

TURFGRASS TRENDS

Volume 10, Issue 10 • October 2001

WEED CONTROL

Maximize your preemergence herbicide performance

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Preemergence herbicides persist in the soil and control susceptible weeds for two to six months. The level of control depends on the specific herbicide and rate being used, soil physical and chemical properties, soil moisture levels, soil temperatures, as well as the species of turfgrass. Additionally, the type of herbicide formulation and uniformity of application also has a major influence on the level of control achieved.

Each year there are instances where for some reason preemergence herbicides fail to control weeds or injury occurs to turfgrasses. Why?

Let's examine the factors that will maximize the effectiveness of a preemergence herbicide.

Application before germination

Preemergence herbicides must be applied prior to weed seed germination. The mode of action for most preemergence herbicides (e.g., bensulide, benefin, dithiopyr, oryzalin, pendimethalin, prodiamine) is the inhibition of certain phases of cell division during the seed germination process. As the weed seed germinates, the herbicide is absorbed by the root or shoot, cell division is blocked, growth is inhibited and eventually the immature seedling dies.

In general, sprayable and granular formulations of pre-emergence herbicides are equally effective in controlling susceptible weeds.

Emergent weeds visible at the time of application are not controlled by preemergence herbicides. Although the majority of herbicides may be classified as pre-emergence or postemergence chemicals, atrazine, simazine, dithiopyr, ethofumesate, and pronamide are exceptions.

Dithiopyr will control seedling crabgrass (prior to tiller development), but will not control seedling goosegrass. Both atrazine and simazine exhibit preemergence and postemergence control of a wide range of winter annual broadleaf weeds and annual bluegrass. Similarly pronamide has preemergence and postemergence activity on annual bluegrass.

Germination factors

Application timing counts. The various species of crabgrass and goosegrass are among the most troublesome annual grass weeds in turf.

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