WHEAT VARIETY RESPONSE TO METRIBUZIN 2015

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Metribuzin 75DF 8 oz/A

Non-Treated Check

Photo 11-25-2014 (15 days After Treatment)

Metribuzin has the potential to manage some key herbicide resistant weeds in wheat, yet there is a risk it may cause crop injury in the form of stunted plants with chlorotic and necrotic older leaves (see above figure). Several factors can influence crop injury including differential tolerance in wheat varieties. While company labels attempt to list wheat varieties that are tolerant or susceptible to metribuzin; these lists become outdated due to the rapid improvement and turnover of wheat genetics.

This field project was initiated to evaluate the tolerance of 111 wheat varieties to metribuzin.

METHODS AND MATERIALS

Wheat was planted with a no-till cone planter October 8, 2014. Metribuzin 75FDF was applied November 10 at labeled rates of 3 oz/A or 8 oz/A (2.25 and 6 oz ai/A, respectively) using a CO_2 back pack sprayer. Both rates were applied in 6.67 ft wide swaths perpendicular to planted wheat in each variety. Wheat averaged 4.7" tall and ranged 3 to 6 inches in height. Wheat growth stage was 3 leaf to one tiller.

Visual ratings of percent chlorosis and necrosis were recorded November 25. Ratings were grouped into three categories: Little to No Injury, Slight Injury, and Significant Injury. We did not have the resources to carry this project out as a replicated research trial. Data are based on only one observation for each variety and herbicide treatment. **Use Caution in making conclusions from these data.**

SUMMARY COMMENTS

- Eighty four wheat varieties had little to no injury when metribuzin was applied at the low rate of 3 oz/A, compared with 27 varieties that had slight injury (See Table 1).
- No variety had significant injury when treated with metribuzin at 3 oz/A.
- The majority of varieties (i.e. 88 varieties) had slight injury when treated with the high rate of 8 oz/A (See Table 2).
- Sixteen varieties had little to no injury when treated with metribuzin at 8 oz/A.
- When metribuzin was applied at the high rate of 8 oz/A, seven wheat varieties had significant injury.

WHEAT VARIETY RESPONSE TO METRIBUZIN AT 3 oz/A (2014-2015)

(Non-replicated -- One Observation per Variety)

AgExp02444	BECK 125	Dyna-Gro 9591	KY05C-1051-37-18-5	PROGENY P 117	STEYER STex142
AgExp0762	BECK EX 5307	Dyna-Gro WX14611	KY05C-1369-14-6-3	PROGENY P 357	STEYER STex145
AgriMAXX 413	BECK EX 5315	Dyna-Gro WX15712	KY06C-1003-139-16-5	PROGENY P 410	SYNGENTA SY 007
AgriMAXX 415	BECK EX 5401	Dyna-Gro WX15742	KY06C-1201-18-6-3	PROGENY P 870	SYNGENTA SY 474
AgriMAXX 438	Brodbeck 202	Equity Brand Butler	KY06C-3058-53-3-3	PROGENY PGX 13-6	SYNGENTA SY 483
AgriMAXX 444	Brodbeck 305	Equity Brand Guardian	L-Brand 264	PROGENY PGX 14-3	SYNGENTA SY 547
AgriMAXX 446	Clark	KAS 5058	L-Brand 304	PROGENY PGX 14-5	Terral TV8848
AgriMAXX 447	Delta Grow 2700	KAS Liberty IV	L-Brand 347	SC 1315-15TM	Terral TV8861
AgriMAXX EXP 1555	Delta Grow 3200	KAS Lowery	L-Brand 377	SC 1321TM	Truman
ARMOR ARX 1325	Delta Grow 7500	KAS S1200	L-Brand 461	SC 1325-15TM	USG 3013
ARMOR ARX 1327	Delta Grow 9700	KAS S2000	PEMBROKE 2008	SC 1335-15TM	USG 3404
ARMOR ARX 1412	Dixie DXEX 13-3	KWS023	PEMBROKE 2014	SC 1342TM	USG 3438
ARMOR ARX 1413	Dixie DXEX 15-1	KWS026	Pioneer variety 25R32	SS 8340	USG 3756
ARMOR ARX 1418	Dixie Extreme	KWS028	Pioneer variety 25R40	SS 8360	VA 10W-21
ARMOR ARX 1433	Dixie Kelsey	KY03C-1002-02	Pioneer variety 26R10	SS 8415	VA11W-108
ARMOR ARX 1441	Dixie McAlister	KY03C-1237-05	Pioneer variety 26R41	SS 8700	VA11W-230
ARMOR HAVOC	Dyna-Gro 9171	KY03C-1237-10	Pioneer variety 26R53	SS EXP 8513	
ARMOR OCTANE	Dyna-Gro 9223	KY03C-1237-12	Pioneer variety XW13T	SS EXP 8530	
BECK 120	Dyna-Gro 9522	KY04C-2004-1-1-1	Pioneer variety XW13W	STEYER MORRIN	

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Little to No Injury

Slight Injury

WHEAT VARIETY RESPONSE TO METRIBUZIN AT 8 oz/A (2014-2015)

(Non-replicated -- One Observation per Variety)

AgExp02444	BECK 125	Dyna-Gro 9591	KY05C-1051-37-18-5	PROGENY P 117	STEYER STex142
AgExp0762	BECK EX 5307	Dyna-Gro WX14611	KY05C-1369-14-6-3	PROGENY P 357	STEYER STex145
AgriMAXX 413	BECK EX 5315	Dyna-Gro WX15712	KY06C-1003-139-16-5	**PROGENY P 410**	SYNGENTA SY 007
AgriMAXX 415	BECK EX 5401	**Dyna-Gro WX15742**	KY06C-1201-18-6-3	PROGENY P 870	SYNGENTA SY 474
AgriMAXX 438	Brodbeck 202	Equity Brand Butler	KY06C-3058-53-3-3	PROGENY PGX 13-6	SYNGENTA SY 483
AgriMAXX 444	Brodbeck 305	Equity Brand Guardian	L-Brand 264	PROGENY PGX 14-3	SYNGENTA SY 547
AgriMAXX 446	Clark	KAS 5058	L-Brand 304	PROGENY PGX 14-5	Terral TV8848
AgriMAXX 447	Delta Grow 2700	KAS Liberty IV	L-Brand 347	SC 1315-15TM	Terral TV8861
AgriMAXX EXP 1555	Delta Grow 3200	KAS Lowery	L-Brand 377	SC 1321TM	Truman
ARMOR ARX 1325	Delta Grow 7500	KAS S1200	L-Brand 461	SC 1325-15TM	USG 3013
ARMOR ARX 1327	Delta Grow 9700	KAS S2000	PEMBROKE 2008	SC 1335-15TM	USG 3404
ARMOR ARX 1412	Dixie DXEX 13-3	KWS023	PEMBROKE 2014	SC 1342TM	USG 3438
ARMOR ARX 1413	Dixie DXEX 15-1	KWS026	Pioneer variety 25R32	SS 8340	USG 3756
ARMOR ARX 1418	Dixie Extreme	**KWS028**	Pioneer variety 25R40	SS 8360	VA 10W-21
ARMOR ARX 1433	Dixie Kelsey	KY03C-1002-02	Pioneer variety 26R10	**SS 8415**	VA11W-108
ARMOR ARX 1441	Dixie McAlister	KY03C-1237-05	Pioneer variety 26R41	SS 8700	**VA11W-230**
ARMOR HAVOC	Dyna-Gro 9171	KY03C-1237-10	Pioneer variety 26R53	**SS EXP 8513**	
ARMOR OCTANE	Dyna-Gro 9223	KY03C-1237-12	Pioneer variety XW13T	SS EXP 8530	
BECK 120	Dyna-Gro 9522	KY04C-2004-1-1-1	Pioneer variety XW13W	STEYER MORRIN	

Little to No Injury

Slight Injury

Significant Injury