

Managing marestail in no-till soybeans

Guiding principles of marestail management

- Combination of fall and spring burndown herbicides is most effective. Overwintered plants are difficult to control with spring burndown alone.
- Marestail plants should be dead or dying prior to crop emergence
- Most populations are resistant to both glyphosate and ALS inhibitors (site 2) such as Classic and FirstRate. Populations in some areas are becoming more difficult to control with 2,4-D also.
- There are no POST options in Roundup Ready or nonGMO soybeans, so in-season control depends solely upon use of effective residual herbicides.
- For control after crop emergence, combinations of several residual herbicides are more effective than single active ingredients.
- LibertyLink and Xtend soybeans provide for effective POST options.



Step 1 – fall herbicides

- Soybeans - 2,4-D plus one of the following: glyphosate, dicamba, Basis, Canopy/Cloak, metribuzin
- Corn – 2,4-D plus one of the following: glyphosate, dicamba, Basis, simazine, metribuzin
- Keep herbicide cost less than \$10
- Avoid use of other residual herbicides – save them for spring

Step 2 - Spring burndowns – following fall herbicides

- Glyphosate + one of following: 2,4-D, Elevore+2,4-D, Sharpen, Zidua PRO
- Gramoxone (2 to 3 pt) + 2,4-D + metribuzin
- Glufosinate + metribuzin
- Can add metribuzin (0.3 to 0.5 lb ai) and/or 2,4-D to most of these
- Glyphosate + dicamba (Xtend soybeans)
- Elevore, 2,4-D have plantback restrictions



Spring burndowns – no fall herbicides

- Glyphosate + Sharpen/Zidua PRO + 2,4-D + metribuzin
- Gramoxone (4 pt) + 2,4-D + metribuzin
- Glyphosate + dicamba (Xtend soybeans)
- Glyphosate + dicamba + Sharpen (Xtend soybeans)
- Glufosinate + Sharpen + metribuzin
- Metribuzin rates – 0.3 to 0.5 lb ai



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Step 3 – include residual herbicides with spring burndown

- Flumioxazin – Valor and Fierce products, Surveil, Envive/Enlite, Trivence, Panther Pro, others
- Sulfentrazone – Authority products, Sonic, others
- Metribuzin – various products and premixes
 - equivalent of 0.3 to 0.5 lb ai metribuzin
 - add more metribuzin as necessary if rate in premix is low
- Residual herbicide mix should be more complex in Roundup Ready and nonGMO soybeans due to lack of effective POST options (or in Xtend to avoid POST use of dicamba)
 - Panther Pro, Trivence
 - Metribuzin plus one of following: flumioxazin, sulfentrazone, Sharpen (1.5 to 2 oz)

Step 4 - Postemergence options

- Roundup Ready or nonGMO soybeans – no effective POST options
- LibertyLink soybeans
 - Glufosinate - Liberty, Cheetah, Interline, etc
 - marestalk plants less than 6 inches tall
- Xtend soybeans
 - XtendiMax, Engenia, FeXapan (plus glyphosate)
 - Apply by early June and prior to R1 stage
 - Risk of off-target movement – see label and other information from manufacturers and universities
- Enlist soybeans
 - Enlist Duo, Enlist One
 - Glufosinate
 - Most effective – glufosinate + Enlist Duo



Photos: multiple-resistant marestalk surviving treatment with – from left to right – glyphosate alone, ALS inhibitor (site 2) alone, and a combination of glyphosate plus ALS inhibitor.



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