

RYEGRASS AND HENBIT CONTROL USING FALL AND SPRING APPLICATIONS OF POWERFLEX HL, HARMONY EXTRA, OLYMPUS FLEX, FINESSE, AND AXIAL XL

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INTRODUCTION

It is generally believed that fall is the preferred time to spray ALS-inhibitor herbicides for controlling weedy grasses and broadleaf weeds. In order to confirm the importance of application timing, research was conducted to compare fall and spring applications of certain ALS-inhibitor herbicides such as PowerFlex, Olympus Flex, and Finesse on henbit and ryegrass control. Harmony Extra was included because of its ability to control henbit and not ryegrass; whereas, Axial XL was included because of its activity on ryegrass and not henbit.

METHODS

Plots were disked and seeded with Italian ryegrass on October 14, 2011. Wheat was then planted using conventional tillage practices. Fall treatments were applied November 23, 2011 when wheat was 4.5 inches tall and had one tiller. Ryegrass averaged 1 tiller, 4 inches tall. Henbit averaged approximately 1 inch in diameter. Spring treatments were applied March 1, 2012 when wheat had 3 to 4 tillers and 4.5 inches tall. Ryegrass averaged 5 tillers that were 4 inches tall and henbit was 2 inches in diameter.

Visual ratings were made several times including 2 and 4 weeks after application. In addition to the 2- and 4- week ratings, an evaluation was made at greenup on March 13, 2012 to determine henbit control after going through the winter following the fall treatments. Also, ryegrass control ratings and number of seedheads were determined in late

May. Wheat was harvested with a plot combine June 6, 2012 and yields were adjusted to 13.5%.

RESULTS

Henbit control with fall applications of all ALS inhibitors, including Harmony Extra, was slow relative to the spring applications. Control of henbit at 4 weeks after treatment with fall applications was 63 to 67%, compared with 70 to 100% for spring treatments.

As expected, Harmony Extra provided maximum control of henbit for both the fall and spring treatments. PowerFlex applied in the fall provided up to 83% henbit control at greenup compared to 73% at 4 WAT for the spring treatment. However the maximum level of henbit control with Finesse applied in the fall was 70% compared with 100% when it was applied in the spring. The maximum level of henbit control achieved with Olympus Flex was 63% with the fall treatment, relative to 70% for the spring treatment.

Ryegrass control with PowerFlex, Olympus Flex, and Axial XL ranged from 99 to 100% when applied in the fall and 95 to 99% when applied in the spring. While ryegrass control with these three herbicides was good for both the fall and spring applications; the wheat yield averaged nearly 11 bu/A better for the fall treatments than the spring treatments. Finesse applied in the fall provided 70% ryegrass control; whereas, the spring application of Finesse provided only 30% ryegrass control.

SUMMARY

It is not clear why henbit control was sometimes better with the spring timing than with the fall timing. Ryegrass control with PowerFlex, Olympus Flex, and Axial XL was good regardless of application timing; yet, wheat yields were greater if ryegrass was controlled in the fall rather than delaying the application until spring.

RYEGRASS AND HENBIT CONTROL USING FALL AND SPRING APPLICATIONS OF POWERFLEX HL, HARMONY EXTRA, OLYMPUS FLEX, FINESSE, AND AXIAL XL (UKREC 2011-2012)									
CHEMICALS ¹ (RATE)	Timing ²	HENBIT			RYEGRASS				WHEAT
		% CONTROL			% CONTROL			(Heads/Ft ²)	YIELD
		2 WAT	4 WAT	Greenup	2 WAT	4 WAT	MATURITY (5/24/12)	(5/22/12)	(BU/A)
PowerFlex HL	FALL	13	63	83	17	67	100	0.2	124.6
Harmony Extra		13	67	90	0	10	0	40.2	53.6
Olympus Flex (3 oz/A)		13	63	63	17	67	99	1.5	131.4
Finesse (0.4 oz/A)		20	63	70	10	63	70	12.3	104.7
Axial XL (16.4 oz/A)		0	0	0	20	80	99	1.2	109
PowerFlex HL	SPRING	50	73	-	50	77	95	0.8	106.7
Harmony Extra		60	100	-	3	0	0	45.2	50.2
Olympus Flex (3 oz/A)		50	70	-	53	77	99	0.5	109.9
Finesse (0.4 oz/A)		57	100	-	43	30	30	48.2	57.9
Axial XL (16.4 oz/A)		0	0	-	77	98	95	1.8	116.2
Check		0	0	0	0	0	0	54.3	31.6
LSD (0.05)		8.6	6.6	10	9	7	3	14.9	23.4

¹ Axial: (pinoxaden)

Finesse: (chlorsulfuron [Glean] + metsulfuron [Ally])

Harmony Extra: (thifensulfuron + tribenuron)

Olympus Flex: (mesosulfuron [Osprey] + propoxycarbazone [Olympus])

PowerFlex: (pyroxulam)

Axial: (pinoxaden)

² Application Timing:

- Fall: 11-23-11 Wheat 1 tiller 4" tall. Ryegrass 3 lf to 2 tiller average 1 tiller, 4" tall.

- Spring: 3-1-12. Wheat 3-4 tiller 4.5" tall. Ryegrass 3-10 tillers average 5 tillers, 4" tall.

- Axial XL was applied in 10 GPA volume. All other treatments were applied in 20 GPA volume.
- Planted Pioneer 25 R32 at 37 viable seed/ft² on 11-10-11