



Metribuzin Tolerance Testing of Soybean Varieties - 2016



Metribuzin (Sencor, Canopy, etc.) is a PSII inhibitor (Group 5) herbicide that provides residual control of an assortment of annual grasses and broadleaf weeds in soybean, including Palmer amaranth. With the extensive use of PPO inhibitors (Group 14) and chloroacetamide (Group 15) herbicides in soybean and rotational crops such as corn and cotton, use of an additional mode of action (MOA) is a sound strategy to reduce the risk of resistance to these other herbicide MOAs.

The handicap to metribuzin use is the sensitivity of soybean varieties to this herbicide. Other environmental factors, including: soil texture, organic matter, rainfall, soil pH, and product use rate, may also play a part in sensitivity. The University of Arkansas System Division of Agriculture conducted a greenhouse screening of soybean varieties, testing their tolerance to metribuzin at a rate of 0.5 lb ai/ac or 10.67 oz/ac of a 75DF metribuzin product. The following tables break down into an injury scale:

Slight (Table 1) – Some symptoms observed in the greenhouse but unlikely to injure soybean plants in the field at a 1X rate if applied to the correct soil texture at the appropriate soil pH. It is recommended that these soybean varieties be planted if metribuzin is intended to be applied.

Moderate (Table 2) – Likely to observe some injury in the field, even when applying a premix product that contains a lower rate of metribuzin.

Severe (Table 3) – Use of any metribuzin-containing product would likely cause considerable injury to these soybean varieties.

Please note that most varieties show an acceptable tolerance to metribuzin. Choose a variety with a high level of tolerance. Please read and follow all labels.

Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating
Armor 39-D90	RR2Xtend	4.0	Slight	Armor ARX4706	RR2Xtend	4.7	Slight	CZ 4540 LL	LL	4.5	Slight
Armor 44-D40	RR2Xtend	4.4	Slight	Armor ARX4906	RR2Xtend	4.9	Slight	CZ 4656 RY	RR2Y	4.6	Slight
Armor 47-D17	RR2Xtend	4.7	Slight	Asgrow AG 42X6	RR2Xtend	4.2	Slight	CZ 5147 LL	LL	5.1	Slight
Armor 47-R70	RR2Y	4.7	Slight	Asgrow AG 47X6	RR2Xtend	4.7	Slight	CZ 5150 LL	LL	5.1	Slight
Armor 49-D66	RR2Xtend	4.9	Slight	Asgrow AG 48X7	RR2Xtend	4.8	Slight	Delta Grow DG4825 RR2/STS	RR2Y	4.8	Slight
Armor 49-D90	RR2Xtend	4.9	Slight	Asgrow AG 49X6	RR2Xtend	4.9	Slight	Delta Grow DG4855 RR2X/STS	RR2Xtend	4.8	Slight
Armor AR491	RR1	4.9	Slight	AvDx-D514	RR	4.5	Slight	Delta Grow DG4880 RR	RR	4.8	Slight
Armor 53-D04	RR2Xtend	5.3	Slight	AvDx-E816	RR	3.8	Slight	Delta Grow DG4967 LL	LL	4.9	Slight
Armor 55-R68	RR2	5.5	Slight	AvZx-D515	LL	4.5	Slight	Delta Grow DG4977 LL/STS	LL	4.9	Slight
Armor AR4906	RR2	4.9	Slight	Blue River EXP 4	Conv.	4.7	Slight	Delta Grow DG5230 RR2	RR2Y	5.2	Slight
Armor AR5206C	Conv.	5.2	Slight	Blue River 50SK7	Conv.	5.1	Slight	Delta Grow DG5580 RR2	RR2Y	5.5	Slight

Table 1 (Continued). 2016 Soybean Varieties that Tested Slight Injury to Metribuzin at 0.5 lb ai/ac.

Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating
Delta Grow DG5625 RR2	RR2Y	5.6	Slight	Hutcheson	Conv.	5.3	Slight	REV® 56R63™	RR	5.6	Slight
Dyna-Gro S45LL97	LL	4.5	Slight	JTN-5110	Conv.	5.5	Slight	REV® 57R21™	RR	5.7	Slight
Dyna-Gro S45XS66	RR2Xtend	4.5	Slight	MSX 48XDS1	RR2Xtend	4.8	Slight	S11-17025	Conv.	5.2	Slight
Dyna-Gro S49LL34	LL	4.9	Slight	MSX 49XD1	RR2Xtend	4.9	Slight	S11-20124	Conv.	5.2	Slight
Dyna-Gro S55LS75	LL	5.5	Slight	MSX 49XD3	RR2Xtend	4.9	Slight	S12-2418	Conv.	4.8	Slight
Dyna-Gro S56RY84	RR2Y	5.6	Slight	NK S42-P6 Brand	RR2Y	4.2	Slight	S12-3782	Conv.	4.6	Slight
Eagle Seed ES4460RYX	RR2Xtend	4.4	Slight	NK S45-R7 Brand	RR2/STS	4.5	Slight	S12-3791	Conv.	4.5	Slight
Eagle Seed ES4772RY	RR2Y	4.7	Slight	NK S52-Y2 Brand	RR2Y	5.2	Slight	S12-4718	Conv.	5.3	Slight
Eagle Seed ES4840RY	RR2Y	4.8	Slight	NK S56-M8 Brand	RR2Y	5.6	Slight	Schillinger e4510	Conv.	4.5	Slight
Eagle Seed ES4870RYX	RR2Xtend	4.8	Slight	Pioneer P47T89R	RR	4.7	Slight	Schillinger e4993	Conv.	4.9	Slight
Eagle Seed ES5420RYX	RR2Xtend	5.4	Slight	Progeny P 4211RY	RR2Y	4.2	Slight	UA 5014C	Conv.	5.0	Slight
Eagle Seed ES5508RY	RR2Y	5.5	Slight	Progeny P 4516RXS	RR2Xtend	4.5	Slight	UA 5213C	Conv.	5.2	Slight
Eagle Seed ES5650RR	RR	5.6	Slight	Progeny P 4930LL	LL	4.9	Slight	UA 5414RR	RR	5.4	Slight
Eagle Seed ES5930RYX	RR2Xtend	5.9	Slight	Progeny P 4944RX	RR2Xtend	4.9	Slight	UA 5612	Conv.	5.6	Slight
Go Soy 42L16	LL	4.2	Slight	Progeny P 5414LLS	LL	5.4	Slight	UA 5814HP	Conv.	5.8	Slight
Go Soy 483.C	Conv.	4.8	Slight	Progeny P 5417RX	RR2Xtend	5.4	Slight	UAX 51010	Conv.	5.1	Slight
Go Soy 4912LL	LL	4.9	Slight	Progeny P 5555RY	RR2Y	5.5	Slight	UAX 5102	Conv.	5.1	Slight
Go Soy 4913LL	LL	4.9	Slight	R09-430	Conv.	5.1	Slight	UAX 59012C	Conv.	5.9	Slight
Go Soy 5115LL	LL	5.1	Slight	R10-230	Conv.	5.6	Slight	UAX 59013C	Conv.	5.9	Slight
Go Soy Ireane	Conv.	4.9	Slight	REV® 45A46™	RR	4.5	Slight	UAX 59111C	Conv.	5.9	Slight
Go Soy Leland	Conv.	5.0	Slight	REV® 47R34™	RR	4.7	Slight	UAX 59113GT	RR	5.9	Slight
GS47R216	RR	4.7	Slight	REV® 48A26™	RR	4.8	Slight	USG 7536XT	RR2Xtend	5.3	Slight
GS48R216	RR	4.8	Slight	REV® 49L49™	LL	4.9	Slight	USG 7547XT	RR2Xtend	5.4	Slight
GS4915R2	RR	4.9	Slight	REV® 51A56™	RR	5.1	Slight				
HBK LL4953	LL	4.9	Slight	REV® 52A94™	RR	5.2	Slight				

Table 2. 2016 Soybean Varieties that Tested Moderate Injury at 0.5 lb ai/ac Metribuzin.

Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating
Armor 46-D08	RR2Xtend	4.6	Moderate	Delta Grow DG4970 RR	RR	4.9	Moderate	LG C4900RX	RR2Xtend	4.9	Moderate
Armor 48-D24	RR2Xtend	4.8	Moderate	Delta Grow DG4995 RR	RR	4.9	Moderate	MorSoy Xtra 4535 RXT	RR2Y	4.3	Moderate
Armor AR4606	RR2Y	4.6	Moderate	Delta Grow DG5067 LL	LL	5.0	Moderate	MorSoy Xtra 47X12	RR2Y	4.7	Moderate
Armor ARX5506	RR2Xtend	5.5	Moderate	Delta Grow DG5170 RR2/STS	RR2Y	5.1	Moderate	MorSoy Xtra 48X02	RR2Y	4.8	Moderate
Asgrow AG 44X6	RR2Xtend	4.4	Moderate	Delta Grow DG5461 LL	LL	5.4	Moderate	Mycogen 5N414R2	RR2Y	4.1	Moderate
Asgrow AG 45X6	RR2Xtend	4.5	Moderate	Dyna-Gro 31RY45	RR2Y	4.5	Moderate	Mycogen 5N424R2	RR2Y	4.2	Moderate
Asgrow AG 4632	RR2Y	4.6	Moderate	Dyna-Gro 39RY43	RR2Y	4.3	Moderate	Mycogen 5N433R2	RR2Y	4.3	Moderate
Asgrow AG 46X6	RR2Xtend	4.6	Moderate	Dyna-Gro S43RY95	RR2Y	4.3	Moderate	Mycogen 5N480R2	RR2Y	4.8	Moderate
Asgrow AG 46X7	RR2Xtend	4.6	Moderate	Dyna-Gro S45XS37	RR2Xtend	4.5	Moderate	NK S42-E5 Brand	RR2Y	4.2	Moderate
Asgrow AG 53X6	RR2Xtend	5.3	Moderate	Dyna-Gro S48RS53	RR2Y	4.8	Moderate	NK S45-W9 Brand	RR2Y	4.5	Moderate
Asgrow AG 54X6	RR2Xtend	5.43	Moderate	Dyna-Gro S48XT56	RR2Xtend	4.8	Moderate	Osage	Conv.	5.6	Moderate
Asgrow AG 55X7	RR2Xtend	5.5	Moderate	Dyna-Gro S49XT07	RR2Xtend	4.9	Moderate	Pioneer P41T33R	RR	4.1	Moderate
AvDx-D714	RR	4.7	Moderate	Dyna-Gro S52LL66	LL	5.2	Moderate	Pioneer P47T36R	RR	4.7	Moderate
AvDx-D814	RR	4.8	Moderate	Dyna-Gro SX16844XS	RR2Xtend	4.4	Moderate	Pioneer P50T64R	RR	5.0	Moderate
AvDx-D916	RR	4.9	Moderate	Eagle Seed ES4680RYX	RR2Xtend	4.6	Moderate	Pioneer P52T50R	RR	5.2	Moderate
AvDx-F216	RR	5.2	Moderate	Eagle Seed ES4998RR	RR	4.9	Moderate	Pioneer P53T73SR	RR	5.3	Moderate
CZ 4818 LL	LL	4.8	Moderate	Eagle Seed ES5015RYX	RR2Xtend	5.0	Moderate	Progeny P 4247LL	LL	4.2	Moderate
CZ 4898 RY	RR2Y	4.8	Moderate	Go Soy 43L16	LL	4.3	Moderate	Progeny P 4588RY	RR2Y	4.5	Moderate
CZ 5445 LL	LL	5.4	Moderate	Go Soy 4714LL	LL	4.7	Moderate	Progeny P 4757RY	RR2Y	4.7	Moderate
Delta Grow DG4587 LL/STS	LL	4.5	Moderate	Go Soy 4814GTS	RR	4.8	Moderate	Progeny P 4788RY	RR2Y	4.7	Moderate
Delta Grow DG4670 RR2	RR2Y	4.6	Moderate	Go Soy 49G16	RR	4.9	Moderate	Progeny P 4799RXS	RR2Xtend	4.7	Moderate
Delta Grow DG4680 RR2	RR2Y	4.6	Moderate	Go Soy 5214GTS	RR	5.2	Moderate	Progeny P 4814LLS	LL	4.8	Moderate
Delta Grow DG4781 LL	LL	4.7	Moderate	GS45R216	RR	4.5	Moderate	Progeny P 4816RX	RR2Xtend	4.8	Moderate
Delta Grow DG4790 RR2	RR2Y	4.7	Moderate	HBK RY4721	RR2Y	4.7	Moderate	Progeny P 4900RY	RR2Y	4.9	Moderate
Delta Grow DG4845 RR2X	RR2Xtend	4.8	Moderate	LG C4615RX	RR2Xtend	4.6	Moderate	Progeny P 5016RXS	RR2Xtend	5.0	Moderate
Delta Grow DG4940 RR	RR	4.9	Moderate	LG C4845RX	RR2Xtend	4.8	Moderate	Progeny P 5226RYS	RR2Y	5.2	Moderate

Table 2 (Continued). 2016 Soybean Varieties that Tested Moderate Injury at 0.5 lb ai/ac Metribuzin.											
Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating
Progeny P 5752RY	RR2Y	5.7	Moderate	UAX 59011C	Conv.	5.9	Moderate	USG 74K95RS	RR2Y	4.9	Moderate
R07-6614RR	RR	5.7	Moderate	UAX 59313GT	RR	5.9	Moderate	USG 7506XTS	RR2Xtend	5.0	Moderate
R10-197RY	RR2Y	5.6	Moderate	USG 7487XTS	RR2Xtend	4.8	Moderate	USG 7557XT	RR2Xtend	5.5	Moderate
REV® 48A76™	RR	4.8	Moderate	USG 7496XTS	RR2Xtend	4.9	Moderate	USG 7576XT	RR2Xtend	5.7	Moderate
REV® 49R94™	RR	4.9	Moderate	USG 7497XT	RR2Xtend	4.9	Moderate	USG Ellis	Conv.	4.9	Moderate
Shillinger e4892	Conv.	4.6	Moderate	USG 74B83RS	RR2Y	4.8	Moderate				

Table 3. 2016 Soybean Varieties that Tested Severe Injury at 0.5 lb ai/ac Metribuzin.											
Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating	Variety Name	Herbicide Tolerance	MG	Rating
Aarmor 43-D34	RR2Xtend	4.3	Severe	Delta Grow DG4545 RR2X/STS	RR2Xtend	4.5	Severe	NK S49-B1 Brand	RR2Y	4.9	Severe
Aarmor 48-D80	RR2Xtend	4.7	Severe	Dyna-Gro S49XS76	RR2Xtend	4.9	Severe	Progeny P 4613RYS	RR2Y	4.6	Severe
CZ 4044 LL	LL	4.0	Severe	Eagle Seed ES5225RY	RR2Y	5.2	Severe	Progeny P 4620RXS	RR2Xtend	4.6	Severe
CZ 4222 LL	LL	4.2	Severe	Go Soy 4714GTS	RR	4.7	Severe	Progeny P 5768RX	RR2Xtend	5.7	Severe
CZ 4590 RY	RR2Y	4.5	Severe	MSX 46XDS1	RR2Xtend	4.6	Severe	R11-89RY	RR2	5.4	Severe
CZ 4748 LL	LL	4.7	Severe	Mycogen 5N406R2	RR2Y	4.0	Severe	REV® 48L63™	LL	4.8	Severe
CZ 4959 RY	RR2Y	4.9	Severe	NK S47-C8 Brand	RR2Y	4.7	Severe	USG 75B75R	RR2	5.7	Severe
CZ 5225 LL	LL	5.2	Severe	NK S47-K5 Brand	RR2Y	4.7	Severe				
CZ 5242 LL	LL	5.2	Severe	NK S48-D9 Brand	RR2Y	4.8	Severe				

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