

Post-Seed Burnoff Advice

It's not ideal, but plans for a pre-seed burnoff in a cool or wet spring can quickly turn into a post-seed application before the crop is up. **While pre-seed spraying is still the first choice, you can apply glyphosate successfully after seeding, before the crop emerges.**

SPRAYING EARLY IS BETTER

Research at the University of Saskatchewan¹ investigated the timing of pre-seed glyphosate applications in wheat (early and late application in the first and fourth weeks of May) relative to two seeding dates (early and late seeding in the first and fourth weeks of May). The research generated two solid conclusions (Chart 1):

1. Pre-seed spraying was better than not spraying, regardless of application or seeding date.
2. Early spraying resulted in a bigger yield response, regardless of seed date.

The researchers suggested early weed control is important to reduce water consumption by weeds, even in wet springs.

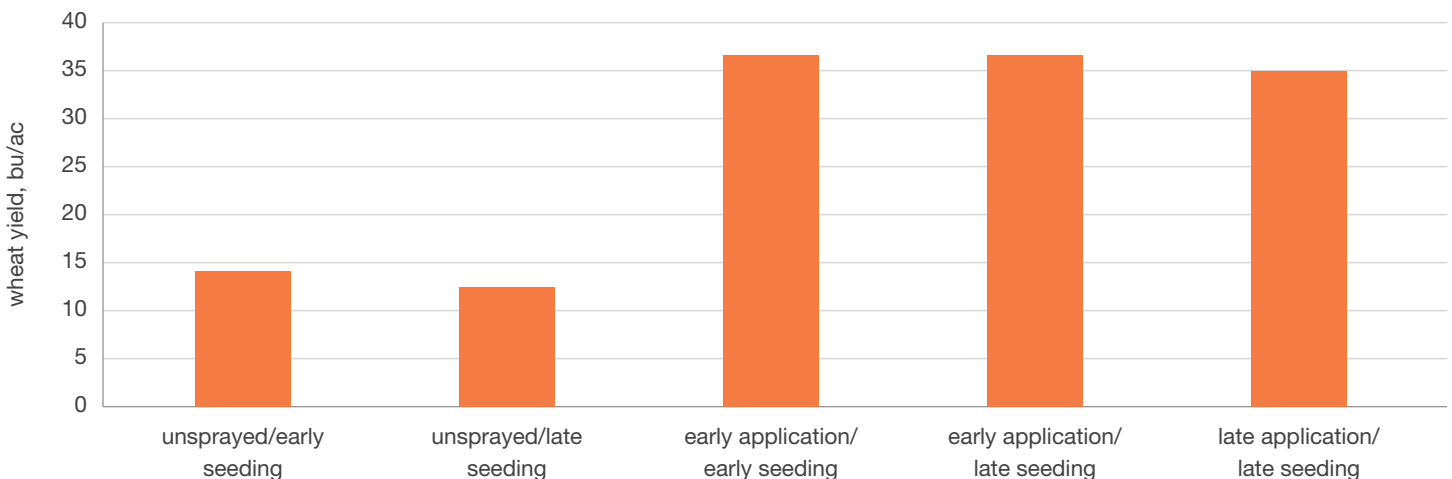
Don't underestimate the competitive ability of weeds. Even low to moderate population densities in the spring can hurt yields.

TIMING A POST-SEED, PRE-EMERGENCE BURNOFF

If you're forced to delay spraying until after seeding, remember glyphosate can kill emerging crops. University of Saskatchewan² research showed severe plant stand thinning and significant yield loss in wheat when glyphosate was applied 24 hours after ground crack – the first sign of crop emergence.¹

The conclusion: do not apply glyphosate after the first sign of crop emergence.

CHART 1: WHEAT YIELD RESPONSE TO TIMING OF WINTER ANNUAL WEED CONTROL AND CROP SEEDING DATA (AVERAGE OF 6 SITE YEARS)



Source: Sapsford, Holm, Johnson, and Cleacy, 2007

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SPRAYING IN COOL WEATHER

Weed control at cooler temperatures can be compromised because of reduced herbicide uptake, translocation and activity at the target site. In cool weather, spray glyphosate once the daytime temperature is 5°C to 6°C, the forecast is 8°C for at least two to four hours and there's no risk of frost overnight. If the temperature drops below -5°C overnight, wait a day or two to assess frost injury. Treat only if the majority of weeds are at least 60% green, showing signs of active growth and the daytime forecast is 8°C without impending frost.

KEEP GLYPHOSATE EFFECTIVE BY TANK MIXING

Tank mixing multiple modes of action is one of the most effective ways to prevent the development and spread of herbicide resistance.³ By using glyphosate as your base, you'll take advantage of its effective weed control. Here's why your early-season application is the best time to tank mix:

- It targets high-risk annual weeds with two or more modes of action at once, which reduces selection pressure for resistant weeds, and is important to preventing herbicide resistance on your farm.
- Many tank-mix options also control volunteer glyphosate-tolerant canola.
- Even in short rotations, such as canola-wheat, you can add diversity to your herbicide program by using an early-season tank mix.

Not all tank-mix partners can be sprayed post-seed/pre-emergence. Follow label directions when choosing your herbicides.

KEY POINTS

- Pre-seed spraying is better than not spraying, regardless of application or seeding date.
- If doing a post-seed application, do not apply glyphosate after the first sign of crop emergence.



For more information on weed management and to get a custom chemistry recommendation for your farm, visit MixItUp.ca.



¹ Sapsford, K.L., F.A. Holm, E.N. Johnson, and G. Cleazy. 2007. Research poster: Timing of Spring Application for Winter Annual Weed Control.

² Sapsford, K.L., F.A. Holm, K. Kirkland, and E.N. Johnson. 1997. Research poster: Timing of Glyphosate Burnoff for Direct Seeding

³ Hugh Beckie and Xavier Reboud. "Selecting for Weed Resistance: Herbicide Rotation and Mixture." *Weed Technology* Vol. 23 (2009): 363-379

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