

## PLAN FOR SUCCESSFUL LATE SPRING AND SUMMER ALFALFA PLANTING

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**It's not too late to plant alfalfa-** Upper Midwest spring planting weather turned out better than some of us might have expected following the winter and early spring weather patterns, including late snows experienced in most areas. When soils finally became fit enough to plant, it was high time to get corn in the ground on many farms, and rightfully so. Corn yield and growth stage progression are more sensitive to planting date and Growing Degree Days than most other crops. Missing your best corn planting window can mean declining yields, late harvest, and all the potential problems that go with it. Soybeans are much less sensitive to planting date, with about one day in delayed harvest for each day of delayed planting after the “optimum” window. But how does delayed planting affect alfalfa? Should a later planting date affect how you manage the establishment phase of the crop? Here are some points to consider.



**Seedling emergence and early growth can be faster than during the cooler temperatures of early spring.** Alfalfa seeds sprout in a soil temperature range of 40 to 104°F. That's cooler on the low end than corn and soybeans, and it's why many alfalfa fields are planted ahead of row crops when early spring weather and soil conditions permit. But what about later planting for alfalfa? Just like with early planting, the key ingredients for good stand establishment are a firm seedbed, seeding at the proper depth, and good seed-to-soil contact.

**The soil profile should have sufficient soil moisture to enable germination and early seedling growth.** Alfalfa is most vulnerable to drought in its establishment phase, before establishing its crown and the deep tap root that is typical of this perennial plant. If the soil surface is extremely dry, germination may be delayed until sufficient rain or irrigation to provide the moisture needed for germination and early emergence.

**With corn planting finished, consider taking the time to incorporate soil amendments,** if needed, before jumping straight into alfalfa planting. Lime and potassium applications can be broadcast and worked into the soil, as well as phosphorus if banded applications aren't convenient. Soil testing and analysis should be the basis for the amount of application.

**Take advantage of a later planting date to overcome the spring flush of weeds.** If tillage is your preferred field preparation, consider spacing out your tillage operations to delay a final light tillage operation by up to a week to take out germinating weeds encouraged by your initial tillage. (It's the same principle behind using a rotary hoe for sprouted weed control.) With delayed spring or early summer planting, you have the chance to decimate the spring flush of weeds and incorporate a pre-plant herbicide such as Balan™ or Eptam®. Consider a burndown herbicide before tillage, especially if large weeds are present that might not be adequately controlled by your tillage method. Likewise, if you plan no-till or minimum-tillage alfalfa establishment, a burn-down herbicide is usually necessary for later-planted alfalfa, and you can follow up with a post-emergence herbicide application if needed.

**The key to good post-emergence herbicide efficacy in alfalfa: spray weeds when they are small.** There are several herbicide options for both grass control and small broadleaf weeds. Scout for weeds soon after alfalfa emergence in order to keep all your weed control options open. You'll get much better weed control with timely herbicide application rather than waiting and allowing weed seedlings to get established. See the table below for alfalfa herbicide options.

**If a manure application is made prior to alfalfa seeding,** incorporate manure into the soil. Heavy applications of manure can disrupt soil-incorporated herbicide effectiveness and may interfere with alfalfa germination and seedling emergence if manure chunks remain at or near the soil surface or interfere with preparation of a firm seedbed.

**Timing of weed seedling emergence and predominant weed species can change as the season progresses.** For example, mustard and related weed species are typically early emerging weeds; pigweed, barnyardgrass and panicum species emerge later in spring or early summer. These and other “summer” weeds can be fast growers, so early identification and control are important.

**It's always important to scout young alfalfa stands for insect pests,** but scouting and early identification can be even more crucial during the establishment phase of late spring and early summer-planted alfalfa. Learn what to look for and scout for alfalfa weevils and armyworms. Early spring plantings can get further along in development by the time these pests become a threat, but late spring and early summer plantings often have less above-ground plant mass. With less plant material to feed on, these pests can have a more damaging effect than on an established stand.

Potato leafhoppers can be detrimental to young alfalfa stands during the establishment phase, even if the variety you've chosen is leafhopper-resistant. That's because leafhopper resistance is not expressed in young plants.

Small seedlings and even young plants during the establishment phase may not have enough taproot development to bounce back quickly from excessive pest pressure. Scout alfalfa regularly during early establishment, and know what to look for in terms of weed and pest identification. Consult an Extension advisor or other crop expert if needed for their expertise and opinion, and be timely with insect pest and post-emergence weed control measures if needed.

**When is it too late to plant alfalfa? You can plant all summer** – provided you anticipate enough soil moisture to obtain good germination and early growth. Plan on wrapping up late-summer planting by early August in the Upper Midwest. Alfalfa plants need time to develop their tap roots and crowns before a killing frost, and the rule of thumb is to *plant at least six weeks before the killing frost*. Late August and even early September seedings can be successful in some years, but it's an increasingly risky establishment bet to wait past mid-August. Besides, yield the following spring will be best on fully established alfalfa fields, so fields planted after mid-August may not meet your yield expectations for first cut the following year. The bottom line is that late-spring and summer establishment can be successful or even preferable from a timing standpoint when you consider all the other spring activity that you need to juggle as you prioritize your crop management practices.

The following table provides a list of herbicides labeled for use on alfalfa in most states but does not constitute a recommendation. Your herbicide-use decisions and applications must be made according to full and complete herbicide manufacturer label information, plus supplemental labels for certain uses and states.

**TABLE OF HERBICIDES FOR USE IN ALFALFA**  
(Read and follow label directions, including alfalfa growth stage, not shown in table.)

Timing	Herbicides	Weed Growth Stage	Weeds Controlled	Considerations
Pre-plant burndown, At-plant burndown	Gramoxone Inteon®	Actively growing weeds and grasses	Non-selective broad spectrum	70-day harvest restriction, only one application per season, with varying regional restrictions
Pre-plant burndown, At-plant burndown	Roundup®	Actively growing weeds and grasses	Non-selective broad spectrum	Application must be made prior to crop emergence
Pre-plant Incorporated	Balan™ Eptam®	Germinating broadleaf seeds and emerging seedlings	Broad-spectrum broadleaf control	Soil incorporation or chemigation needed to distribute herbicide in top few inches of soil
Early Postemergence	Buctril®	Broad-spectrum broad- leaf control of small weeds up to 2" tall	Broad-spectrum broadleaf control	Temperatures over 70 degrees F within 3 days of application can cause crop burn, 30- to 60-day harvest restriction
Postemergence	Butyrac®	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 tank-mixed with Buctril® or Poast® for additional broadleaf and grass control
Postemergence	Poast®	Actively growing grasses, tallest height controlled varies by grass species, generally 8"	Annual and perennial grasses	Harvest restriction 7 days before grazing, 14 days before cutting for hay/haylage, best control before mowing grasses
Early Postemergence and Established stands	Pursuit® Raptor®	Emerged weeds up to 3" for most species	Broad-spectrum broad- leaf and grass suppres- sion, with control of many broadleaves	30-day harvest restriction
Early Postemergence and Established stands	Warrant® (supplemental label for alfalfa)	Germinating weed and grass seeds	Most annual grasses and broadleaf weeds as they germinate	Up to or at the 4 <sup>th</sup> trifoliate stage of emerged stands, or no later than 7 days after cutting established alfalfa
Early Postemergence and Established stands	Prowl® H <sub>2</sub> O	Germinating weed and grass seeds	Most annual grasses and broadleaf weeds as they germinate	Do not apply to alfalfa before 2 <sup>nd</sup> trifoliate stage. Will not control emerged broadleaf and grass seedlings
Postemergence and Established stands	Select Max® Section®	Actively growing grasses, generally 2-6" in height	Annual and perennial grasses	Harvest restriction 15 days, best control before mowing grasses
Postemergence, only for varieties with Genuity® Roundup Ready® technology	Roundup PowerMAX® or WeatherMAX®	Actively growing weeds and grasses	Broad spectrum of annual and perennial broadleaves and grasses	Do not apply within 5 days of harvest, aim for first application at 3- to 4-trifoliate leaf stage for best early weed control and null plant take-out, no rotational restrictions
Postemergence, Established stands only, not greater than 6" crop height	Chateau®	Emerged seedlings not exceeding 1-3" in height	Broadleaf and some annual grass control, including cheatgrass	25-day harvest restriction, up to 12-month rotation interval
Fall and Early Winter Postemergence in established alfalfa, or late-summer seedings after 1 <sup>st</sup> trifoliate stage.	Kerb®	Controls germinating seeds and emerging seedlings	Annual and perennial grasses, including cheatgrass	25- to 45-day harvest restriction, apply during cool temperatures above freezing, up to 55-60 degrees F

Timing	Herbicides	Weed Growth Stage	Weeds Controlled	Considerations
Dormant Application in established stands	Eptam® 7E Treflan® 4EC	Germinating broadleaf seeds and emerging seedlings	Broad-spectrum broadleaf control	14- to 21-day harvest restrictions, chemigation needed to carry herbicide into top few inches of soil
Dormant Application in established stands	Velpar® AlfaMax™ Gold	Pre-emergence and early growth up to 2" in height or diameter	Non-selective broad spectrum	12-month minimum rotation interval to corn and root crops, 24 months for most other crops
Dormant Application in established stands	Sinbar®	Pre-emergence and early growth up to 2" in height or diameter	Seedling annual weeds	24-month rotation interval
Dormant Application	Roundup Original MAX® or PowerMAX®	Apply to actively growing weeds	Control or suppress many weeds including quackgrass, downy brome, and cheatgrass	Supplemental labels refer to a training requirement, 36-hour grazing restriction