



2023 Herbicide x Variety Guide

The purpose of this guide is to assist you in managing herbicide programs with Pioneer® brand soybeans. Pioneer uses molecular markers, lab, and/or field testing to evaluate soybean variety tolerance to several herbicides.

- Research has shown good correlation between molecular markers and varietal response to **preplant or pre-emergence applications** of the PPO herbicides sulfentrazone and saflufenacil, but low correlation with response to the PPO herbicide flumioxazin (e.g. Afforia®, Enlite®, Envive®, Trivence®, Surveil® and Valor®) when the herbicides are used at normal field rates.
- Research has also shown good correlation between lab assays and field tolerance to preplant and preemergence applications of metribuzin.
- Research has also shown good correlation between molecular markers and tolerance to preplant or preemergence applications of rimsulfuron.

Please note that these ratings are not correlated with tolerance to exposure or application of these herbicides after soybean emergence. Metribuzin, rimsulfuron, and all PPO herbicides can injure soybeans when applied after emergence. Crop injury can also occur when metribuzin or PPO-treated soils are splashed onto soybean stems, cotyledons, or foliage.

Challenging environments such as heavy rainfall during seed germination or seedling emergence; sandy soils, soils low in organic matter or high pH soils; or during periods of excessively cold, hot, dry or wet weather can result in higher herbicide activity or reduced crop tolerance. In such cases, crop injury may occur on varieties rated as having acceptable tolerance to the herbicide. University research indicates herbicides within an herbicide class may vary in their degree of crop selectivity. The potential for herbicide injury may also be impacted by the labeled herbicide rate used and the method or timing of application.

Herbicides that contain **Sulfentrazone and Saflufenacil** include Spartan® brands, Authority® brands, Sonic®, Optill®, Optill® PRO, Sharpen® and Verdict®. **Always read and follow herbicide label directions.**

Herbicides that contain **Metribuzin** include Canopy® Blend herbicide, Trivence® herbicide, Sencor®, Axiom®, Boundary®, Domain® and Authority® MTZ. **Always read and follow herbicide label directions.**

The following herbicide sensitivity ratings are for sulfentrazone, saflufenacil, and metribuzin:

- **Adequate Tolerance.** Available research and/or field observations suggest this herbicide is unlikely to result in material crop injury to this particular variety under normal circumstances.
- ▼ **Requires Careful Management.** Available research and/or field observations suggest this herbicide may exhibit crop injury to this particular variety in challenging environments.
- **Response Warning.** Available research and/or field observations suggest this herbicide has a high potential for crop injury to this variety.
- **Insufficient Data.** Additional testing is needed to evaluate this variety.

Herbicides that contain **Rimsulfuron** include LeadOff® and Basis® Blend. **Always read and follow herbicide label directions.**

The following herbicide sensitivity ratings are for rimsulfuron:

- ++++ **Varieties with BOLT® technology.** Growers may apply LeadOff® or Basis® Blend herbicides 0 days or more prior to planting this particular variety.
- +++ **Varieties with the STS® gene.** This particular variety has a shorter plant-back interval for LeadOff® and Basis® Blend herbicides. See product labels for details on plant-back intervals.
- ++ **High degree of rimsulfuron tolerance.** Available research and/or field observations suggest these herbicides are unlikely to result in material crop injury to this particular variety under normal circumstances. See product labels for details on plant-back intervals.
- + **Low degree of rimsulfuron tolerance.** Available research and/or field observations suggest these herbicides have a high potential for crop injury to this particular variety. Do not plant this particular variety into rimsulfuron-treated fields within 10 months of application if soil is excessively cold or wet or if soil pH exceeds 6.5. Soil temperature should be >50° F and trending warmer. See product labels for details on plant-back intervals.
- **Insufficient Data.** Additional testing is needed to evaluate this variety.



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Pioneer makes no warranty regarding the herbicide crop response information in this guide. Other varieties may be added when data become available.

Variety/Brand**	Relative Maturity ¹	Technology Segment ²	Herbicide Sensitivity Ratings		
			Sulfentrazone and Saflufenacil	Metribuzin	Rimsulfuron
P31A73E™	3.1	E3	●	●	++
P33A53X™	3.3	RR2X	■	●	+
P33A85E™*	3.3	E3	●	●	++
P34A98E™*	3.4	E3	●	●	++
P35A70X™	3.5	RR2X	■	●	+
P35A91BX™	3.5	Bolt, RR2X	●	●	++++
P35T15E™	3.5	E3	●	●	++
P37A18E™	3.7	E3	●	●	++
P37T33E™	3.7	E3	●	●	++
P37T38SE™	3.7	STS, E3	●	●	+++
P38A28E™*	3.8	E3	●	●	++
P38A54E™	3.8	E3	●	●	++
P38T05E™	3.8	E3	■	▼	+
P38T76E™	3.8	E3	■	▼	+
P39A45X™	3.9	RR2X	●	●	++
P39A78™*	3.9	-	●	●	++
P39A82S™	3.9	STS	■	▼	+++
P39T61SE™	3.9	STS, E3	■	●	+++
P40A23E™	4.0	E3	●	●	++
P40A40™	4.0	-	●	●	++
P40T19E™	4.0	E3	■	●	+
P41A61BE™*	4.1	Bolt, E3	●	●	++++
P42A55BX™	4.2	Bolt, RR2X	●	●	++++
P42A84E™	4.2	E3	●	●	++

● Adequate Tolerance ▼ Requires Careful Management ■ Crop Response Warning □ Insufficient Data



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Variety/Brand**	Relative Maturity ¹	Technology Segment ²	Herbicide Sensitivity Ratings		
			Sulfentrazone and Saflufenacil	Metribuzin	Rimsulfuron
P42A96X™	4.2	RR2X	■	▼	+
P42T31E™	4.2	E3	●	●	++
P44A91E™	4.4	E3	●	●	++
P44T04SE™	4.4	STS, E3	■	●	+++
P45A81E™*	4.5	E3	●	■	++
P45T88E™	4.5	E3	■	●	+
P46A09E™	4.6	E3	■	●	+
P46T27SE™	4.6	STS, E3	■	●	+++
P46T97SE™	4.6	STS, E3	■	●	+++
P47A10™*	4.7	-	●	▼	++
P47A25BX™	4.7	Bolt, RR2X	●	▼	++++
P47A64X™	4.7	RR2X	●	●	++
P48A14E™	4.8	E3	●	●	++
P48T06SE™	4.8	STS, E3	■	●	+++
P49A41L™	4.9	LL	●	●	++
P49T74E™	4.9	E3	■	□	+
P51A85BE™*	5.1	Bolt, E3	●	●	++++
P52A14SE™	5.2	STS, E3	■	●	+++
P53T90E™	5.3	E3	■	▼	+
P55A49X™	5.5	RR2X	●	●	++

* New Product

** All Pioneer products denoted with ™ are brand names.

1 RELATIVE MATURITY: Shows the relative maturity group rating, with the digits preceding the decimal representing the general maturity group, and the digit following the decimal showing relative maturity within the group on a scale of 0 to 9, with 0 early and 9 late. For example, a soybean product with a relative maturity rating of 1.8 would be a late product in Group 1 maturity.

2 TECHNOLOGY SEGMENT:



● Adequate Tolerance ▼ Requires Careful Management ■ Crop Response Warning □ Insufficient Data



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Always follow stewardship practices in accordance with the Product Use Guide (PUG) or other product-specific stewardship requirements including grain marketing and pesticide label directions. **Varieties with BOLT® technology** provide excellent plant-back flexibility for soybeans following application of sulfonylurea (SU) herbicides such as LeadOff® or Basis® Blend as a component of a burndown program or for double-crop soybeans following SU herbicides such as Finesse® applied to wheat the previous fall.

Glyphosate Tolerant

Always follow grain marketing, stewardship practices and pesticide label directions. **Varieties with the Glyphosate Tolerant trait** (including those designated by the letter "R" in the product number) contain genes that confer tolerance to glyphosate herbicides. Glyphosate herbicides will kill crops that are not tolerant to glyphosate.



Varieties with the Roundup Ready 2 Yield® (RR2Y) trait: ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® technology contains genes that confer tolerance to glyphosate, an active ingredient in Roundup® brand agricultural herbicides. Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate. Roundup Ready 2 Yield® is a trademark of Bayer Group.

STS®

herbicide tolerant trait

Varieties with the STS® trait are tolerant to certain sulfonylurea (SU) herbicides. This technology allows post-emergent applications of Synchrony® XP and Classic® herbicides without crop injury or stress (see herbicide product labels). NOTE: A soybean variety with a herbicide tolerant trait does not confer tolerance to all herbicides. Spraying herbicides not labeled for a specific soybean variety will result in severe plant injury or plant death. Always read and follow herbicide label directions and precautions for use.



DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO SOYBEANS WITH Roundup Ready 2 Xtend® (RR2X) technology unless you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application. IT IS A VIOLATION OF FEDERAL AND STATE LAW TO MAKE AN IN-CROP APPLICATION OF ANY DICAMBA HERBICIDE PRODUCT ON SOYBEANS WITH Roundup Ready 2 Xtend® technology, OR ANY OTHER PESTICIDE APPLICATION, UNLESS THE PRODUCT LABELING SPECIFICALLY AUTHORIZES THE USE. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with soybeans with Roundup Ready 2 Xtend® technology. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Soybeans with Roundup Ready 2 Xtend® technology contain genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Roundup Ready 2 Xtend® is a registered trademark of Monsanto Technology LLC used under license.



Varieties with Enlist E3® technology (E3): The transgenic soybean event in Enlist E3® soybeans is jointly developed and owned by Corteva Agriscience and M.S. Technologies L.L.C.

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