

Burndown herbicide options in no till soybeans

By: Mike Hunter, CCE NCRAT

Glyphosate (and possible multiple resistant) marestail is spreading across NNY and may already be on your farm. If it is not on your farm it is likely on its way. Now that herbicide resistant marestail, tall waterhemp and palmer amaranth are in NY, we need to start to manage like we already have them on the farm. In no till, strip till and very minimum till (i.e. one pass with a vertical tillage tool) burndown herbicides will be necessary to control weeds prior to planting.

If any marestail is present, it must be controlled before planting. Marestail can be either a summer annual or winter annual. The winter annual marestail rosettes are present right now and as soon as it begin to warm up these will begin to bolt and grow tall quickly. Once resistant marestail gets any taller than 6 inches it becomes very difficult to control. If we are dealing with multiple resistant marestail (resistant to Group 9 and Group 2 herbicides) Liberty Link, Xtend and Enlist soybeans are the choices that allow for effective postemergence options.

The most effective burndown programs for resistant marestail in soybeans will have more than one effective site of action. If dandelions are a problem consider using one of the listed programs that include 2,4-D ester. Don't substitute 2,4-D amine formulations for the ester formulation. Apply 1 pint per acre of 2,4-D ester (4 lb gal formulations) to keep the preplant interval to 7 days, rates higher than that will lengthen the planting interval.

If using a burndown option that includes Sharpen (saflufenacil), apply 1 oz/acre with no preplant restrictions. If Sharpen (used at 1 oz/ac) is included in the burndown program and tank mixed with a flumioxazin product the preplant restrictions will be a minimum of 14 days in no till (expect for coarse soils with 2% or less organic matter where the preplant restriction is 30 days) and 30 days in conventional till regardless of the soil texture and organic matter.

Here choices that include more than one effective site of action for the control of resistant marestail in soybeans:

- Sharpen (1 oz) + glyphosate + metribuzin
- 2,4-D ester (1 pint) + glyphosate + metribuzin (7 days prior to planting)
 - Can include a flumioxazin product (Valor SX, Valor XLT, Envive, Surveil)
 - Or a premix containing metribuzin + flumioxazin (Trivence WDG or Panther Pro)
- 2,4-D ester (1 pint) + Sharpen + glyphosate + metribuzin (7 days prior to planting)
- Sharpen (1 oz) + glufosinate (Liberty)
- Sharpen (1 oz) + glufosinate + metribuzin
- 2,4-D ester (1 pint) + Sharpen (1 oz) + glufosinate + metribuzin (7 days prior to planting)
- paraquat (Gramoxone) + metribuzin
- 2,4-D ester (1 pint) + paraquat (Gramoxone) + metribuzin (7 days prior to planting)

- Sharpen (1 oz) + glyphosate + dicamba (must use one of these: XtendiMax, Engenia, FeXapan, Tavium (dicamba + s-metolachlor)) In Roundup Ready 2 Xtend (dicamba tolerant) soybeans only
- Sharpen (1oz) + Enlist One + glyphosate (or Enlist Duo (2,4-D choline + glyphosate)) In Enlist soybeans only

Here choices that include only one effective site of action for the control of resistant marestail in soybean:

- 2,4-D ester (1 pint) + glyphosate (7 days prior to planting)
- Sharpen (1 oz) + glyphosate
- glyphosate + dicamba (must use one of these: XtendiMax, Engenia, FeXapan, Tavium (dicamba + s-metolachlor)) In Roundup Ready 2 Xtend (dicamba tolerant) soybeans only
- Enlist One + glyphosate or Enlist Duo In Enlist soybeans only

If resistant tall waterhemp is present the herbicide program will be slightly different. It will be highly unlikely that a one pass, preemergence herbicide application will provide adequate control of resistant tall waterhemp. It will require a two pass (Pre and Post) herbicide program to achieve good enough control levels that minimize the spread seed.

If Roundup Ready or conventional soybeans are planted, apply a Group 15 herbicide (Dual II Magnum, Warrant, Outlook) + metribuzin or a flumioxazin + metribuzin containing product or tank mix preemergence. The postemergence application must contain Reflex or Flexstar or Prefix or Warrant Ultra. If necessary, a late postemergence rescue treatment of Cobra can be used.

If planting Xtend, Enlist or Liberty Link soybeans are planted, apply a Group 15 herbicide (Dual II Magnum, Warrant, Outlook) + metribuzin or a flumioxazin + metribuzin containing product or tank mix preemergence. In Roundup Ready 2 Xtend (dicamba tolerant) soybeans apply a postemergence application of XtendiMax, Engenia, FeXapan, Tavium (dicamba + S-metolachlor). If Enlist soybeans are planted, apply Enlist or Enlist Duo. If Liberty Link soybeans are planted apply Liberty postemergence.

If you have any questions regarding soybean herbicide programs contact Mike Hunter (315)778-8602 or meh27@cornell.edu.