

Don't skip burndown herbicide applications this spring

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Deck: Not starting with a clean field will lead to soybean yield reductions.

Timely burndown herbicide applications in no-till fields are extremely important in protecting soybean yield. Less than ideal spring conditions have provided less time for growers to make burndown applications in no-till fields. This has left many fields with lush growth of winter annual weeds like purple deadnettle and chickweed (Figure 1). The tendency for a number of growers, particularly those planting Roundup Ready soybean, will be to plant into a weedy mess and not worry about applying their burndown herbicide until later or to wait until most of the summer annual weeds have emerged before making their first postemergence glyphosate application. Delayed burndown applications can reduce soybean yield, by inhibiting soybean emergence and growth. Also by delaying applications weeds become larger and can often times can be tougher to control and many times dense weed populations (or mats) can even interfere with planting.

One way to give the soybean crop an early advantage is to make burndown herbicide applications before or near the time of planting. In MSU trials, preplant burndown applications of glyphosate + 2,4-D ester, made at least 7 days prior to planting, provided excellent control of most weeds present prior to planting. Burndown applications of glyphosate that were delayed until soybeans were at the VC (unifoliate) to V1 (1 trifoliate) growth stages resulted in an average yield loss of 8.3 bushels/acre (Figure 1). Waiting until soybeans were at the V3 growth stages resulted in a 9.2 bushel/acre loss. In addition to protecting yield by reducing early-season weed competition, starting the growing season with a clean field will also eliminate several winter annual weeds that may potentially serve as hosts for destructive insects and soybean cyst nematode. **Remember early control of these weeds is important.** If a burndown herbicide application cannot be made prior to planting, it should be made shortly thereafter. Any delays in these applications can reduce soybean yield. A complete listing of burndown herbicide programs and their effectiveness ratings can be found in Table 2D of the 2011 Weed Control Guide for Field Crops (E-434). Remember treatments that contain 1 pt/A of 2,4-D ester need to be applied a minimum of 7 days before soybean planting.

Figure 1. Michigan no-till fields needing burndown herbicide applications prior to planting.



Figure 2. Soybean yield due to delayed burndown herbicide applications. Burndown applications were made 7 d prior to planting, at unifoliolate to V1 (1-trifoliolate) soybean, and V3 (3-trifoliolate) soybean.

