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Metribuzin Tolerance Testing of Soybean Varieties - 2014

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 Division of Agriculture ran a screen of soybean varieties testing their tolerance to metribuzin. The following tables break down into an injury scale: tolerant (<1), slight (1-3), moderate (4-6), severe (7-9), and death (10). Please note that most varieties show an acceptable tolerance to metribuzin. Choose a variety with a high level of tolerance.

Below is the response of soybean varieties to 0.5 lb ai/A metribuzin on a silt loam soil.

Soybean Varieties that Tested Tolerant to Metribuzin (<1)								
Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group
AgVenture 55K5RR	RR	5.5	Hoegemeyer 5280 NRS	RR1/STS	5.2	REV@ 49A55™	RR1	4.9
Armor 48-R66	RR2/STS	4.8	JTN-4307	CONV	5	REV@ 49A75™	RR1	4.9
Armor AX4550	RR2	5.5	MorSoy Extra 48X02	RR2	4.8	REV@ 51R53™	RR1	5.1
Asgrow AG5335 GENRR2Y/SR	RR2/SR	5.3	MorSoy Extra 48X34	RR2/STS	4.8	REV@ 52R74™	RR1	5.2
Asgrow AG5535 GENRR2Y	RR2	5.5	NK S52-Y2 Brand	RR2	5.2	REV@ 55R53™	RR1	5.5
Croplan R2C4873S	RR2	4.8	OZARK	CONV	5.2	S09-6262	CONV	4.8
Delta Grow DG4880RR	RR1	4.8	Progeny P 5555 RY	RR2	5.5	S11-20356	CONV	4.9
Delta Grow DG5461LL	LL	5.4	R05-3239	CONV	4.9	USG 74B94RS	RR2,STS	4.9
Dulaney Seed AvDx-D814	RR	4.8	R09-4571	CONV	4.9	USG 74G74LS	LL, STS	4.7
Go Soy 4914	LL	4.9	R10-130RY	RR	5.2	Willcross RY2494NS	RR2/STS	4.9
HALO 4:94	LL	4.9	R10-366RY	RR	5			
HALO 4:97	LL/STS	4.9	R10-428RY	RR	5.1			

Soybean Varieties that Tested with Slight Injury to Metribuzin (1-3)								
Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group
Armor 44-R08	RR2	4.4	Delta Grow DG4670GENRR2Y	RR2	4.6	Dyna-Gro S46RY85	RR2	4.6
Armor 47-R13	RR2	4.7	Delta Grow DG4755GENRR2Y	RR2	4.7	Dyna-Gro S47RY13	RR2	4.7
Armor 49-C3	CONV	4.9	Delta Grow DG4767LL/STS	LL/STS	4.7	Dyna-Gro S49LS665	LL/STS	4.9
Armor 49-R56	RR2	4.9	Delta Grow DG4775GENRR2Y	RR2	4.7	Dyna-Gro S52RY75	RR2	5.2
Armor 51-R50	RR2	5.1	Delta Grow DG4825GENRR2Y/STS	RR2/STS	4.8	Dyna-Gro S54RY43	RR2	5.4
Armor AX4390	RR2	3.9	Delta Grow DG4867LL	LL	4.8	Dyna-Gro S56RY84	RR2	5.6
Armor AX4410	RR2	4.1	Delta Grow DG4930GENRR2Y	RR2	4.9	Eagle Seed ES4720RY	RR2	4.7
Armor AX4480	RR2	4.8	Delta Grow DG4940RR	RR1	4.9	Eagle Seed ES4777RR	RR1	4.7
Armor AX4490	RR2	4.9	Delta Grow DG4970RR	RR1	4.9	Eagle Seed ES4840RY	RR2	4.8
Armor AX4520	RR2	5.2	Delta Grow DG4981LL/STS	LL/STS	4.9	Eagle Seed ES5400RR	RR1	5.4
Armor X447C	CONV.		Delta Grow DG4985GENRR2Y	RR2	4.9	Eagle Seed ES5650RY	RR2	5.6
Armor X47C	CONV/STS	4.7	Delta Grow DG4990LL	LL	4.9	ELLIS	CONV	4.9
Armor X49C	CONV/STS	4.9	Delta Grow DG5230GENRR2Y	RR2	5.2	Go Soy 4713	LL	4.7
Asgrow AG4534 GENRR2Y/SR	RR2/STS	4.5	Delta Grow DG5480GENRR2Y	RR2	5.4	Go Soy 5213	LL	5.2
Asgrow AG4632 GENRR2Y/SR	RR2/STS	4.6	Delta Grow DG5481LL	LL	5.4	Go Soy 5214	LL	5.2
Asgrow AG5233 GENRR2Y/SR	RR2/STS	5.2	Delta Grow DG5565GENRR2Y	RR2	5.5	HALO 4:95	LL	4.9
Asgrow AG5332 GENRR2Y	RR2	5.3	Delta Grow DG5575GENRR2Y	RR2	5.5	HALO 5:01	LL	5.0
Bayer CropScience BX 5150 LL	LL	5.1	Delta Grow DG5625GENRR2Y	RR2	5.6	HALO 5:26	LL	5.2
Bayer CropScience BX 5242 LL	LL	5.2	Dulaney Seed AvDx-D514	RR	4.5	HALO X445	LL	4.5
Croplan LC4713S	LL	4.7	Dulaney Seed AvDx-D613	RR	4.6	HALO X448	LL	4.8
Croplan LC5253S	LL	5.2	Dulaney Seed AvDx-D914	RR	4.9	HALO X449	LL/STS	4.9
Croplan R2C4493	RR2	4.4	Dulaney Seed AvDx-V213	RR	5.2	HALO X451	LL	5.1
Croplan R2C4801S	RR2	4.8	Dyna-Gro 31RY45	RR2	4.5	HBK LL4653	LL	4.6
Davis 4148RR2YS	RR2/STS	4.8	Dyna-Gro 32RY55	RR2	5.5	HBK LL4850	LL	4.8
Davis 4447RR2YS	RR2/STS	4.7	Dyna-Gro 39RY43	RR2	4.3	HBK LL4950	LL	4.9



Soybean Varieties that Tested with Slight Injury to Metribuzin (1-3)								
Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group
HBK LL4953	LL	4.9	NK S55-C3 Brand	RR2	5.5	R08-2797	CONV	4.7
HBK RY4620	RR2/STS	4.6	Pioneer 95L01	LL	5	R09-430	CONV	5
HBK RY5221	RR2	5.2	Pioneer P45T11R	RR1	4.5	R10-197RY	RR	5.6
HBK RY5421	RR2/STS	5.4	Pioneer P47T89R	RR1	4.7	REV@ 44A15™	RR2	4.4
Hoegemeyer 4822 NRR	RR1	4.8	Pioneer P48T53R	RR1	4.8	REV@ 46R64™	RR1	4.6
Hoegemeyer 4904 NR2S	RR2/STS	4.9	Pioneer P48T67L	LL	4.8	REV@ 47R53™	RR1	4.7
Hutcheson	CONV	5.5	Pioneer P49T97R	RR1	4.9	REV@ 48R22™	RR1	4.8
JTN-5110	CONV	5.5	Pioneer P50T64R	RR1	5	REV@ 48R44™	RR1	4.8
Leland	CONV	5.1	Pioneer P52T50R	RR1	5.3	REV@ 49A14™	RR2/STS	4.9
MorSoy Extra 47X12	RR2/STS	4.7	Pioneer P53T73SR	RR1/STS	5.3	REV@ 49R94™	RR1	4.9
MorSoy Extra 49X54	RR2	4.9	Pioneer P56T03R2	RR2	5.6	REV@ 52A94™	RR2/STS	4.9
MorSoy Extra 51X31	RR2	5.1	Progeny P 4211 RY	RR2	4.2	REV@ 53R23™	RR1	5.3
MorSoy Extra 53X82	RR2	5.3	Progeny P 4440 RY	RR2	4.4	REV@ 54R84™	RR1	5.4
MorSoy Extra 54X41	RR2	5.4	Progeny P 4510 RYS	RR2/STS	4.5	REV@ 55L95™	LL	5.5
MPG 4714	RR1	4.7	Progeny P 4747 RY	RR2	4.7	REV@ 56A54™	RR2	5.6
MPG 483C	CONV	4.8	Progeny P 4788 RY	RR2	4.7	REV@ 56R63™	RR1	5.6
MPG 5214NRR	RR1	5.2	Progeny P 4819 LL	LL	4.8	REV@ 57R21™	RR1	5.7
Mycogen 5N451R2	RR2	4.5	Progeny P 4848 RYS	RR2/STS	4.8	S11-20124	Conv.	5.2
Mycogen 5N452R2	RR2	4.5	Progeny P 4850 RYS	RR2/STS	4.8	Seedway SG 4513	RR2	4.5
Mycogen 5N478R2	RR2/STS	4.7	Progeny P 4900 RY	RR2	4.9	Seedway SG 4713	RR2/STS	4.7
Mycogen 5N540R2	R2	5.4	Progeny P 4928 LL	LL	4.9	UA 5213C	CONV	5.2
Mycogen 5N550R2	R2	5.5	Progeny P 4930 LL	LL	4.9	UA 5612	CONV	5.6
Mycogen X54522NR2	R2	5.2	Progeny P 5220 LLS	LL/STS	5.2	USG 74B83R	RR2/STS	4.8
NK S40-N2 Brand	RR2	4.0	Progeny P 5333 RY	RR2	5.3	USG 75G24L	LL	5.2
NK S41-J6 Brand	RR2	4.1	Progeny P 5460 LL	LL	5.4	USG 75Q42R	RR2	5.4
NK S43-K1 Brand	RR2	4.3	Progeny P 5610 RY	RR2	5.6	Willcross WX 2524N	RR2	5.2
NK S45-V8 Brand	RR2	4.5	R04-1250RR	RR	5.5	Willcross WX 2534N	RR2	5.2
NK S46-L2 Brand	RR2	4.6	R04-1268RR	RR	5.4	Willcross WX2454N	RR2	4.5
NK S49-F8 Brand	RR1	4.9	R05-374	CONV	5.1	Willcross WX2495N	RR2	4.9
NK S51-C5 Brand	RR2	5.1	R07-6614RR	RR	5.8			

Soybean Varieties that Tested with Moderate Injury to Metribuzin (4-6)								
Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group
Armor 46-R65	RR2	4.6	Delta Grow DG5367LL	LL	5.3	MorSoy Extra 46X04	RR2	4.6
Armor 50-R44	RR2	5.0	Dulaney Seed AvDx-D714	RR	4.7	Mycogen 5N479R2	RR2/STS	4.8
Armor 53-R16	RR2	5.3	Dyna-Gro S43RY95	RR2	4.3	Mycogen X54480NR2	RR2/STS	4.7
Armor AX4450	RR2	4.5	Dyna-Gro S48RS53	RR2/STS	4.8	Mycogen X54490NR2	RR2	4.9
Armor AX4460	RR2	4.6	Eagle Seed ES4960RY	RR2	4.9	Pioneer P47T36R	RR1	4.7
Armor AX4471	RR2	4.7	Eagle Seed ES4998RY	RR!	4.9	Pioneer P54T94R	RR1	5.4
Armor AX4500	RR2	5.0	Eagle Seed ES5225RY	RR2	5.2	Progeny P 4560 LL	LL	4.5
Armor X48C	CONV/STS	4.8	Eagle Seed ES5335RY	RR2	5.3	Progeny P 4613 RYS	RR2/STS	4.6
Asgrow AG4835 GENRR2Y/SR	RR2/SR	4.8	Eagle Seed ES5507RY	RR1	5.5	Progeny P 4620 LLS	LL/STS	4.6
Asgrow AG4934 GENRR2Y/SR	RR2/SR	4.9	HALO 4:40	LL	4.4	R10-453RY	RR	5.6
Bayer CropScience BX 4748 LL	LL	4.7	HALO X440	LL	4.0	REV@ 47R34™	RR1	4.7
Croplan R2C4752S	RR2	4.7	HBK RY4721	RR2/STS	4.7	REV@ 49L29™	LL	4.9
Croplan R2C5103	RR2	5.1	LG Seeds C4696R2	RR2	4.6	USG 74F24RS	RR2/STS	4.2
Davis 4146RR2YS	RR2 STS	4.6	LG Seeds C4919R2	RR2	4.9	USG 74F53R	RR2/STS	4.5
Delta Grow DG4765GENRR2Y/STS	RR2/STS	4.7	LG Seeds C5122R2	RR2	5.1	USG 75J23R	RR2	5.2
Delta Grow DG4925GENRR2Y	RR2	4.9	LG Seeds C5252R2	RR2	5.2	Willcross WX2464NS	RR2/STS	4.6
Delta Grow DG4967LL	LL	4.9	MorSoy Extra 44X82	RR2	4.4			

Soybean Varieties that Tested with Severs Injury to Metribuzin (7-9)								
Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group
Armor 43-R43	RR2	4.3	Delta Grow DG4685GENRR2Y	RR2	4.6	HBK LL4650	LL	4.6
Armor AX4440	RR2	4.4	Delta Grow DG5267LL	LL	5.2	NK S47-K5 Brand	RR2	4.7
Armor AX4470	RR2	4.7	Delta Grow DG5475GENRR2Y	RR2	5.4	OSAGE	CONV	5.6
Asgrow AG4135 GENRR2Y/SR	RR2/SR	4.1	Dyna-Gro S49RY25	RR2	4.9	Progeny P 5213 RY	RR2	5.2
Asgrow AG4232 GENRR2Y/SR	RR2/SR	4.2	HALO 4:76	LL	4.7			
Bayer CropScience BX 4959 RY	R2	4.9	HALO X452	LL	5.2			

Soybean Varieties that Ended in Death to Metribuzin (10)								
Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group	Variety	Herbicide Technology	Mat. Group
Armor AX4430	RR2	4.0	HALO 5:45	LL	5.4	Progeny P 5160 LL	LL	5.1
HALO 5:25	LL	5.2	MPG 5314NRR	RR1	5.3	Progeny P 5960 LL	LL	5.9

JEREMY ROSS, Associate Professor/Extension Agronomist – Soybean, University of Arkansas Division of Agriculture
JASON NORSWORTHY, Professor, University of Arkansas Division of Agriculture
BOB SCOTT, Professor, University of Arkansas Division of Agriculture
TOM BARBER, Associate Professor, University of Arkansas Division of Agriculture