

#40

COMPLETE

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Q1

First name

David

Q2

Last name

Bray

Q3

Respondent skipped this question

Organisation name (if relevant)

Q4

Email address

[REDACTED]

Q5

Phone number

[REDACTED]

Q6

Yes

Can we contact you about your submission (if required)?

Q7

I am a private land manager/owner

What best describes you?

Q8

North Coast

Which of the following regions best describes your location/area of interest?

Q9

I agree to have my submission published with my name or company/organisation

The Commission publishes submissions on its website for transparency. If you do not want your personal details or responses published, please tell us below.

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Q10

To what extent are the NSW environment, industries and communities currently impacted by invasive species?

Difficult to generalise here as the impacts vary with location and the form of land management. In my locality, which is about 50sq/km, Lantana has arrived in the past 40 years and now infests approximately half of the properties. While most local landowners do not consider it to be overwhelming the native vegetation as yet, it has displaced native vegetation on my property and has been spreading steadily, despite serious efforts to control it. The combination of Lantana and (native) Bell Miners has led to dieback of eucalypt forest on my property and neighbouring properties, reducing the potential for timber production. Crofton Weed has also invaded all of the local properties and it is poisonous to horses. It is also a difficult weed to eradicate and also requires regular control measures.

Q11

To what extent do you think existing programs in NSW are effectively managing invasive species?

This depends on the individual invasive species. On the north coast Lantana is being managed in small areas where sufficient resources are available, but in larger areas of private and public land it is out of control. My understanding is that the majority of established invasive species have not been effectively managed. At least some newly arrived invasive species, such as Varroa Mite, have not been effectively contained or managed. Overall, I think we are facing increasing demands on management resources, with decreasing success in containing and managing invasive species.

Q12

What, if any, are the key barriers to effective management of invasive species?

1. Insufficient resources. For traditional forms of management of invasive species they can often be controlled in small scale urban settings where relatively greater resources are available. For large scale areas, such as farms, forests and reserves, it is unrealistic for a relatively small number of people to be able to manage aggressive invasive species.
 2. The nature of the invasive species and its plasticity. An invasive species has the ability to rapidly establish and spread in suitable conditions. Containment and/or elimination is very difficult once a species becomes established. In addition, many invasive species have the ability to adapt to less favourable conditions over time and spread more widely.
 3. Visibility. It is easy to detect a stowaway elephant as it enters the country, but not so easy to detect the microscopic spores of a disease such as Myrtle Rust. I do not think it likely that we can develop effective detection methods for all invasive species with potential to enter Australia.
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Q13

How has invasive species management changed since the introduction of the NSW Biosecurity Act 2015 legislation and associated programs and plans?

I must admit that I do not know. I have the impression that our border security has been improving. While working as a volunteer at the Australian Museum I witnessed visits from entomologists working with biosecurity who were updating their skills at detecting various alien insects.

Q14

What are the future risks posed by invasive species to the NSW environment, industries and communities?

For most established invasive species I expect to see a steady increase in their impacts, with associated increases in the cost of their management. However, some species will have disproportionate impacts. For example, feral horses in the alpine country will almost certainly cause extinctions of vulnerable native flora and fauna. The combination of Lantana and Bell Miners has already resulted in dieback of eucalypts over thousands of hectares of forest in northern NSW. I have read that Fire Ants in southern USA have made some areas almost un-inhabitable and control efforts have become very costly. Fire Ants have potential to infest large areas of eastern Australia, probably with similar impacts on communities, environment and industry.

Q15

What opportunities do you see to improve the outcomes of invasive species management in the future?

Biocontrol.

In Australia, biocontrol has a bad reputation. This is based largely on Cane Toads, which were not introduced as part of a researched program. Most Australians forget, or are unaware of, the successful control programs for rabbits, Prickly Pear, Bush Flies and many other invasive species. Perhaps this is the reason why we have a research and development program for biocontrol which is relatively minute when compared to the resources allocated to traditional management of invasive species. Yet biocontrol methods can be more efficient than traditional methods and can be effective over much greater areas. Currently, effective biocontrols have been implemented for only some invasive species and further research is required to develop suitable agents for difficult species such as Lantana. However, as we develop our understanding of biocontrol agents, other than insects, an increase in relevant research is likely to be more rewarding than simply increasing funding for traditional management methods. One area of research could be the mechanisms of host-specificity of diseases and this could then be coupled with our expanding knowledge of genetics to locate suitable biocontrol agents. Additionally, we may soon have the skills to engineer suitable biocontrol agents.

Q16

Any other comments?

My experience with Lantana management has been largely negative. Despite hundreds of person-hours and approximately \$20,000 spent on control and management the Lantana on my property has recovered and is spreading into areas that are very difficult to access and control with traditional methods. I see similar scenarios for invasive species on neighbouring properties. In rural areas the difficulties for management by traditional methods can be much greater than the resources available. In these situations I see biocontrol as the only realistic method of management and I would like to see much greater resources allocated to the research and development of biocontrol methods.

Thank you.
