

Recommendations for Management of Glyphosate-Resistant Horseweed (Marestail) in Illinois Soybean

STEP 1: Implement control practices before horseweed plants exceed 6 inches tall.

- Herbicide effectiveness against horseweed rapidly diminishes after plants bolt and exceed 6 inches tall.
- Fall or early spring burndown herbicide applications can target smaller horseweed plants more consistently than applications made closer to soybean planting.
- Paraquat, dicamba and 2,4-D have provided effective control of glyphosate-resistant horseweed following either fall or early spring applications.
- Besides glyphosate, include at least two other herbicide modes of action in burndown applications.

STEP 2: Include soil-residual herbicides with burndown herbicide applications.

- Horseweed can emerge during fall or spring, so soil-residual herbicides are warranted to control horseweed that had not germinated or emerged when the burndown herbicide was applied.
- Soil-residual soybean herbicides that provide good to excellent residual control of horseweed include chlorimuron, cloransulam, and flumioxazin.
- Select application rates based on label recommendations for soil type and organic matter content.

STEP 3: Make timely applications of postemergence herbicides before spring-emerged horseweed exceed 2 to 3 inches.

- Limited herbicide options exist to control glyphosate-resistant horseweed after soybeans have emerged.
- Glyphosate at 1.13 lb acid equivalent (ae)/ acre tankmixed with either FirstRate or Synchrony XP can suppress or control small horseweed. Horseweed biotypes that are resistant to glyphosate and ALS inhibitors will not be effectively controlled by these tankmixes.

STEP 4: Continue to aggressively manage glyphosate-resistant horseweed during the growing season of the rotational crop.

- Horseweed seed is short-lived, so programs in rotational crops that reduce the amount of seed added back to the soil seedbank can potentially reduce the horseweed population when soybean is again grown.
- Encourage neighbors to control horseweed before it reaches the reproductive stage. Horseweed seed is easily moved by wind and seed produced in a neighboring field can easily reintroduce the species into surrounding fields.



Herbicide susceptible and resistant horseweed following glyphosate application.