FACTSHEET NUMBER WS-5

UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

BURNDOWN CONTROL OF MARESTAIL IN FULL-SEASON NO-TILL SOYBEANS

James R. Martin, Extension Weed Scientist

The choice and timing of burndown applications are key factors affecting marestail control in no-till soybeans.

Glyphosate is typically preferred over paraquat for burndown control of marestail. However, there are occasions when glyphosate is inconsistent in managing this weed. Poor weather conditions, low herbicide rate for the size of weed, and tank mix antagonism have historically caused problems with glyphosate; yet a new emerging issue deals with biotypes that are highly tolerant or resistant to glyphosate.

The problems that we sometimes see with controlling marestail with glyphosate can often be overcome by including 2,4-D ester as a tank mix partner in early preplant burndown applications. The drawback with using 2,4-D ester is the risk of injury to soybeans. In order to minimize this risk, 2,4-D ester must be applied 7 to 30 days ahead of planting. Treatments with 0.5 lb (acid equivalent) ae of 2,4-D ester/A require a minimum of 7 days between application and soybean planting; whereas, 1 lb ae of 2,4-D/A requires at least 30 days between application and planting. The rate of product will vary depending on concentration of the 2,4-D formulation used. Consult the label for specific directions. Unacceptable crop injury may occur when 2,4-D is applied as a pre-plant treatment to soybean. Plant soybean seeds at least 1 ½ to 2 inches deep. Adjust planter press wheels to ensure that soybeans seed are completely covered with soil. Do not cut soybeans for feed or graze fields treated with a 2,4-D pre-plant application. Do not exceed 1 lb ai/A/season.

The following list of 2,4-D ester products helps illustrate the differences in formulations and importance for following label directions for recommended rates and waiting period between application and planting of no-till soybeans.

PRODUCT	WAITING PERIOD	
	7 Days	30 Days
	------ Product rate /A ------	
Salvo *(5 lb ae/gal)*	12.8 oz/A	25.6 oz/A
Weedone LV 4 EC *(3.84 lb ae/gal)*	1 pt/A	2 pt/A
Weedone LV6 *(5.4 lb ae/gal)*	0.67 pt/A	1.33 pt/A
Weedone 638 *(2.8 lb ae/gal)*	1.33 pt/A	2.67 pt/A

The size of marestail can also determine when to spray burndown applications. Ideally burndown treatments with 2,4-D ester should be applied before marestail exceeds 6 inches in height. In order to achieve this goal, treatments should be applied before the first of May. Emergence and growth of marestail is usually delayed where there is a heavy cover of vegetation or dead residue.

The fact marestail can emerge throughout the season can complicate your control strategy. Including ALS inhibiting herbicides such as Canopy XL, FirstRate, or Amplify with the burndown treatments, can provide soil-residual control as well as enhance

burndown control of marestail that is tolerant or resistant to glyphosate. However, since ALS-resistant marestail has been confirmed in some neighboring states, there is a remote chance these herbicides may not provide the desired level of control. As you prepare for this season, do not take for granted that rotating to corn last season will eliminate the risk of having marestail in your soybeans this year. There were reports of glyphosate-resistant marestail in no-till soybean fields that were in corn in the previous season. Marestail seed have plumes of hairs that can facilitate their movement in wind currents from adjacent or nearby infested fields. Observe fields early, particularly those that have a history of marestail or ones that are adjacent to problem fields. Prepare a strategy that will be timely. Delaying your tactics will decrease the chance of successfully managing this problem weed.

Educational programs of Kentucky Cooperative Extension serve all people regardless of race, color, age, sex, religion, disability, or national origin.