

Timing of Spring Application for Winter Annual Weed Control.

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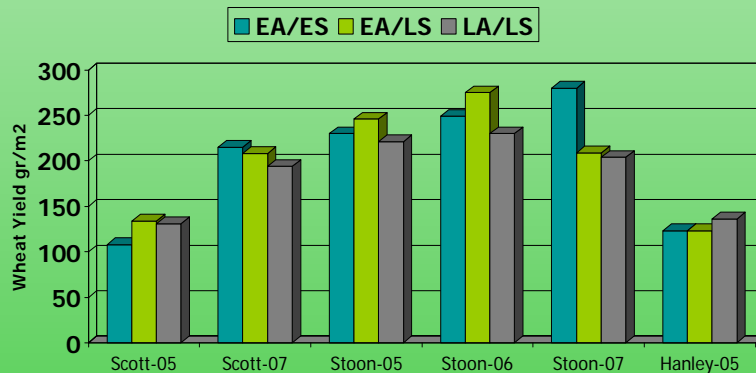
Background:

Winter annual weeds like flixweed (*Descurainia sophia*), shepherd's purse (*Capsella bursa-pastoris*), narrow-leaved hawk's-beard (*Crepis tectorum*) and stinkweed (*Thlaspi arvense*) can remove a lot of soil moisture in the spring as they begin to grow very early and are very inefficient water users. With farm size increasing and seeding taking 4 weeks or more, winter annual weeds may be robbing crop yield if not controlled early.

Materials and Methods

Trials were conducted in 2005 at Saskatoon, Scott and Hanley, Sask. and in 2006 and 2007 at Saskatoon and Scott. There were two application dates of glyphosate, 1st week of May and 4th week of May and 2 seeding dates, 1st week of May and 4th week of May. Glyphosate was applied at 450 gai ha- (equivalent to 0.5 litres per acre of Roundup® Original). The treatments were Early application followed by Early seeding (EA/ES), Early application followed by Late seeding (EA/LS) and Late application followed by Late seeding (LA/LS). Soil moisture readings were taken at seeding, visual control of winter annual weeds was recorded at 7-10, 14-21 and >35 days after application. Grain yields were recorded at harvest.

Chart #1
Wheat yield response to timing of winter annual weed control and seeding date at 6 site years in Sask.



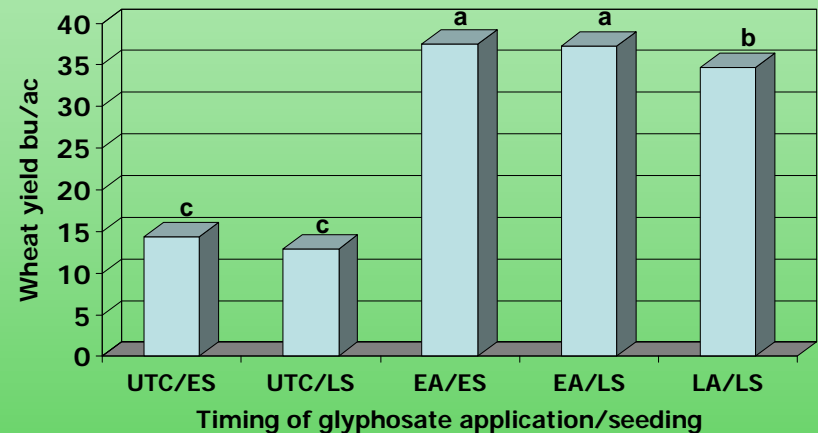
Treatments:

1. Untreated Check – Early seeded (1st week of May)
2. Untreated Check – Late seeded (4th week of May)
3. Early glyphosate – Early seeded
4. Early glyphosate – Late seeded
5. Late glyphosate – Late seeded

Saskatoon Rainfall
% of Normal for May and June
2005 – 191%
2006 – 152%
2007 – 141%

Chart #2

Wheat yield response to timing of winter annual weed control and crop seeding date (average of 6 site years)



Conclusions:

- All application times of glyphosate controlled the winter annual weeds >90%. (data not shown – see photos)
- The yield of wheat with the EA/ES and EA/LS treatments were similar or greater than the LA/LS treatment 5 of the 6 years. (Chart #1)
- When averaged across all site years the EA/ES and EA/LS treatments yielded 8% higher than the LA/LS treatment (Chart #2).
- Even in years with good spring moisture, winter annual weeds should be controlled early to avoid yield loss.

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