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1998 Burndown herbicides for no-till

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Abstract

Providing the crop an even start with weeds has been one of the tenets of modern weed management systems. Whether in conventional tillage or no-till, almost all growers accept the need to plant the crop into a weed-free seedbed. Weeds present at planting will grow much quicker than the crop and thus become competitive very early in the growing season.

Keywords

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INTEGRATED CROP MANAGEMENT

1998 Burndown herbicides for no-till

Providing the crop an even start with weeds has been one of the tenets of modern weed management systems. Whether in conventional tillage or no-till, almost all growers accept the need to plant the crop into a weed-free seedbed. Weeds present at planting will grow much quicker than the crop and thus become competitive very early in the growing season.



Decisions on timing of burndown treatments should be based on weed size and population.

[1]

The introduction of herbicide-resistant crops allowing the use of nonselective herbicides (Roundup, Liberty) has led to a questioning of the need for burndown herbicides at planting in no-till systems. The concept of a delayed burndown treatment has been proposed, where the traditional burndown treatment is not made until weeds reach a specified height (often 4-6 inches). The delay in burndown treatment may allow the first postemergence treatment to be made 1 to 2 weeks later in the growing season, thereby reducing the potential for late-emerging weeds that require a second postemergence application.

In deciding whether to use a delayed burndown treatment, the field should be scouted at planting to determine the nature of the weed infestation. A delayed burndown application may be appropriate in fields with low to moderate infestations (<1 to 5 weeds per square foot) of small weeds (<1 inch tall) present at planting. Under these conditions, it is unlikely that the weeds will impact early growth of the crop for at least 2 to 3 weeks after crop emergence.

There is greater risk associated with delayed burndown applications in fields with heavier weed infestations. Although emerged weeds may be small at planting, they will grow very quickly when temperatures increase. These weeds not only will become competitive very early in the growing season but also they will be more difficult to kill as their size increases. A delayed burndown strategy could result in serious management problems if weather conditions keep sprayers out of the field during the desired time for the initial herbicide application.

We suggest this strategy should work in fields with low to moderate infestations of annual weeds. However, if the field has significant infestations of winter annuals, perennials, or early-germinating summer annuals, such as giant ragweed, kochia, lambsquarter, or woolly cupgrass, a standard application timing for the burndown herbicide would be appropriate. Because giant ragweed and other weeds began emerging as early as the last week of March across much of Iowa, this may not be a good year for a delayed burndown treatment. In fields

with significant weedy vegetation present at planting, it probably is best to plan on applying the burndown application within a week of planting.

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