

Corn Herbicide Showcase: No Atrazine Arlington, WI 2023

Trial Information

Trial Sponsor(s): BASF, Corteva, FMC, Syngenta, UPL

Objective: Evaluate multiple 1- and 2-pass corn herbicide programs without atrazine for weed control and crop safety

Crop: Corn

Hybrid: P9998Q

Weed species (pressure): common ragweed (high)
common lambsquarters (moderate)
giant foxtail (high-very high)
woolly cupgrass (high-very high)

Herbicide Application(s): PRE – 4/28
EPOST – 5/30 (V2/V3 corn)
POST – 6/6 (V4 corn)

For the full report see trial #23-ARL-CN03 in the [2023 Wisconsin Weed Science Research Report](#)



Corn Herbicide Showcase: No Atrazine (Arlington, WI 2023)

Trt #	Herbicide (rate acre ⁻¹)	Common Ragweed (%)					Lambsquarters			Yield ^b
		5/19	6/6	6/19	7/6	10/19	6/6	6/19	10/19	
1	Untreated Check	0	0	0	0	0	0	0	0	7 c
One-Pass – PRE (4/28)										
2	Resicore XL (2.8 qt)	99	100	97	95	94	100	100	100	180 a
3	Acuron Flexi (2.25 qt) + Princep 4L (1 qt)	99	98	97	91	88	100	100	100	140 b
One-Pass – EPOST (5/30)										
4	Resicore XL (2 qt) + Roundup PM3 (32 fl oz) + 1% v/v COC + 2.5% v/v AMS	0	93	96	98	92	90	100	100	191 a
5	Anthem Maxx (4 oz) + Callisto (3 oz) + Roundup PM3 (30 oz) + 0.25% v/v NIS + 2.5% v/v AMS	0	98	95	90	60	99	100	100	170 ab
Two-Pass – PRE (4/28) fb POST (6/6)										
6	Surpass NXT (2 pt) fb Kyro (45 fl oz) + Roundup PM3 (32 fl oz) + 1% v/v COC + 2.5% v/v AMS	96	83	97	100	100	100	100	100	194 a
7	Surpass NXT (2 pt) fb Kyro (45 fl oz) + Accent Q (0.9 oz) + 1% v/v COC + 2.5% v/v AMS	94	79	85	99	100	100	100	100	166 ab
8	Verdict (16 fl oz) fb Roundup PM3 (15 fl oz) + Status (5 oz) + Zidua SC (2.5 fl oz) + 1% v/v COC + 2.5% v/v AMS	99	98	100	100	99	100	100	100	201 a
9	Anthem Maxx (4 fl oz) + Callisto (4 fl oz) fb Roundup PM3 (30 oz) + Status (5 oz) + 0.25% v/v NIS + 2.5% v/v AMS	91	85	98	100	100	100	100	100	188 a
10	Calibra (1.4 qt) + Princep 4L (1 qt) fb Acuron GT (3.75 pt) + 0.25% v/v NIS + 2.5% v/v AMS	97	91	97	99	99	100	100	100	199 a
11	Intrava DX (21 fl oz) fb Intermoc (64 fl oz) + AMS (3 lb)	94	90	100	100	97	100	100	100	186 a
12	Intrava DX (21 fl oz) + Moccasin II Plus (1.33 pt) fb Intermoc (64 fl oz) + AMS (3 lb)	97	92	100	100	100	100	100	100	203 a
LSD ($\alpha=0.10$)		4	5	3	4	8	1	ns	ns	28
p value		0.013	<.001	<.001	<.001	<.001	<.001	0.465	1.00	<.001

^aVisual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

^bYield values with the same letter are not significantly different.

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Trt #	Herbicide (rate acre ⁻¹)	Wolly Cupgrass ^c (%)					Giant Foxtail (%)			Yield ^b bu acre ⁻¹
		5/19	6/6	6/19	7/6	10/19	6/6	6/19	7/6	
1	Untreated Check	0	0	0	0	0	0	0	0	7 c
One-Pass – PRE (4/28)										
2	Resicore XL (2.8 qt)	99	96	90	81	66	99	94	86	180 a
3	Acuron Flexi (2.25 qt) + Princep 4L (1 qt)	95	86	77	68	56	98	94	84	140 b
One-Pass – EPOST (5/30)										
EPOST										
4	Resicore XL (2 qt) + Roundup PM3 (32 fl oz) + 1% v/v COC + 2.5% v/v AMS	0	97	100	99	87	97	100	99	191 a
5	Anthem Maxx (4 oz) + Callisto (3 oz) + Roundup PM3 (30 oz) + 0.25% v/v NIS + 2.5% v/v AMS	0	98	100	99	97	98	100	100	170 ab
Two-Pass – PRE (4/28) fb POST (6/6)										
POST										
6	Surpass NXT (2 pt) fb Kyro (45 fl oz) + Roundup PM3 (32 fl oz) + 1% v/v COC + 2.5% v/v AMS	99	93	100	100	98	99	100	100	194 a
7	Surpass NXT (2 pt) fb Kyro (45 fl oz) + Accent Q (0.9 oz) + 1% v/v COC + 2.5% v/v AMS	98	88	84	82	69	99	95	96	166 ab
8	Verdict (16 fl oz) fb Roundup PM3 (15 fl oz) + Status (5 oz) + Zidua SC (2.5 fl oz) + 1% v/v COC + 2.5% v/v AMS	96	85	100	98	93	98	100	99	201 a
9	Anthem Maxx (4 fl oz) + Callisto (4 fl oz) fb Roundup PM3 (30 oz) + Status (5 oz) + 0.25% v/v NIS + 2.5% v/v AMS	87	67	100	99	94	88	100	100	188 a
10	Calibra (1.4 qt) + Princep 4L (1 qt) fb Acuron GT (3.75 pt) + 0.25% v/v NIS + 2.5% v/v AMS	93	75	100	99	96	96	100	100	199 a
11	Intrava DX (21 fl oz) fb Intermoc (64 fl oz) + AMS (3 lb)	82	61	100	97	86	90	99	97	186 a
12	Intrava DX (21 fl oz) + Moccasin II Plus (1.33 pt) fb Intermoc (64 fl oz) + AMS (3 lb)	96	87	100	99	94	98	100	99	203 a
LSD ($\alpha=0.10$)		3	9	6	7	8	3	2	3	28
p value		<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

^aVisual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

^bYield values with the same letter are not significantly different.

^c5/19 and 10/19 ratings were a combination of woolly cupgrass, giant foxtail, and other minor grass species present in the trial.

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Plot pictures taken on 5/19
21 days after the PRE application

The number in the upper right-hand corner is the
average % annual grass control of 4 replications

21 days after PRE (5/19)
Untreated Check

0%



21 days after PRE (5/19)
PRE: 2.8 qt Resicore XL

99%



21 days after PRE (5/19)

PRE: 2.25 qt Acuron Flexi + 1 qt Princep 4L

95%



21 days after PRE (5/19)
PRE: 2 pt Surpass NXT

99%



21 days after PRE (5/19)
PRE: 16 oz Verdict

96%



21 days after PRE (5/19)

PRE: 4 oz Anthem Maxx + 4 oz Callisto

87%



21 days after PRE (5/19)

93%

PRE: 1.4 qt Calibra + 1 qt Princep 4L



21 days after PRE (5/19)

PRE: 21 oz Intrava DX

82%



21 days after PRE (5/19)

PRE: 21 oz Intrava DX + 1.33 pt Moccasin II Plus

96%



Corn Herbicide Showcase: No Atrazine Arlington, WI 2023

Plot pictures taken on 6/6

39 days after the PRE application
7 days after the EPOST application
The day of the POST application

The number in the upper right-hand corner is the average % woolly cupgrass control of 4 replications

39 days after PRE (6/6)
Untreated Check

0%



39 days after PRE (6/6)
PRE: 2.8 qt Resicore XL

96%



39 days after PRE (6/6)

PRE: 2.25 qt Acuron Flexi + 1 qt Princep 4L

86%



7 days after EPOST (6/6)

EPOST: 2 qt Resicore XL + 32 oz Roundup PM3 + COC + AMS

97%



7 days after EPOST (6/6)

EPOST: 4 oz Anthem Maxx + 3 oz Callisto + 30 oz Roundup PM3 + NIS + AMS

98%



39 days after PRE (6/6)
PRE: 2 pt Surpass NXT

91%



39 days after PRE (6/6)
PRE: 16 oz Verdict

85%



39 days after PRE (6/6)

PRE: 4 oz Anthem Maxx + 4 oz Callisto

67%



39 days after PRE (6/6)

PRE: 1.4 qt Calibra + 1 qt Princep 4L

75%



39 days after PRE (6/6)
PRE: 21 oz Intrava DX

61%



39 days after PRE (6/6)

PRE: 21 oz Intrava DX + 1.33 pt Moccasin II Plus

87%



Corn Herbicide Showcase: No Atrazine Arlington, WI 2023

Plot pictures taken on 6/19

52 days after the PRE application

20 days after the EPOST application

13 days after the POST application

The number in the upper right-hand corner is the average % woolly cupgrass control of 4 replications

52 days after PRE (6/19)
Untreated Check

0%



52 days after PRE (6/19)
PRE: 2.8 qt Resicore XL

90%



52 days after PRE (6/19)

PRE: 2.25 qt Acuron Flexi + 1 qt Princep 4L

77%



20 days after EPOST (6/19)

EPOST: 2 qt Resicore XL + 32 oz Roundup PM3 + COC + AMS

100%



20 days after EPOST (6/19)

EPOST: 4 oz Anthem Maxx + 3 oz Callisto + 30 oz Roundup PM3 + NIS + AMS ^{100%}



13 days after POST (6/19)

PRE: 2 pt Surpass NXT *fb*

100%

POST: 45 oz Kyro + 32 oz Roundup PM3 + COC + AMS



13 days after POST (6/19)

PRE: 2 pt Surpass NXT *fb*

POST: 45 oz Kyro + 0.9 oz Accent Q + COC + AMS

84%



13 days after POST (6/19)

PRE: 16 oz Verdict *fb*

100%

POST: 15 oz Roundup PM3 + 5 oz Status + 2.5 oz Zidua SC + COC + AMS



13 days after POST (6/19)

PRE: 4 oz Anthem Maxx + 4 oz Callisto *fb*

100%

POST: 30 oz Roundup PM3 + 5 oz Status + COC + AMS



13 days after POST (6/19)

PRE: 1.4 qt Calibra + 1 qt Princep 4L *fb*

POST: 3.75 Acuron GT + NIS + AMS

100%



13 days after POST (6/19)
PRE: 21 oz Intrava DX fb
POST: 64 oz Intermoc + AMS

100%



13 days after POST (6/19)

PRE: 21 oz Intrava DX + 1.33 pt Moccasin II Plus *fb*

100%

POST: 64 oz Intermoc + AMS



Corn Herbicide Showcase: No Atrazine Arlington, WI 2023

Plot pictures taken on 7/6

69 days after the PRE application

37 days after the EPOST application

30 days after the POST application

The number in the upper right-hand corner is the average % woolly cupgrass control of 4 replications

69 days after PRE (7/6)
Untreated Check

0%



69 days after PRE (7/6)
PRE: 2.8 qt Resicore XL

81%



69 days after PRE (7/6)

PRE: 2.25 qt Acuron Flexi + 1 qt Princep 4L

68%



37 days after EPOST (7/6)

EPOST: 2 qt Resicore XL + 32 oz Roundup PM3 + COC + AMS

99%



37 days after EPOST (7/6)

EPOST: 4 oz Anthem Maxx + 3 oz Callisto + 30 oz Roundup PM3 + NIS + AMS

99%



30 days after POST (7/6)

PRE: 2 pt Surpass NXT fb

100%

POST: 45 oz Kyro + 32 oz Roundup PM3 + COC + AMS



30 days after POST (7/6)

PRE: 2 pt Surpass NXT fb

POST: 45 oz Kyro + 0.9 oz Accent Q + COC + AMS

82%



30 days after POST (7/6)

PRE: 16 oz Verdict *fb*

98%

POST: 15 oz Roundup PM3 + 5 oz Status + 2.5 oz Zidua SC + COC + AMS



30 days after POST (7/6)

PRE: 4 oz Anthem Maxx + 4 oz Callisto *fb*

99%

POST: 30 oz Roundup PM3 + 5 oz Status + COC + AMS



30 days after POST (7/6)

PRE: 1.4 qt Calibra + 1 qt Princep 4L *fb*

99%

POST: 3.75 Acuron GT + NIS + AMS



30 days after POST (7/6)
PRE: 21 oz Intrava DX fb
POST: 64 oz Intermoc + AMS

97%



30 days after POST (7/6)

PRE: 21 oz Intrava DX + 1.33 pt Moccasin II Plus *fb*

99%

POST: 64 oz Intermoc + AMS

