

Accelerating hawkweed eradication: Innovation, collaboration and persistence

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Summary The hawkweed (*Pilosella aurantiaca* and *P. officinarum*) eradication program is the largest weed eradication in New South Wales (NSW) and, together with the Victorian hawkweed eradication program, aims to eradicate hawkweeds from mainland Australia. Eradication began in NSW in 2009, and the program recently gained significant long-term support to accelerate eradication efforts. Fast tracking eradication through greater innovation, research to fill knowledge gaps and refining best practice are key to ensuring commitment is maintained and the objective reached. Weed eradication as a management objective is challenging but attractive as it has an end point, a low cost to benefit ratio and avoids future long-term management costs. Key factors affecting eradication feasibility and success include, 1) the ability to prevent reinvasion; 2) availability of effective controls; 3) suitable biological characteristics of the target species; 4) manageable infestation size; 5)

target species detectability; and 6) socioeconomic factors, including political and community support. Hawkweeds in NSW are measured against these criteria, and a 2017 program review concluded eradication is feasible. However, key challenges remain to ensure eradication occurs rapidly and cost-effectively, including to ensure: i) the entire infestation is delimited; ii) seed set is prevented; and iii) infestations are rapidly progressed from active to extirpated status. Earlier innovations such as detection of hawkweed by colour drone imagery and scent detector dogs are assisting to delimit the infestation, but more is required. This presentation outlines how enhanced drone surveillance and technology; dispersal and habitat suitability modelling; time to eradication modelling; hawkweed biology and ecology research; volunteer surveillance and improved weed hygiene contribute to accelerating eradication of hawkweeds from NSW.