

New and existing weed threats in southern New South Wales.

Birgitte Verbeek

Regional Weed Control Coordinator, NSW Department of Primary Industries, Wagga Wagga Agricultural Institute, Wagga Wagga, NSW 2650.

Sleepers in the landscape

Weeds started creating havoc in Australia when the First Fleet arrived in 1788. The onslaught of new arrivals is continuing to this day and the problem is increasing not decreasing. Sixty five percent of all weed introductions into Australia come from plantings in gardens. Paterson's Curse (*Echium plantagineum*) and St John's wort (*Hypericum perforatum*) are classic examples. Of even greater concern is that each year 20 new foreign species are discovered growing in the wild in Australia. Some weeds naturalise and spread quickly while others spend many years seemingly without impact until suddenly they erupt out of control. These "sleepers weeds" as they are sometimes referred to could already be in the landscape of southern New South Wales (NSW) waiting for an opportunity to expand given the right conditions.

Managing your future weed burden

Over the last four years I have actively sort the input of many land holders, professional advisors and government agency personnel across southern NSW on the ways to best manage our current and future weed problems. This input was collected at a series of workshops conducted to develop regional weed strategies for Catchment Management Authority (CMA) areas of southern NSW. It is encouraging that many people have been willing to attend these workshops and actively participate providing valuable experience and insight to the weed problems at hand and solutions that may be implemented to manage them.

However, so often the finger is pointed in someone else's direction, either to lay blame for inadequate action or to transfer responsibility for dealing with current weed problems. The reality for all involved in weed management is, no matter where the finger is pointed, there will always be constraints on the amount of resources available to deal with the weed problems. There just aren't enough resources available to deal with the overwhelming weed problems we already have and this is unlikely to change in the future. Therefore, it is very important that we use what limited resources we have in the most cost effective

manner. The most cost effective method to manage future weed problems is to prevent the introduction of new weeds in the first place and secondly to act early to manage and eradicate small outbreaks.

Whilst undertaking the workshops across southern NSW it struck me that little discussion occurred about how private land holders in particular can protect their own backyard. People are the most effective agent for spreading most weeds, therefore managing peoples' activities can effectively reduce the risk of future weed invasions. In particular managing activities on your own patch to proactively prevent new weed problems can prevent future loss of production and ongoing costs for weed management. Following this theme, or approach, a list of weeds detailed below have been singled out because greater vigilance and a proactive approach can make a difference to their spread and impact on un-infested land. Also information about these weeds is readily available detailing identification and control options.

Weed Lists for southern grazing lands of NSW

The weeds detailed below have been split into known levels of distribution.

1. Difficult to control weeds that are present in southern NSW with limited distribution but will leave an ongoing legacy once established.

These plants form dense monocultures that dominate pastures and cause ongoing decreased agricultural productivity. Once established these weed are very difficult to control. There are no satisfactory "one stop" herbicide options that will give effective control of these weeds once infestations become well established.

- Chilean needle grass (*Nassella neesiana*)
- Coolatai grass (*Hyparrhenia hirta*)
- Blue heliotrope (*Heliotropium amplexicaule*)
- Silver-leaf Nightshade (*Solanum elaeagnifolium*)

2. Trees or shrubs with relatively small and scattered infestations in southern NSW but have the potential to greatly increase.

Control options are readily available and immediate action should take place to fully and continuously

treat infestations. These plants form dense monocultures that reduce access by vehicles and livestock, reduce productivity or restrict water flow and are already causing major problems in other regions of Australia.

- Gorse (*Ulex ueropeus*)
- Pussy and Black Willows (*Salix cinerea* and *Salix nigra*)
- Scotch broom (*Cytisus scoparius*)

3. Weeds that are already widely distributed but expanding their range and density in southern NSW.

These weeds are mostly well known but sometimes early identification and quick action to treat small infestation is not undertaken which leads to large unmanageable infestations. Greater vigilance and early action is required because of the high risk of being infested from surrounding areas.

- Serrated tussock (*Nassella trichotoma*)
- St John's wort (*Hypericum perforatum*)
- African lovegrass (*Eragrostis curvula*)
- Blackberry (*Rubus fruticosus* agg.)

4. Weeds that are not known to be present in southern NSW and have been identified as having the potential to cause a large negative impact on grazing land if allowed to establish.

- South American stipoid grasses including:
 - i) Mexican feather grass (*Nassella tenuissima*)
 - ii) Texas needle grass (*Nassella leucotricha*)
 - iii) Lobed needle grass (*Nassella charruana*)
 - iv) Cane needle grass (*Nassella hyalina*) one infestation identified near Wagga Wagga.
- Uruguayan rice grass (*Piptochaetium montevidense*)
- Espatillo (*Stipa caudata*)
- Orange hawkweed (*Hieracium aurantiacum*)
- Knapweeds (*Centaurea* spp.)

Weed legislation, CMAs and cooperative approaches to weed management

The Noxious Weeds Act 1993 has recently been reviewed. The amended Act came into force in March 2006. Declared weeds across NSW have been placed into Classes, being:

- Class 1 - State Prohibited Weeds
- Class 2 - Regionally Prohibited Weeds
- Class 3 - Regionally Controlled Weeds
- Class 4 - Locally Controlled Weeds
- Class 5 - Restricted Plants,

These Classes reflect a proactive approach to weed management in the state. Highest priority is given to preventing new weed problems within the state or within regions of the state. Accordingly state funding for noxious weeds is distributed in a strategic manner to meet these priorities.

CMAs are a new player in the world of weed management. Weed management activities and weeds as a priority issue for natural resource management differ both within and between CMA areas. However, resources and funding from these authorities may be channelled into dealing with weed issues, especially more widespread problems where the weeds in question directly impact on the biodiversity of high conservation value native vegetation areas, water quality and aquatic biota.

As previously mentioned catchment wide weed strategies are being developed in southern NSW to guide stakeholders in their efforts to manage the growing weed problem. Without these guiding documents there is a reduced chance of attracting funding to assist land management agencies, local government, private landholders and other stakeholders to undertake on ground work to manage weeds. The documents will set some benchmarks and guide investment in the future. More importantly they will help the coordination of efforts to achieve better outcomes to prevent future costs of weed management.

What can you do to help yourself?

Knowing what to look for and where to find help is a good starting point. One of the most valuable things that you can start or continue to do is to identify the plants in the area you manage, not only the bad ones but the good ones too. At the very least identify anything that looks new or not familiar to you. You don't need to be a botanist to do this, simple observation skills are all that is required. Once you start looking you will be amazed at what knowledge you can quickly acquire. To use an analogy, for those of us that are not car enthusiasts, if you are thinking about buying a new car so many of the features of the range you will select from will become important to you, these features may never have been noticed by you in the past. I think it's the same in the plant world, simple identifying features become familiar once you start looking at them and you can then associate this with plant identification.

Help is not hard to find. There are an increasing amount of very useful resources to help with the identification of plants. These include CD-Roms, the internet, a wide range of books and pamphlets local government weed officers and local agronomists. If all else fails and the plant in question cannot be

identified then sending samples to a herbarium for formal identification is the track to follow. Samples can be submitted through your council weeds officer or through NSW Department of Primary Industries (NSW DPI) offices.

Generally plant samples need to be pressed and dried before sending them to a herbarium and dried samples should include key identification features of the plant. For grasses you must include the seed-head. For broadleaf plants a sample of leaves and leaf arrangements and the flowering part of the plant are required to assist the identification. Information on how to collect plant samples can be obtained from NSW DPI website or local office.

Most weeds are spread by human activity. Check the following points to see if you are doing all things possible to prevent introducing and spreading weeds on your land.

- Quarantine stock in holding paddocks when brought onto your property. Monitor and treat weed infestations in these areas before seed set
- Insist that earth moving equipment, sowing or harvesting machinery has been cleaned thoroughly before commencing work on your land
- Clean down vehicles and machinery when moving from an infested area to clean areas slashers in particular are notorious for moving weed seed around
- Restrict the movement of visiting passenger vehicles on your property or ensure they are free of mud or weed material before moving around the property
- Buy registered seed for sowing pastures and crops. At the very least assess the level of contamination

in seed and evaluate the risk of creating new weed problems

- Ensure fodder (hay and grain) used for stock feed is free of weeds, if forced to buy or use contaminated fodder manage the risk by feeding out in restricted areas. Monitor and control weeds in these areas before they are allowed to set seed
- Identify and check high risk areas on your property for new weed incursions.

All these activities might seem time consuming and are easily dismissed but in the long-term they can prevent large ongoing costs.

Useful contacts and websites for weed management information

Local Government Weed Officers

NSW Department of Primary Industries officers

www.dpi.nsw.gov.au

www.weeds.crc.org.au

www.weeds.org.au

References

Parsons, W.T. and Cuthbertson, E.G. (1992). *Noxious weeds of Australia*. Inkata Press.

Martin, P. (2003). *Killing us softly - Australia's green stalkers - a call to action on invasive plants, and a way forward*. CRC for Australian Weed Management.

Storrie, A. (2004). *Collecting and preparing plant specimens for identification*. NSW DPI Agnote DPI-492. 