

Using Grass Control Products in Ornamental Plantings

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With the vast diversity in ornamental species, ornamental landscape plantings are one of the most difficult areas to control weeds. Weeds are commonly defined as plants growing out of place, and effective weed control programs in ornamental plantings are limited. There are many benefits to controlling weeds, especially grasses, in ornamental plantings as they reduce yield and the aesthetic value of the landscape. Weeds are often the number one cost in maintaining an ornamental planting and can threaten the health and welfare of others if not properly maintained.

Preventative, cultural, mechanical, biological and chemical weed control methods must be utilized in ornamental plantings to develop a successful and complete weed management system. One often assumes that hand weeding is the only option once grasses become established in a desired planting. In some cases this is true, but in others the use of a selective grass herbicide can be more efficacious and cost effective than alternatives such as hand weeding.

During the early 1970's two classes of chemistry, Aryloxyphenoxypropionates and Cyclohexendiones were discovered that effectively control emerged grasses while having no effect on broadleaf plants. These postemergence grass herbicides provided a new means for weed control in ornamental plantings. Up to this point in time, herbicides for use in ornamentals only displayed activity against weeds before they emerged or only controlled emerged broadleaf weeds.

Aryloxyphenoxypropionate and Cyclohexendione herbicides selectively control grasses by inhibiting lipid biosynthesis. Specifically, the site of herbicidal activity in sensitive grass species is the enzyme acetyl-CoA (ACCase) in the stroma of plastids. Interestingly, due to the presence of a non-receptive ACCase enzyme, broadleaf plants tolerate applications of these herbicides.

The discovery and subsequent labeling of postemergence grass control products for use in ornamentals is one of the most dynamic tools developed for the ornamental industry in the last 30 years. These compounds display the ability to safely and effectively control grasses growing in a planting of mixed ornamental species.