Managing Giant Ragweed in Corn and Soybeans

Giant ragweed (*Ambrosia trifida* L.) is one of the most competitive and difficult-to-control weeds in corn and soybeans. Control options have declined with the development of herbicide resistance in many giant ragweed populations. Effective management programs require both preemergence and postemergence herbicide treatments using multiple modes-of-action to help prevent resistance development.

**Biology**

Giant ragweed is a summer annual broadleaf weed found throughout the Midwest and East. It can be more of a problem in the eastern Corn Belt because it emerges later and over a more extended period of time. In other areas it generally emerges early and in a continuous flush. Seeds are large with a characteristic crown-shaped appearance, and can emerge from soil depths up to 4 to 6 inches. The seed requires an overwintering period to break dormancy, but it has reduced longevity lasting only about 2 years in the soil. The continued germination of giant ragweed seed throughout the season can present a difficult management problem.

Giant ragweed seedlings have fairly large, spoon-shaped cotyledons. The plant is very competitive and grows rapidly, often up to 5 feet taller than the crop. It has been known to reach heights up to 17 feet tall. The weed has a relatively short taproot, hairy stem, and large leaves generally having 3 to 5 distinct lobes. Giant ragweed produces a lot of pollen, which is a major cause for allergies. Plants also cross-pollinate, creating variation in appearance and genetic diversity, and increasing the potential for herbicide resistance. ALS-resistant populations are widespread, and glyphosate-resistant populations have been confirmed.

**Management**

Timing of herbicide applications is very important for control of giant ragweed. Control can be reduced if the plant gets too large prior to application. Roundup PowerMAX® at 22 ounces per acre should be used to control giant ragweed before it exceeds 6 inches in height. Tank mixing with 2,4-D at 0.5 pound per acre at preplant will help to provide more effective control. Giant ragweed control with postemergence herbicides can be difficult because of the weed’s rapid growth rate. Stem-boring insects can also cause large giant ragweed plants to survive following glyphosate applications. These insects can injure the plant’s vascular system, preventing adequate translocation of glyphosate needed to kill the plant.

Sequential preemergence and postemergence herbicide applications are often necessary for adequate control of giant ragweed. Residual herbicides may not persist long enough to control all of the emergence events. Follow the recommendations provided to effectively manage giant ragweed in corn and soybeans.
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Starting Clean and Controlling Weeds Early

- **Roundup Ready® Corn 2**
  - Start clean with a burndown herbicide or tillage. Tank mix Roundup PowerMAX® with 2,4-D or dicamba can help provide more effective burndown control.
  - Apply a preemergence residual herbicide containing atrazine such as Harness® Xtra, Degree Xtra®, or other residual herbicides at the recommended rate. Consider adding more atrazine for heavy infestations or include products like Hornet® or Balance® in the pre-mix.
  - Or apply a preemergence residual herbicide containing atrazine at the recommended rate tank mixed with Roundup WeatherMAX® at a minimum of 22 oz/A in-crop before giant ragweed exceeds 4 inches in height.
  - Follow with a postemergence in-crop application of Roundup PowerMAX at a minimum of 22 oz/A for control of additional giant ragweed flushes.
  - Tank mix other herbicides such as 2,4-D or dicamba-based products (Clarity®, Banvel®, or Distinct®) with Roundup PowerMAX if necessary for postemergence giant ragweed control.

- **Roundup Ready® and Genuity® Roundup Ready 2 Yield® Soybeans**
  - Start clean with a burndown herbicide or tillage. Tank mix Roundup PowerMAX® with 2,4-D to control giant ragweed prior to planting.
  - Apply a preemergence residual herbicide such as Valor® XLT or Gangster®. FirstRate®, Canopy® or Scepter® could be used where ALS-resistance is not an issue.
  - In-crop, apply Roundup PowerMAX® at 22 oz/A when giant ragweed is less than 6 inches tall. Increase the rate to 32 oz/A if giant ragweed is 6 to 8 inches tall.
  - Roundup PowerMAX can be tank mixed with FirstRate if ALS-resistance is not an issue, or with Cobra® or Flexstar® where ALS-resistant giant ragweed occurs.

Minimize the Risk of Weed Resistance

- Start clean and control weeds early.
- Use Roundup Ready® technology as your foundation.
- Add other herbicides and cultural practices where appropriate as part of the Roundup Ready System.
- Use the right rate at the right time.
- Control weeds throughout the season and reduce the weed seed bank.

Recommendations for control of giant ragweed in corn and soybeans. Always consult the product label for information on rates, additive recommendations, crop precautions, and appropriate tank mix partners.