

APPLICATION TIMING AFFECTS CONTROL OF WILD PARSNIP [*Pastinaca sativa* (L)] AND WILD CARROT [*Daucus carota* (L)] WITH HERBICIDES. Byron Sleugh¹, Mark Renz², and Mary Halstvedt¹. ¹Dow AgroSciences LLC, 9330 Zionsville Rd., Indianapolis, IN 46268, ²University of Wisconsin, Madison.

Wild parsnip (*Pastinaca sativa* (L)) and *Daucus carota* (L) are two biennial invasive and noxious species that often occur in non crop sites such as ditch banks, road side rights of ways, Conservation Reserve Program (CRP) areas, wildlife habitat and others areas including pastures throughout the USA Midwest and Great Plains. While many herbicides are registered for use on these sites, little information is available about herbicides that provide long-term control of these weeds and appropriate timing to apply these treatments. Trials were established in CRP sites in Iowa and Wisconsin and herbicide applications were made in the autumn and spring. The experiment was designed as a randomized complete block with 3 to 4 replications. Treatments included (65, 87, 108, and 130 g ae ha⁻¹) of a premix formulation of aminopyralid + metsulfuron methyl (61.95% WG), methsulfuron methyl (13 g ae ha⁻¹), aminopyralid (120 g ae ha⁻¹) [WI only], 2,4-D amine (2240 g ae ha⁻¹), aminopyralid + 2,4-D (ForeFront[®] R&P) (120 + 972 g ae ha⁻¹), and metsulfuron methyl + dicamba + 2,4-D (11+ 140+ 402 g ae ha⁻¹) [IA only]. A nonionic surfactant was included with all treatments at 0.25% v/v. Control (% visual) of wild parsnip and wild carrot was evaluated as well as wild parsnip seedling count and ground cover at the Wisconsin trial site. There were no differences between fall applied treatments for control of established wild parsnip and wild carrot rosettes, but there was a difference in number of new seedlings the following spring among treatments. The premix formulation of aminopyralid + metsulfuron (130 g ae ha⁻¹) provided the best control of new seedlings with a 57% reduction for wild parsnip at the Wisconsin site. Aminopyralid + metsulfuron could be an effective treatment to manage wild parsnip populations. When applied in the spring, all treatments provided excellent control of both wild parsnip and wild carrot (except 2,4-D amine) at 96 days after treatment (DAT) in Iowa and 55 DAT in Wisconsin. Based on these results, a fall herbicide application is not recommended for the control of wild parsnip and wild carrot unless the management strategy also calls for a follow up application in the spring to control the emerging seedlings. Spring herbicide applications were much more effective at controlling both existing rosettes and emerging seedlings.

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