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Soybean Response to Metribuzin

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Increased reliance on PPO-inhibiting herbicides in recent years has led to concerns about overuse of this mode of action and highlighted the need for alternative modes of action for Palmer amaranth control in soybeans. Metribuzin is a PSII inhibitor with residual activity on Palmer amaranth. Metribuzin alone or in premix products provides an option, however varietal sensitivity and soil type restrictions require homework prior to application. A study was conducted in 2012 to screen all soybean varieties entered in North Carolina State University's OVT. The results show several varieties are tolerant to metribuzin, some are extremely sensitive, and many have varying responses to metribuzin. Select varieties which are tolerant to metribuzin where possible. Varieties listed under use caution showed injury symptoms in our study and should be used at the growers risk.

Utilize this list as a guideline, keeping in mind factors such as soil type, organic matter, herbicide rate, and environmental factors can also impact sensitivity. Cultural practices such as planting depth and irrigation can also impact sensitivity. Heavy rainfall or irrigation when the soybean is emerging to second trifoliate can lead to increased injury and may result in plant death. Increasing planting depth to 2 inches or greater can help reduce injury. Sensitive varieties should never be used where metribuzin use is planned.

Soybean Varieties Tolerant to Metribuzin					
Group 4 (Roundup Ready)	**Group 5 Early (Roundup Ready)**	**Group 5 Late (Roundup Ready)**	**Group 5 Early (Conventional)**	**Group 5 Late (Conventional)**	**Group 6 (Conventional)**
Dyna-grow DG37RY47	HBKR5425	USG USG75J90R	NCC07-77	NCC06-21	R03-1250
Progeny 4747RY	HBKRY522		Glenn		
USG74A79	Terral Seed REV51R53		JTN-4307		
	USG75U52		NCC07-75		
	USG7553nRS				

Conventional or Liberty Link (LL) Soybean Varieties - Use Caution with Metribuzin				
Group 4	**Group 5 Early**	**Group 5 Late**	**Group 6**	**Group 7 & 8**
AG4730	AGS553LL	Dare	AGS6011L	AGS Woodruff
AG4831	Fowler	Fowler	N05-7353	N05-316
NCC05-11	Go Soy 5010LL	Jake	N05-7375	N05-7396
NCC05-12	Go Soy 5410LL	N08-174	N06-06	N05-7432
NCC06-14	Hutcheson	NCC06-57	N06-7023	N05-7452
NCC06-33	Jake	NC Miller	N07-187	N05-7462
Progeny 4819LL	JTN-5203	Stine 58LC23	N08-145	N06-7564
Progeny 4928LL	JTN-5303	UA5612	NCC04-61	N08-521
SH4913LL	JTN-5503	USG75G90L	NCC05-15	N7002
Stine 45LD02	N02-7002		NCC06-10	N7003CN
USG74G82L	NCC05-45		NCC06-13	N8001
	Ozark		NCC07-81	NCC06-89
	Progeny 5460LL		R02-3065	NCC06-92
	S08-X173		Tracy	Ransom
	SH5212LL			
	Stine 53LD80			

Roundup Ready Soybean Varieties - Use Caution with Metribuzin				
Group 4	**Group 5 Early**	**Group 5 Late**	**Group 6**	**Group 7 & 8**
Armor DK4744RR2/STS	Armor AR53-15RR2	AGS568RR	AG6132	AGS787RR
AG4730	Armor AR55-R22RR2	AGS597RR	AG6732	AG7231
AG4933	AG5233	Armor AR56-R22RR2	AG6931	AG7333
Dyna-Grow DGS48RS5	AG5533	AG5632	Dyna-grow DG36RY68	AG7733
HBK HBKRY4620	Dyna-grow DG32RY55	AG5732	Dyna-grow DGV61N9RR	Dyna-grow DG34RY75
HBK HBKRY4721	Dyna-grow DG35RY51	AG5831	Pioneer 96M60	Dyna-grow DGV76N9RR
Pioneer 94Y70	Dyna-grow DGS54RY43	Dyna-grow DG39RY57	P6710RY	HBK HBKR7028
Pioneer 94Y81	HBK HBKRY5425	Pioneer 95M82	S67-R6	HBK HBKR7200
Pioneer 94Y90	HBK HBKRY5525	Pioneer 95Y71	South. States SS6810NR	Pioneer 97M50
P4211RY	NCC07-11	P5610RY	Stine 6202-4	P7310RY
P4510RY	Pioneer 95Y40	P5655RY	USG620nR	S74-M3
P4611RY	Pioneer 95Y50	P5711RY	USG76S90R	S77-T7
P4710RY	P5111RY	P5811RY		S78-G6
P4814RY	P5210RY	R09-1607		S79-B9
P4850RY	P5412RY	Terral Seed REV56R21		SC03-062
P4900RY	R04-1268	Terral Seed REV56R63		SC04-306
P4920RY	Terral Seed REV54R84	Terral Seed REV57R21		SC04-375
RPMDB451	Terral Seed REV55R53	Terral Seed REV59R13		South. States SS7511NR
S08-X141	Terral Seed REV55R83	RPMDB571RR		USG7732nRR
S08-X249	S08-X639	S56-G6		USG77S40R
S46-T3	S08-X727	S57-K3		
S48-P4	S51-H9	South. States SS5711NR		
S49-F8	Schillinger 5220.RC	USG75J62		
Schillinger 478.RCS	Schillinger 557.RC	USG75J90R		
Schillinger 4990.RC	South. States SS5112NR2	USG75Z98		
SS4971NR	South. States SS5312NR2			
Stine 48RD00	South. States SS5510NR2			
Terral Seed REV47R53	South. States SS5511NR2			
Terral Seed REV47R74	Stine 51RD02			
Terral Seed REV48R33	USG7553NRS			
Terral Seed REV49R11	USG75J50R			
Terral Seed REV49R22	USG75Q42R			
Terral Seed REV49R43	USG75Q52R			
Terral Seed REV49R54	USG75Z38			

Soybean Varieties Sensitive to Metribuzin (NEVER USE)				
Group 5 Late (Roundup Ready)	**Group 6 (Roundup Ready)**	**Group 5 Early (Conventional or LL)**	**Group 5 Late (Conventional or LL)**	**Group 6 (Conventional)**
S56-W5	Dyna-grow DGSX1286	Osage	AGS5911L	Arksoy
South. States SS5911NR2	USG76S22	Progeny 5160RYLL	Go Soy 5911LL	
		SH5512LL	Progeny 5960LL	
		South. States LL511N	SH5912LL	
			South. States SSLL595N	

*Studies were conducted under field conditions where 1.5" of rainfall occurred at or within 4 days of soybean emergence, resulting in optimal injury conditions.