

Precautions With Late-Season Herbicide Applications

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Performance of many foliar-applied soybean herbicides has been challenged by the adverse environmental conditions common across much of Illinois. Weeds that survive an initial herbicide application are often resprayed, with the same herbicide or a different one. The likelihood of controlling larger, moisture-stressed weeds at this point in the growing season continues to decline, for myriad reasons. Apart from that, be reminded that late-season herbicide applications increase the probability that herbicide residues will persist long enough to injure sensitive rotational crops.

Nearly all herbicide labels (soil-applied and postemergence) specify the time that must elapse between herbicide application and planting of a rotational crop. The rotational crop intervals become particularly important with late-season herbicide applications and when soil moisture is limited. The intervals are established to reduce the likelihood that herbicide residues will persist in sufficient quantities to adversely affect the rotational crop. Some restrictions are based solely on time, while other factors, such as soil pH and the amount of precipitation received after herbicide application, can influence the length of the intervals.

Soil moisture is often the most critical factor governing the efficacy and persistence of soil-

residual herbicides. Many herbicides are degraded in soil by the activity of soil microorganisms, and populations of these microorganisms can be greatly depressed when soil moisture is limited. Also, dry soils can enhance herbicide adsorption to soil colloids, rendering the herbicide unavailable for plant uptake and degradation by soil microbial populations. Some herbicide rotational intervals are increased if a specified amount of precipitation is not received by a certain date.

Please keep in mind that the labels of almost all postemergence soybean herbicides indicate a preharvest interval or a soybean developmental stage beyond which applications cannot be made. Labels of some products may indicate both a developmental stage (before soybean bloom, for example) and a preharvest interval. Preharvest intervals indicate the time that must elapse between the herbicide application and crop harvest. Failure to observe the preharvest interval may result in herbicide residue levels in the harvested portion of the crop exceeding established limits. Also, livestock grazing or foraging treated soybean is prohibited by the labels of many postemergence soybean herbicides. Table 1 details preharvest intervals and grazing restrictions for a number of postemergence soybean herbicides. ^Δ

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Table 1. Preharvest intervals and grazing restrictions for postemergence herbicides used in soybean.

Herbicide	Preharvest interval	Forage or grazing ok?
Alm EW	Broadcast: V10 soybean Harvest aid: 3 days	No
Assure II/Targa	80 days	No
Basagran	30 days?	Yes, after 30 days
Cadet	60 days	No
Classic	60 days	No
Cobra or Phoenix	45 days	No
Extreme/Tackle	85 days	No
FirstRate	65 days	Yes, after 14 days
Flexstar/Rhythm	45 days	No
Flexstar GT	45 days	No
Fusillade DX	60 days	No information on label
Fusion	Prebloom	No
Liberty	70 days	No
Roundup PowerMax ¹	Broadcast: through R2 Harvest aid: 14 days	Yes Yes, after 14 days
Harmony SG/Unity ²	60 days	Yes, after 7 days
Poast or Poast Plus	75 days	Hay
Prefix	90 days	No
Pursuit	85 days	No
Raptor	Prebloom ³	No information on label
Resource	60 days	No
Scepter	90 days	No
Select or SelectMax	60 days	No
Sequence	90 days	No
Storm	50 days	No
Synchrony XP	60 days	No
Ultra Blazer	50 days	No
Warrant	R2	No

¹Data, taken from the Roundup PowerMax label, are for broadcast applications in glyphosate-resistant soybean varieties. Intervals change for applications (spot treatment and preharvest) made to non-glyphosate-resistant soybean varieties. Forage and grazing allowances can vary among glyphosate-containing products. Consult the glyphosate product label for specific information on forage and grazing restrictions.

²Unity does not allow treated areas to be grazed or fed as forage.

³The Raptor label indicates there is no preharvest interval for any crop, but applications must be made before soybean bloom.