**Hawkweed Delimitation**

**Mouse-ear hawkweed example**

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**SUMMARY (300 words)**

1. The New South Wales Hawkweed Eradication Program is on track to eradicate mouse-ear hawkweed in the next 5-8 years. In order to achieve this target, we need to be sure we have found the outer extent of the infestation. Learning from previous eradication programs which were either successful or unsuccessful, delimitation early on is key to achieving eradication of an invasive species. There is not much in the way of documentation relating to the delimitation of weeds and therefore we took an approach that used modelling and expert knowledge to achieve this outcome.

The hawkweed team has always incorporated new area surveillance into each season but to be more systematic towards delimitation we have taken new approach to determining whether the extent of hawkweed has been found. Using the 50m x 50m grid system, each grid cell was given a ranking of likelihood of mouse-ear hawkweed from 0 (least likely) - 10 (most likely). The rank will highlight the areas which are most likely to have mouse-ear hawkweed. The ranking is based of modelling of habitat suitability, wind dispersal, and previously surveyed areas (to exclude). Grids were selected into blocks that were between 1-7 hectares in size and incorporated a cross-section of the grid rankings to test the delimitation model. On the ground, surveillance efforts were more than doubled in the 2022-2023 hawkweed season to progress towards delimitation. The most up to date results from this can be shared at the conference once they have been analysed on completion of this season.

**Keywords:** invasive, eradication, surveillance, extent, model