

DOES ADJUVANT CHOICE REALLY MATTER?

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The Roundup Ready crop era and the robust activity of glyphosate has almost eliminated the need for an applicator to be knowledgeable about adjuvants. Arguably, glyphosate is the most forgiving herbicide when applied under less than optimal conditions or application methods. Glyphosate can be optimized with proper adjuvant selection, however, the lack of doing such can be offset by just applying progressively higher rates of glyphosate. Continued abuse of glyphosate in these applications eventually led to the evolution of glyphosate-resistant weed biotypes which has required the use of alternative herbicides to glyphosate.

The foliar-applied herbicides currently used to manage the most challenging weed species include the PPO-inhibitors (e.g., Sharpen, Flexstar, Cobra), HPPD-inhibitors (e.g. Callisto, Laudis), and glufosinate (Liberty). These herbicides must be optimized with proper adjuvant selection to provide consistent and complete weed control. Instead of the focus being on the built-in adjuvant system of glyphosate, we should look to identify adjuvant products that will help these alternative herbicides control the weeds that glyphosate won't. For the PPO- and HPPD-inhibiting herbicides, the use of oil-based activator adjuvants may be necessary and the inclusion of a drift control agent in the adjuvant product may be a negative for the non-systemic (contact) herbicides.

With the potential future commercialization of soybeans with resistance to 2,4-D and dicamba a significant change in the composition of the commercial adjuvant products will be required compared to the adjuvant products sold today. No longer will we have one adjuvant product that can cover all the acres we need to spray each week. Each individual herbicide combination will likely require the best adjuvant product or the consequence will be failed weed control with little opportunity for a rescue treatment if glyphosate no longer kills your target weeds.

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