

Figure 1. Planting without first controlling existing weeds can increase several risks to the crop.



## Control Weeds Before Planting

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**W**et soil conditions have caused delays in both planting and efforts to control existing weed vegetation. Much of the existing weed growth is comprised of winter annual species, such as common chickweed, henbit, purple deadnettle, etc.,

but emergence of several summer annual species also has begun. The growth of all species has accelerated with warmer temperatures and abundant soil moisture. Several species of winter annuals are flowering and could produce viable seed before they are controlled with either tillage or herbicides. Much effort will be directed toward planting when soil conditions become conducive, and some may elect to plant first and attempt to control existing vegetation sometime afterward (Figure 1). This practice introduces a large amount of uncertainty and risk. Much uncertainty lies in whether or not weather and soil conditions will allow for the application of herbicides to control existing vegetation before the crop emerges. The risk of crop establishment problems and yield loss increases if the crop emerges in a dense stand of large weeds. We recommend that existing weed vegetation be controlled before planting by utilizing tillage, herbicides, or a combination of tactics so the crop can become established under weed-free conditions. Before implementing any plan to control existing vegetation, scouting to determine what species are present and their densities can be time very well spent.

Preplant tillage operations can effectively con-

trol existing vegetation while preparing a seedbed. However, as weeds become larger the effectiveness of tillage to control weeds before planting can be reduced. Dense stands of certain winter annual weeds, such as common chickweed, can “ball up” in a field cultivator. Stems of larger common lambsquarters plants bent over but not completely severed from the roots during tillage may spring back upright in a c-shaped or s-shaped configuration. Summer annual weeds that survive preplant tillage are often much more difficult to control with herbicides applied after crop emergence. Reduced weed control may also occur when fields are a bit wet during the preplant tillage operation. Soil disturbance may not be as extensive when soils are retaining moisture, and clods are more likely to be formed. Weeds are also more likely to take root again after tillage when soil disturbance is inadequate and soil moisture is abundant.

Be sure to make adjustments in the application rates of herbicides used to control large weeds in no-till situations. Glyphosate application rates of 1.5 lb ae/acre or higher and combined with other herbicides, such as 2,4-D, can provide improved control of larger weeds. Include AMS at 8.5–17 lb/100 gallons of spray solution, and apply in sufficient carrier to ensure good coverage of the dense vegetation. Be sure to include a tankmix partner with glyphosate if you suspect glyphosate-resistant marestail in any fields, but be cautious about which herbicide alternative you include with glyphosate. Some herbicides that are more contact in activity can sometimes antagonize glyphosate, especially on large weeds.  $\Delta$

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