council
- Orange City Council
- Parkes Shire Council
- Unincorporated area of Western Division
- Wellington Council

Participating County Council:

- Castlereagh Macquarie County Council
- Upper Macquarie County Council

Participating Rural Lands Protection Boards:

- Bourke
- Brewarrina
- Central Tablelands
- Coonabarabran
- Coonamble
- Dubbo
- Molong
- Moree
- Mudgee/Merriwa
- Nyngan
- Walgett

2.2 OTHER STAKEHOLDERS

- NSW Department of Primary Industries (DPI)
- State Forests
- NSW Department of Environment and Climate Change (DECC) – National Parks and Wildlife Service (NPWS)
- Department of Lands
- Catchment Management Authorities (CMA's)
- Regional Landcare Coordinators
- Aboriginal Lands Councils
- Service providers – Country Energy, Telstra, Australian Rail Track Corp (ARTC)

3.0 BACKGROUND AND JUSTIFICATION

3.1 PLAN JUSTIFICATION AND DESCRIPTION OF PROBLEM

African Boxthorn is a serious exotic intrusion and causes loss of production, harbours feral animals and replaces native vegetation. The plant also alters watercourses and infers stream flows and has the ability to grow on all soil types.

African Boxthorn seed is easily spread by birds, animals and water. In places, it can form impenetrable clumps. It has the ability to make infested areas inaccessible and can also harbour vermin. African Boxthorn often grows under trees and along fence lines, which makes removal difficult. African Boxthorn is expensive to control and control opportunities are limited due to seasonal conditions.

African Boxthorn is now an important weed throughout NSW, particularly in the western pastoral areas.

- It is recognised as a major weed and now is a “declared” noxious weed in most States.
- Where little competition exists, it can become established quickly, especially on disturbed lighter country or over-grazed native pastures.

- African Boxthorn, with ideal weather conditions, can rapidly become the dominant species in these situations.
- The Macquarie Valley Weeds Advisory Committee members regard African Boxthorn as a significant weed of the area.
- African Boxthorns' status in the Noxious Weeds Act 1993 require it to be fully and continuously suppressed and destroyed and this objective can only be achieved through substantial commitment of their own resources and grant funding.

3.2 THE 'DO NOTHING' OPTION

If nothing were done to suppress, reduce and manage this weed, it would continue to spread and increase:

- Forming clumps to the exclusion of all other vegetation including pasture species leading to the reduction of stock carrying capacity.
- Making the mustering of stock difficult.
- Denying stock access to water along rives and around dams.
- Providing excellent cover for feral animals to the detriment of grazing industries.
- Providing a good breeding place for many insects including fruit fly, dried fruit beetle and other vectors.
- Increasingly dominating native pasture to the detriment of biodiversity.

3.3 DISTRIBUTION OF INFESTATIONS

African Boxthorn is spread along the Castlereagh, Macquarie, Barwon and Darling River Systems. The plant is often found growing around old habitation areas and abandoned mine sites where it was originally planted as an ornamental plant and has spread on to agricultural lands as well as a variety of surrounding lands.

The specific details of current distribution are:

Scattered core infestations from south of Narromine through to Walgett and East of Coolah through to west of Nyngan. Core infestations also found in Dubbo City Council area.

Marginal infestations are found around Coonabarabran, Gulgong, Brewarrina, Cobar and Bourke.

Rare and isolated infestations widely spread throughout Cabonne, Wellington and Mid Western Regional Council areas.

African Boxthorn has the potential to spread throughout the western slopes and plains of Queensland, New South Wales and Victoria.

3.4 WEED BIOLOGY

African Boxthorn is an erect perennial and spiny shrub that can grow up to 4.5 meters high, reproducing from seed. It can develop an extensive and deep root system that has the ability to produce new growth from broken pieces.

African Boxthorn was originally brought into Australia as a hedge plant from South Africa during the second half of the 1800's. It was distributed and sold enthusiastically throughout most of Australia at the time. It did not take long to become naturalised and a serious weed in many States

3.5 METHOD AND RATE OF SPREAD

The seeds of African Boxthorn are the only means of dispersal. Birds and foxes readily eat the fruit, and the seed are viable when excreted. Seeds are also spread by water. The occurrence of Boxthorn under trees, poles and fences where birds have perched is evidence of their importance in dispersing the weed. Some spread occurs when the seeds contaminate agricultural produce, gravel and mud but these are of minor importance.

3.6 SPECIES MANAGEMENT

As with most species, African Boxthorn requires integrated weed management to achieve successful control.

Mechanical removal – All parts of the plant must be removed and destroyed as broken root segments can sucker and regrow, and fruit can continue ripening on dead branches.

Chemical treatment – Different situations require different methods including foliar spray, basal bark treatment, cut stump treatment, and root application.

Revegetation – Competition limits African Boxthorn’s ability to regenerate. Planting out treated sites with desired species increases competition and therefore increases the potential success of the management program.

Monitoring – successful treatment programs rely on ongoing monitoring of sites. Regrowth and new seedlings can easily become larger infestations if follow-up treatments are not part of the management program.

3.7 KEY LAND MANAGERS

- LCA’s
- RLPB’s
- Landholders
- National Parks
- State Forests
- Department of Lands
- Service providers – Country Energy, ARTC
- RTA

4.0 LEGISLATIVE AND REGULATORY SITUATION

4.1 CURRENT DECLARATION

Lycium ferocissimum (Common Name: African Boxthorn) is declared as a Class 4 noxious weed in all LCA areas across the Macquarie Valley region:

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| Class 4: The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the local control authority | |
| <ul style="list-style-type: none">• Bogan Shire Council• Bourke Shire Council• Brewarrina Shire Council• Cabonne Council• Castlereagh Macquarie County Council• Cobar Shire Council• Dubbo City Council | <ul style="list-style-type: none">• Mid Western Regional Council• Narromine Shire Council• Orange City Council• Parkes Shire Council• Unincorporated area of Western Division• Upper Macquarie County Council• Wellington Council |

4.2 DECLARATION CHANGES

No alteration to existing declaration is anticipated.

5.0 CONSIDERATIONS AND OPPORTUNITIES

5.1 FINANCIAL SUPPORT TO CARRY OUT THE PLAN

The majority of the financial support for this plan will be provided as part of LCA/RLPB weed control programs. Further support will be sought through DPI’s group project funding program. Any other funding source deemed relevant by MVWAC will also be explored.

5.2 LINKS TO OTHER STRATEGIES

- Australian Weed Strategy
- NSW Invasive Species Plan

- MVWAC Regional Weed Strategy
- Catchment Action Plans

5.3 BARRIERS AND CONTINGENCIES

Barriers:

- African Boxthorn spreading from infested areas.
- Landholders fail to control African Boxthorn because of the lack of resources.
- Seasonal conditions limit strategies for the control of African Boxthorn.
- Lack of knowledge of the potential damage done by the lack of control of African Boxthorn by landholders and government agencies.
- Spread by birds and feral animals.

Contingencies:

- Variable seasonal conditions
- Resource shortfall occurs when an ideal seasonal condition allows a prolific growth and such a growth is beyond the resources of individual LCA and Land Managers.

6.0 ACTION PLAN

| Objective | Action | Performance indicator | By whom |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| 1.7.1 Considerably reduce impacts of existing weeds | All public lands to be inspected annually | 100% of all roadsides, reserves and Travelling Stock Routes (TSR's) inspected. | LCA weed officers & RLPB rangers |
| | Control methods to be carried out on all infestations on LCA & RLPB lands as seasonal conditions allow | Existing infestations on LCA/RLPB lands reduced by 60% | LCA weed officers & RLPB rangers |
| | All private properties identified as having infestations are to be inspected annually and regulatory action taken as required | 100% of identified properties inspected Existing core infestations on private lands reduced by 20% Existing marginal infestations on private lands reduced by 40% Existing rare and isolated infestations on private lands reduced by 40% | Landholders, LCA weed officers & RLPB rangers |
| 1.7.2 Prevent new weed problems | Inspect for African Boxthorn as part of routine property inspection program | African Boxthorn is included in the inspection routine | LCA weed officers & RLPB rangers |
| | Aspects of the rapid response program to be implemented when a new infestation is discovered | 100% of located new infestations recorded and mapped 100% of new infestations treated 100% of new infestations to be monitored and follow-up treatment programs implemented | Landholders, LCA weed officers & RLPB rangers |
| | All infestations to be contained to prevent new weed problems | Buffer zones established around sites known to be infested | Landholders, LCA weed officers & RLPB rangers |

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|-----------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| 1.7.3 Improve coordination and cooperation | All infestations to be recorded and mapped | Maps produced and updated regularly Data recording standards adhered to | LCA weed officers & RLPB rangers |
| | Plan implementation to be monitored and reviewed | Review process (as outlined in section 7.0) carried out | RPO, LCA weed officers & RLPB rangers |
| | Actively seek partnerships with other weed management agencies | Partnerships developed where necessary | RPO, LCA weed officers & RLPB rangers |
| | Develop on-ground management plans with neighbouring landholders, LCA's and RLPB's | Plans of management entered into and partnerships developed with neighbouring landholders, LCA's and RLPB's | LCA weed officers & RLPB rangers |
| 1.7.4 Raise awareness of weeds issues within region | African Boxthorn to be part of a regional weeds awareness program | Advertisements on television Field days held Displays at local shows attended by Weed Officers Weed pamphlets distributed to landholders during property inspections Weed Calendars distributed by LCA's and RLPB's | DPI, RPO, LCA weed officers & RLPB rangers |

7.0 MONITOR AND REVIEW

There will be an annual review of the African Boxthorn Regional Management Plan to ensure the performance indicators are realistic and are being met. Member LCA/RLPB's weed officers and rangers will participate in the review process. This would include discussions on increases or decreases of range, new incursions, successful management strategies, expectations and results.

8.0 BENEFITS

The benefits of controlling African Boxthorn are:

- The destruction of feral animal habitat and therefore their numbers
- Access to watering points
- Minimising risk of African Boxthorn spreading to uninfested lands
- Stock campsites accessibility
- Reduced habitat of Fruit fly
- Increased productivity
- Increased land values
- Improved pastures and native vegetation and sensitive environmental areas
- A substantial benefit to Macquarie Valley through greatly increased productivity

The LCA/RLPB will demonstrate to adjoining Landholders their commitment to minimising the damage and further spread of this weed.

9.0 RESOURCES

- Auld, B.A. and Medd, R.W. (1987) “*Weeds: An illustrated botanical guide to the weeds of Australia*”, Inkata Press, 255pp.
- Cunningham, G.M., Mulham, W.E., Milthorpe, P.L. and Leigh, J.H. (1981) “*Plants of Western New South Wales*” N.S.W. Government Printing Office, 766pp.
- Lamp, L. and Collet, F. (1979) “*A field guide to Weeds in Australia*” Inkata Press, 376pp.
- Parsons, W.T. (1973) “*Noxious Weeds of Victoria*” Inkata Press, 300pp.
- Parsons, W.T. and Cuthbertson, E.G. (1992) “*Noxious Weeds of Australia*” Inkata Press, 692pp.