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Application timing for preemergence herbicides

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Abstract
The optimum application time for preemergence herbicides is dependent upon a grower’s management skills, environmental conditions, and properties of the herbicide used. In an ideal situation, all herbicides would be applied at the optimum time for performance. However, due to time constraints at planting, many applications are made for convenience reasons rather than for performance.

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In systems where tillage is used to prepare a seedbed and the grower is willing to rotary hoe when needed, applications made shortly before or after planting will provide the most consistent control. Final seedbed preparation, planting, and herbicide application must be completed in a relatively narrow time frame (2 or 3 days) for optimum performance.

In systems that growers are unable or unwilling to supplement preemergence herbicides with rotary hoeing, more consistent control can be achieved by applying the herbicide from 1 to 3 weeks ahead of planting. This approach usually allows the herbicide to be applied prior to peak emergence periods for major weeds, thereby reducing dependency on timely rain. If tillage is used following application for seedbed preparation, operate the tool as shallow as possible while maintaining uniform mixing of the soil.

The benefits of early applications generally occur in the 2 to 3 weeks prior to planting. Applications made earlier than this should be viewed primarily for convenience rather than for performance. The level of risk associated with early applications is dependent largely upon weather conditions. If planting or crop development is delayed due to weather, fields where herbicides were applied in early April will be more prone to late-season weed escapes than fields where herbicides were applied closer to planting.

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