Field Facts: Managing Volunteer Corn With the Roundup Ready® Corn 2 Trait Plus the LibertyLink® Trait

With the advent of stacked herbicide resistant traits such as the Roundup Ready® Corn 2 (RR2) trait and LibertyLink® trait, controlling an existing field of volunteer corn before planting your normal crop or controlling the first planting in a replant situation requires refitting some existing herbicide tools. Glyphosate has typically been used to control the first planting of conventional corn in replant situations, but obviously **will not control corn with the RR2 trait. Hybrids that also contain the LibertyLink gene remove Liberty® and Ignite® herbicides as options**. So, how do producers effectively control a failed stand of corn that is resistant to both glyphosate and Liberty/Ignite herbicides? What is needed is a recommendation that doesn't rely on either herbicide.

Tillage is likely the most reliable method for removing volunteer plants or plants from the first planting, but may not always be feasible. For fields in a long-term no-till cropping system or other situations where tillage is not a viable option, growers will need to turn to the limited herbicide options available.

The ACCase herbicides, such as Assure® II, Fusilade®, Fusion®, Poast®, and Poast Plus®, can be used to control volunteer corn in soybean but have intervals from 30 to 120 days after application before a new corn crop can be planted. The length of these intervals makes these products impractical for use prior to corn planting or replanting. Select Max® has a plant/replant interval of only 6 days for corn, and thus is the only ACCase herbicide that can be used for control of volunteer corn before planting or replanting.

University of Illinois trials conducted in 2006 and 2007 showed Select Max to be an effective option for control of first-planting corn. These trials also evaluated Gramoxone Inteon® (paraquat), alone and in combination with metribuzin. Control using Gramoxone Inteon + metribuzin was generally not as good as with SelectMax; however, this combination of herbicides has no restrictions for replant timing, which may make it a favorable option in some scenarios. Another option to consider is Gramoxone Inteon alone. For this to be effective, however, the corn must be tall enough that its growing point is well above the soil surface (6-leaf stage or greater), otherwise volunteer plants may not be vulnerable to contact-only herbicides even though the label allows for this type of use.

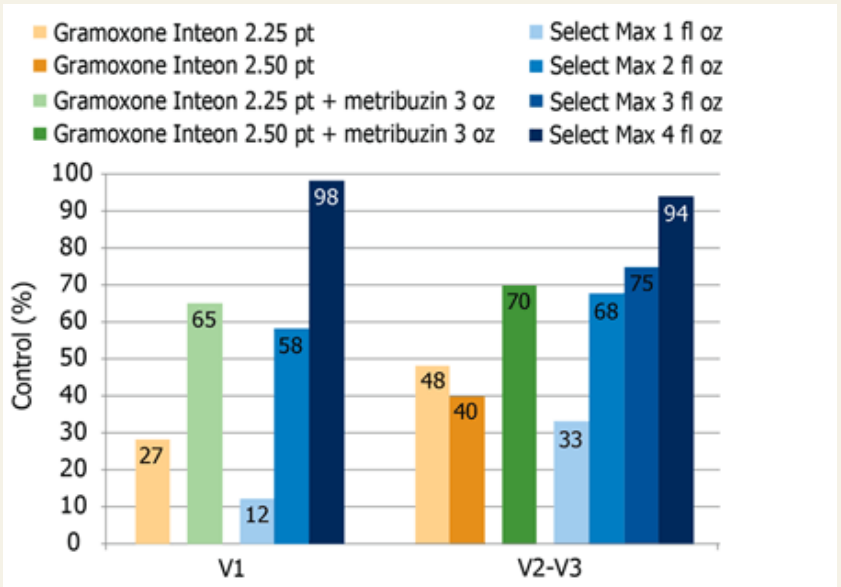

Figure 1. Control of first-planting corn using herbicides at two growth stages (not all treatments were applied at both corn stages)
(Hager 2010).

Herbicide Option	Notes
SelectMax	• Labeled rate: 6 fl oz/acre • Do not replant earlier than 6 days after application • Applications should include NIS and AMS
Gramoxone Inteon + metribuzin	• Labeled rate: 24-48 fl oz/acre (Gramoxone Inteon) + 2-5⅓ oz/acre (metribuzin 75) • No restriction on replant timing following application

Source: Pioneer Hi-Bred Intl., Inc.

Hager, A. 2010. Replanting Corn: How to Control Corn Plants From the Initial Planting. University of Illinois.