

THE EFFECTIVENESS OF MOWING & HERBICIDES TO CONTROL PERENNIAL PEPPERWEED IN RANGELAND & ROADSIDE HABITATS.

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Perennial pepperweed (tall whitetop) can establish large monocultural stands in many different habitats throughout the west. Experiments were initiated to evaluate the use of mowing and herbicides as a potential new control strategy in rangeland and roadside habitats. These experiments consisted of mowing perennial pepperweed once or twice per season at the flower bud stage, and then applying a herbicide to the recovering stems when they returned to the flower bud stage. Unmowed areas were treated with herbicides at the flower bud stage. In rangeland situations the use of herbicides with one mow generally increased the level of control and significantly reduced the amount of litter present from 10 to 5 cm. Chlorsulfuron at 0.052 kg/ha provided excellent control (98%) after one year. Along roadsides, first year data indicates that imazapyr at 0.138 kg/ha, and one to two mows followed by glyphosate at 3.33 kg/ha or chlorsulfuron at 0.052 kg/ha will also provide excellent control ($\geq 91\%$). 2,4-D at 2.109 kg/ha did not provide adequate control ($< 72\%$) even when used in conjunction with mowing in either habitat. These data indicate that mowing can increase the effectiveness of some herbicides in controlling perennial pepperweed by depleting below ground energy reserves.