

Flupropanate resistant serrated tussock (*Nassella trichotoma*) identified at multiple locations in the Monaro, New South Wales

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Summary The continual use of group J herbicides (e.g. flupropanate) for more than 15–20 years has resulted in the development of herbicide resistant serrated tussock (*Nassella trichotoma*) biotypes. Local archived reports indicate that NSW Agriculture commenced serrated tussock control trials using flupropanate in the early 1980s near Dalgety on the Monaro and the herbicide remains in common use today. Jointly funded by South East Local Land Services, Snowy Monaro Regional Council and the Australian Government's National Landcare Program, a multi-year serrated tussock herbicide resistance testing project commenced in 2016. In the first year of testing, 13 samples of serrated tussock seed were collected from across the Monaro region and tested for flupropanate resistance at the application rates of 1.25, 2.0 and 3.0 L ha⁻¹. Five of the thirteen samples were

found to have a high level of resistance to flupropanate with these samples originating from two different localities (Bredbo and Dalgety). Increasing the rate of application of flupropanate from 1.25 to 2 and 3 L ha⁻¹ did not improve the control of these resistant biotypes which confirmed the high-level of resistance. The results from the second year of the project where over 40 seed samples have been collected at strategic locations around the region are pending. These results have significant impacts for how serrated tussock is managed on the Monaro in the future and reinforce the need for integrated approaches to be taken for the control of serrated tussock and the importance of herbicide resistance testing.

Keywords Herbicide resistance, serrated tussock, Monaro.