

CONVENTIONAL ALFALFA ESTABLISHMENT OFFERS HERBICIDE ROTATION OPPORTUNITIES TO HOLD GLYPHOSATE-RESISTANT WEEDS IN CHECK

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Herbicide rotation is a widely accepted and essential management practice for reducing the problem of glyphosate-resistant weeds. Following an herbicide rotation plan can be your best defense against the onset and proliferation of glyphosate-resistant weeds in your fields. Rotate herbicide classes in order to control glyphosate-resistant weeds already present on your farm. Better yet, rotate herbicide classes to delay or prevent the onset and proliferation of glyphosate-resistant weeds in your fields.

Many weed species have developed glyphosate resistance to the point where glyphosate-resistant weeds predominate in some fields. Despite increased prevalence of glyphosate-resistant weed variants, glyphosate can have a place in your row-crop production plan. Conventional alfalfa in your rotation allows you to slow or prevent the onset of herbicide-resistant weeds using herbicide rotation strategies. Alfalfa offers an excellent opportunity to rotate herbicide classes or groups, using herbicides from different herbicide groups than you typically use to control weeds in row crops.

The Roundup Ready® trait is generally priced higher in alfalfa seed than it is in corn or soybean seed units. It can make financial sense to maintain glyphosate use in crops where it is least expensive within your herbicide rotation plan and in crops where additional herbicide applications or tankmixes with other herbicides can help provide control of the most prevalent glyphosate-resistant weed species. For best establishment of conventional alfalfa, apply a broad-spectrum pre-plant or pre-emerge herbicide according to label directions; plant seed into a firm seedbed ¼-½” deep.

For more on alfalfa establishment options, read, “[Stand Establishment and Seeding-year Weed Control Refresher.](#)”

The Weed Science Society of America maintains a listing of herbicide chemical names, and groups them by SOA codes. SOA stands for site of action and refers to the biosynthesis pathways affected by each SOA group. In some publications, these codes may also be referenced as herbicide mode of action or MOA groups. Glyphosate stands alone in SOA Group 9. Thus, any other herbicide that is labeled for your crop has the potential to be part of your herbicide rotation plan for weed species listed on the herbicide label. Learn more about SOA groups by clicking below:

[Take Action Herbicide Classification](#)

[Weed Science Society of America Herbicide Information](#)

When establishing alfalfa, several SOA herbicide groups are available as alternatives to glyphosate, with useful information shown in the table below. Much more information can be found in the herbicide labels for each one. Always read and follow current label directions when handling and applying all herbicides and pesticides.

Timing	Alfalfa Growth Stage	Herbicides	Weed Growth Stage	Weeds	Considerations (Read Label!)
Pre-plant burndown, At-plant burndown	Pre-plant/at-plant burndown, or application on established stands during dormant period	Gramoxone Inteon® SOA code: 22	Actively growing weeds & grasses	Non-selective broad spectrum	70-day harvest restriction, only one application per season, with varying regional restrictions
Pre-plant incorporated	Pre-emergence	Balan™ Eptam® SOA code: 8	Germinating broadleaf seeds & emerging seedlings	Broad-spectrum broadleaf control	Soil incorporation or chemigation needed to distribute herbicide in top few inches of soil
Early postemergence	Seedling alfalfa at least 2-trifoliate leaf stage in West, 4-trifoliate in East	Buctril® SOA code: 6	Broad-spectrum broadleaf control of small weeds up to 2” tall	Broad-spectrum broadleaf control	Temperatures over 70°F within 3 days of application can cause crop burn; 30- to 60-day harvest restriction
Postemergence	Seedling or emerged alfalfa	Butyrac® SOA code: 4	Small broadleaf control, with suppression of some larger broadleaves	Broad-spectrum broadleaf control	30-day harvest restriction for established alfalfa, 60-day harvest restriction for seedling alfalfa; can be tankmixed with Buctril® or Poast® for additional broadleaf & grass control
Postemergence	Seedling & established alfalfa	Poast® SOA code: 1	Actively growing grasses, tallest height controlled varies by grass species, generally 8”	Annual & perennial grasses	Harvest restriction 7 days before grazing, 14 days before cutting for hay/haylage; best control before mowing grasses
Postemergence	Seedling & established alfalfa	Select Max® SOA code: 1	Actively growing grasses, generally 2-6” in height	Annual & perennial grasses	Harvest restriction 15 days; best control before mowing grasses
Early postemergence & established stands	Seedling alfalfa at least 2-trifoliate leaf stage or less than 3” of regrowth in established stands	Pursuit® Raptor® SOA code: 2	Emerged weeds up to 3” for most species	Broad-spectrum broadleaf & grass suppression, with control of many broadleaves	30-day harvest restriction
Early postemergence & established stands	Seedling & established alfalfa	Prowl® H2O SOA code: 3	Controls weed seedlings during sprouting & prior to emergence	Most annual grasses & some broadleaf weeds	In seedling alfalfa, apply after 2-trifoliate but before 6” plant height. Established alfalfa up to 10” plant height. Additional restrictions on label.