

Glyphosate and Fungicide Application Timing in Soybean

Glyphosate and Fungicide Tank Mixing

- Tank mixing a fungicide with a late post-emergence treatment of glyphosate in soybean has gained popularity as a way to apply a fungicide without additional application costs.
- Research has shown weed control efficacy with glyphosate is not negatively affected by the addition of a fungicide.
- However, optimal treatment timing for both products must be considered to determine the viability of a tank-mixed application.

Glyphosate Application Timing

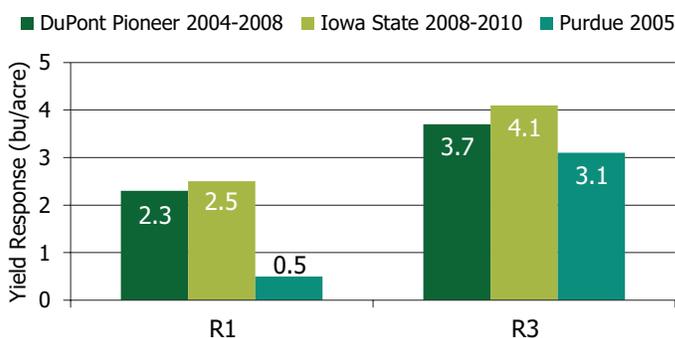
- Optimal application timing for a post-emergence glyphosate application can vary depending on weed species present and weed growth stages
- Glyphosate can be applied to soybeans no later than the R2 growth stage (full flowering), per label guidelines.

Fungicide Application Timing

- DuPont Pioneer research trials have generally found the greatest yield response to foliar fungicides applied at the R3 growth stage (beginning pod).

Application Timing	Number of Comparisons	Yield Response (bu/acre)
R1	40	2.3
R3	100	3.7
R5	48	2.7

- University trials have typically found similar results – yield benefits of fungicide treatments tend to be reduced with application timings earlier than R3.



- Since glyphosate can only be applied up through the R2 growth stage, a tank mix of glyphosate and fungicide would have to be applied at an earlier than optimal timing for the fungicide treatment.
- Optimal application timing will depend to some extent on which diseases are present.
 - » It is important to scout and determine the type of disease or diseases present
 - » Only fungal diseases such as frogeye leaf spot, septoria brown spot, and cercospora leaf blight can be controlled with fungicides.

DuPont™ Approach® Fungicide for White Mold Control

- One scenario in which a fungicide application earlier than R3 can be beneficial is when using DuPont Approach fungicide for white mold control.
- A single Approach fungicide application carefully timed during the bloom period may be sufficient, but two applications (R1-R2 and R2-R3) may be necessary in crops with a longer bloom period and when disease pressure is high.

Bestor, N., D. Mueller, and A. Robertson. 2011. The effect of spraying fungicides at R1 or R3 on soybean. Iowa State Univ.

Hanna, S., S.P. Conley, and G. Shaner. 2005. Impact of fungicide application timing and soybean row spacing on spray canopy penetration and grain yield. Purdue Univ.

Trybom, J. and M. Jeschke. 2009. Foliar fungicide and insecticide effects on soybean yield. DuPont Pioneer Crop Insights 19:1.

