

Consider using residual herbicides with burndown treatments in no-till soybean

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Deck: The use of soil-applied residual herbicides offers growers many benefits for weed control.

Reduced glyphosate costs make it tempting to rely only on glyphosate for weed control in no-till Roundup Ready soybean. However, the addition of a residual herbicide with burndown herbicide applications can provide many benefits.

Residual herbicides can improve early-season and postemergence weed control. Though postemergence application timings for glyphosate are generally flexible in terms of weed height, making the application when weeds are an appropriate size remains a major factor for ensuring satisfactory control. Beyond starting the growing season with a clean field, including a herbicide with residual activity with your burndown application will reduce in-season weed growth and extend early-season weed control. Residual herbicides can improve control and reduce the growth of problematic weeds, such as horseweed (maretail), common ragweed, giant ragweed, and common lambsquarters. As a result of reduced weed growth, the time needed between a burndown herbicide application and a postemergence glyphosate treatment may be extended. This is especially important when weather conditions may prevent timely postemergence applications. There are several different residual herbicides that can be included with a burndown application. For a complete listing of soybean herbicides with residual weed control consult Table 2G in the MSU Extension publication E-434 “*Weed Control Guide for Field Crops*”.

Residual herbicides can pay for themselves. There is no added application expense when a residual herbicide is included in a burndown herbicide application. Depending on market prices, weed pressure, and herbicide cost, the extra expense of adding a residual herbicide to a burndown application may pay for itself with as little as a 1 bushel/acre increase in yield. In fact, the economic returns from the addition of any of six the different residual herbicides that we examined over 2 years at 3 locations were not different from a burndown application of glyphosate + 2,4-D ester alone. This was true regardless of soybean commodity prices from \$5 to \$15/bushel. When choosing residual herbicides, the decision should be based on the types of weeds that are in the field and weed pressures to maximize economic return.

Residual herbicides are a pro-active approach to glyphosate-resistant weeds. One of the most important benefits of including a residual herbicide in a weed control program is the opportunity to use herbicides with additional modes of action beyond glyphosate. While glyphosate continues to provide excellent control of most weeds, the

spread of glyphosate-resistant weeds throughout Michigan and the Midwest is becoming an increasing concern. As glyphosate-resistant weeds become more widespread, use of residual herbicides will give growers another option for weed control in no-till soybean production to improve the stewardship of glyphosate and glyphosate-resistant cropping systems.