Differences Between New Zealand and Australia in Development of Herbicide Resistance

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Summary Cases of herbicide resistance have been developing for many years in Australia, with multiple issues in *Lolium r*igidum being reported since the early 1980s from cereal crops. The first cases of herbicide resistance in New Zealand were also reported at about this time, but these were initially triazine resistant weeds, mainly *Chenopodium album*, from maize crops. Herbicide resistance has been reported on a regular basis since then for both countries, but there have been a number of differences between the countries. There have been far more cases reported from Australia than New Zealand, which is to be expected due to the larger size of Australia, differences in farming systems and possibly because of more weed scientists in Australia working on the problem than in New Zealand. *Lolium rigidum* has been a species that appears particularly susceptible to evolving resistance to herbicides, but this species is almost non-existent in New Zealand. However problems have been developing in recent years within New Zealand with the closely related species of *Lolium perenne* and *Lolium multiflorum*, which are both grown extensively for pasture production. The main concerns in New Zealand for several decades were resistance in maize and pastures, though in the past decade, herbicide resistance within vineyards and cereal crops have also becoming an issue. But over this time, Australia has had extensive issues in many situations, including cereal crops, lucerne, lupins, canola and vineyards. This paper will discuss some of these differences that have occurred over the past 40 years.

Keywords Herbicide resistance, New Zealand, Australia, research, crop, pasture