

## The changing weedscape: Policy and management implications of unknown knowns

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**Summary** Over the past few decades there has been uncertainty around the number of non-native weed species in Australia, despite numerous lists of species being produced. Additionally, the number of weeds that invade and impact upon different sectors is unclear. This data uncertainty has hampered management and policy decisions that reflect the Australian weedscape. We examined several weed datasets (e.g. Randall 2017), as well as records held in the Australian Virtual Herbarium to compile a list of weed species in Australia. From this we classified each species as either an environmental weed, an agricultural (primary production) weed, both, or as a weed of neither. We also tried to determine the introduction date, and used historical texts (e.g. Kloot 1987) to establish how these groups of weeds have changed over time in determining the changing weedscape of Australia. We compared these trends to policy and

management decisions for weeds in Australia: this revealed significant mismatches, many of which were known (i.e. apparent to on-ground managers), but seemingly unknown at higher management and political levels. For example, whilst virtually all of the first weed species recorded in Australia were recognised as weeds of agriculture, such weeds only account for about 32% of today's weeds (with only 6% being exclusively weeds of primary production), whilst environmental weeds account for more than double that number today (66%; with >40% of all weeds exclusively environmental). The policy agenda remains firmly focused on weeds of primary production, despite the environmental weed tsunami already on our shores.

**Keywords** Weed lists, policy, management, agricultural weed, environmental weed, primary production, historical perspective, mismatches.