Aminopyralid: An Innovative Herbicide Designed and Developed for Invasive Plant Management

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Introduction With the introduction of aminopyralid , an innovative , non-restricted use active ingredient from Dow AgroSciences , successful strategies for managing many noxious and invasive species in some of the most ecologically sensitive sites , including pastures , rangeland , conservation areas and wildlife habitats can be developed . Aminopyralid is a pyridine carboxylic acid herbicide developed for selective broadleaf weed control in sites such as rangeland , pastures , rights-of-way , non-cropland , and natural areas and was registered under the United States Environmental Protection Agency's Reduced Risk Pesticide Initiative . Aminopyralid is registered for use in many countries around the world with rates between 10 and 120 g acid equivalent (ae) ha^{-1} with no injury to many cool-and warm-season grasses and is available in mixtures with triclopyr and fluroxypyr globally . Aminopyralid and other Dow AgroSciences active ingredients consistently provide excellent control of invasive and noxious weeds globally such as Canada thistle (*Cirsium arvense*) (Enloe et al ., 2007) , musk thistle (*Carduus nutans*) , Japanese knotweed (*Polygonum japonicum*) , Lantana (*Lantana camara*) , fireweed (*Senecio madagascariensis*) , Crofton weed (*Eupatorium coelestinum*) , ragweeds (*Ambrosia* sp .) and others in a wide variety of environments .

Materials and methods trials were established at different locations around the world and were randomized complete block designs with the number of treatments varying depending on location and target species . Evaluation interval varied by location and target species but ranged from two weeks to two years after initial herbicide application .

Results Two years after autumn-applied aminopyralid at 90 to 120 g acid equivalent (ae)/ha , to Canada thistle control ranged from 87 to 93% control . GF-839 (30 g ae L^{-1} aminopyralid + 100 g ae L^{-1} fluroxypyr , at 1 L ha^{-1} provided 96% control of *Ambrosia artemisiifolia* and 100% control of Crofton weed about 80 days after application .

Conclusion These results indicate that herbicides are an important part of integrated approaches to managing noxious and invasive weeds in various habitats .

Reference

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