

Managing Common Lambsquarters in Corn and Soybeans

Common lambsquarters (*Chenopodium album* L.) is a tough-to-control weed with postemergence herbicides in corn and soybeans. The size of lambsquarters at application and environmental conditions before, during, and after treatment affects the weed's response to glyphosate. To manage common lambsquarters, it is important to treat when it is small and use residual herbicides to help control additional flushes and prevent seed production.

Biology

Common lambsquarters is a summer annual weed and a member of the goosefoot family (*Chenopodiaceae*). It produces an abundance of seed which can persist and remain viable in the soil for decades. This enables the weed to be successful and competitive in corn and soybeans. It prefers well-drained soils, and is well adapted to all tillage systems.

Lambsquarters seed emerges early from soil depths less than an inch and continues to emerge throughout the summer. Its leaf surfaces are covered with white granules or a mealy substance. The leaves and stems have an epicuticular wax and pubescence. As the leaves mature, the wax changes and the hairs become more apparent. Mature plants can reach up to 6 feet tall and generally flower and set seed in late summer and fall.

Populations of common lambsquarters have been confirmed resistant to triazine and ALS-inhibiting herbicides. Some populations of lambsquarters are also being investigated for resistance to glyphosate.

Management

Control measures need to be started early since common lambsquarters emergence begins prior to planting and before



Common lambsquarters in early growth stage.

spring tillage or burndown applications. Common lambsquarters is best controlled when it is small and before it exceeds 4 to 6 inches in height. Adding 2,4-D or dicamba to burndown treatments can help ensure effective control.

Environmental and other conditions can have a significant impact on control of lambsquarters with glyphosate. The weed can be difficult to control under dry soil conditions and cool night temperatures. Waiting for adequate soil moisture and signs of new growth before treating or re-spraying can help to provide more effective control. The wax and mealy powder on lambsquarters leaves can hinder herbicide absorption and translocation throughout the plant. Adding ammonium sulfate to the spray solution is recommended to assist with water conditioning and movement of glyphosate across the leaf surface. Using a non-ionic surfactant with Roundup PowerMAX® herbicide can also increase coverage and contact on difficult leaf surfaces. Damaged common lambsquarters from tillage or stem-boring insects can also create thick woody stems that can interrupt the translocation of glyphosate.

Use residual herbicides and follow the recommendations provided to effectively manage common lambsquarters in corn and soybeans.

Burndown application rates of Roundup PowerMAX® to use for the control of common lambsquarters.

Weed Size (inches)	Rate per Acre* (fluid ounces)
< 6	22
6 to 12	32
> 12	44

Tank mix with 0.5 lb ai/A 2,4-D or 0.25 lb ai/A dicamba for better control of common lambsquarters up to a maximum height of 12 inches.

* water volumes from 15 to 40 GPA.

to pg. 2 

Managing Common Lambsquarters in Corn and Soybeans

▶ from previous page

Roundup Ready® Corn 2*

- ⇒ Start clean with a burndown herbicide application or tillage. Tank mix with 2,4-D or dicamba to control existing weeds and tough-to-control broadleaf weeds such as common lambsquarters.
- ⇒ Apply a preemergence residual herbicide such as Harness® Xtra, Degree Xtra®, or other residual herbicides at the recommended rate.
- ⇒ Or apply a preemergence residual herbicide at the recommended rate tank mixed with Roundup WeatherMAX® at a minimum of 22 oz/A in-crop before lambsquarters exceed 4 inches in height.
- ⇒ Follow either program with a post-emergence in-crop application of Roundup WeatherMAX at a minimum of 22 oz/A for control of additional weed flushes before they exceed 4 inches in height.
- ⇒ Tank mix other herbicides such as 2,4-D, dicamba-based products or Impact® with Roundup WeatherMAX if necessary for postemergence common lambsquarters control.

* Includes corn with Roundup Ready 2 Technology

Roundup Ready® and Genuity™ Roundup Ready 2 Yield® Soybeans

- ⇒ Start clean with a burndown herbicide application or tillage. Tank mixing with 2,4-D or dicamba can help provide more effective burndown control.
- ⇒ Apply a preemergence residual herbicide such as INTRRO®, Prowl®, Valor®, Valor XLT, Gangster®, or other residual herbicides at the recommended rate.
- ⇒ In-crop, apply Roundup WeatherMAX® at a minimum of 22 oz/A before lambsquarters exceed 6 inches in height. If an additional flush of common lambsquarters occurs, observe maximum annual application rates.
- ⇒ Roundup WeatherMAX may be tank mixed with other herbicides, including Raptor® or Harmony® GT if additional postemergence common lambsquarters control is needed.

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 common lambsquarters in corn and soybeans. Always consult the product label for information on rates, additive recommendations, crop precautions, and appropriate tank mix partners.

Scout fields and control weeds throughout the season. Proper application timing protects yields, uses the correct use rate for weed size and considers the impact of environmental conditions on performance.

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Biotechnology Industry Organization.

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate, the active ingredient in Roundup® brand agricultural herbicides. Roundup® brand agricultural herbicides will kill crops that are not tolerant to glyphosate. Degree Xtra® and Harness® are restricted use pesticides and are not registered in all states. The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Check with your local Monsanto dealer or representative for the product registration status in your state. **Tank mixtures:** The applicable labeling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Monsanto has not tested all tank mix product formulations for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. Degree Xtra®, Genuity™, Harness®, Roundup®, Roundup PowerMAX®, Roundup Ready®, Roundup Ready 2 Yield®, Roundup WeatherMAX®, and Technology Development by Monsanto and Design(SM) are trademarks of Monsanto Technology LLC. Valor® is a registered trademark of Valent U.S.A. Corporation. All other trademarks are the property of their respective owners. ©2010 Monsanto Company.