

Introducing non-indigenous plants to the Western Australian rangelands – what can weed risk assessment contribute?

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Summary What place can weed risk assessment (WRA) have in the decision to introduce species with agricultural potential to novel environments?

Northern Western Australia (WA) is a vast area containing a wide range of environments that have evolved unique communities of plants and animals. This has been recognised with the listing of National Diversity Hotspots in both the Kimberley and the Pilbara. Many areas have also undergone development for mining, agriculture and tourism.

There is current interest in increasing and intensifying the pastoral industry in northern WA. Beef cattle production has developed by grazing extensive areas of native and supplemented vegetation. In this highly seasonal environment where natural vegetation may provide limited nutrition for domestic animal production it is hoped that the introduction of fodder plants into dryland pastures and irrigated fodder production will broaden the feed base and result in increased output. However, many species introduced into agriculture in northern Australia have become weeds (Lonsdale 1994) with resulting costs in time, money and to natural environments. More recently Driscoll *et al.* (2014) outlined the potential weed risk from new varieties of pasture species which may show increased weedy characteristics.

Future Farm Industries Cooperative Research Centre developed an Environmental Risk Framework and WRA to examine species with agricultural potential in southern Australia (Stone *et al.* 2012). This informed the selection of species for research and promotion. This framework is now being adapted for use in the rangelands of northern Western Australia to provide weed risk information for decision makers including government bodies, land owners pastoralists and the wider community.

Keywords Weed risk assessment, non-indigenous species, rangelands.

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