Corn Preplant Burndown Programs w/Tough 5EC
Arlington, WI 2025

Trial Information

Trial Sponsor(s):	Belchim USA
Objective:	Evaluate burndown weed control of corn herbicide programs with **Tough 5EC***
Crop:	Corn
Hybrid:	G97B68-DV-EZ1
Weed species (pressure):	common lambsquarters (high) marestail (moderate) purslane speedwell (moderate-high) dandelion (low)
Herbicide Application(s):	Preplant – 5/13 POST - 6/17 (~V5 corn)

***Tough 5EC** (pyridate), a group 6 herbicide, can be used as an alternative to atrazine for synergistic weed control with group 27 (HPPD) herbicides like Callisto (mesotrione).

For the full report see trial #25-ARL-CN18 in the 2025 Wisconsin Weed Science Research Report

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Trt #	Herbicide (rate acre^{-1})	Marestail (%)			Dandelion (%)			Lambsquarters (%)			P. Speedwell (%)			Yield[b] bu acre^{-1}
		9 DAT	16 DAT	21 DAT	9 DAT	16 DAT	21 DAT	9 DAT	16 DAT	21 DAT	9 DAT	16 DAT	21 DAT	
1	Untreated Check	0	0	0	0	0	0	0	0	0	0	0	0	78 b
Two-Pass – Preplant (5/13) *fb* POST (6/17)														
2	Tough (8 oz) + Roundup PM3 (25 oz) + Dual II Magnum (1.5 pt) + COC (1%) + AMS[c]	57	72	67	21	81	88	92	99	96	3	99	100	240 a
3	Tough (8 oz) + Callisto (4.5 oz) + Dual II Magnum (1.5 pt) + COC (1%) + AMS[c]	72	95	99	34	90	96	92	100	100	3	72	91	232 a
4	Tough (8 oz) + Roundup PM3 (25 oz) + Callisto (4.5 oz) + Dual II Magnum (1.5 pt) + COC (1%) + AMS[c]	70	97	99	30	80	97	96	100	100	15	99	100	230 a
5	Sharpen (1 oz) + Roundup PM3 (25 oz) + Dual II Magnum (1.5 pt) + MSO (1%) + AMS[c]	100	100	100	100	100	99	100	100	99	72	100	100	236 a
6	Roundup PM3 (25 oz) + Dual II Magnum (1.5 pt) + AMS[c]	62	71	78	9	84	91	98	100	99	3	100	100	235 a
7	Clarity (0.5 pt) + Roundup PM3 (25 oz) + Dual II Magnum (1.5 pt) + AMS[c]	83	86	92	24	65	73	98	100	100	45	100	100	228 a
8	Clarity (0.5 pt) + Callisto (4.5 oz) + Roundup PM3 (25 oz) + Dual II Magnum (1.5 pt) + AMS[c]	86	87	95	20	75	83	99	100	100	5	99	99	230 a
9	Callisto (4.5 oz) + Dual II Magnum (1.5 pt) + COC (1%) + AMS[c]	62	82	91	26	74	85	39	97	99	10	67	90	239 a
	LSD (α=0.10)	**24**	**7**	**5**	**12**	**9**	**5**	**7**	**2**	**2**	**27**	**7**	**3**	**29**
	p value	**0.092**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**0.098**	**0.011**	**0.007**	**<.001**	**<.001**	**<0.001**

[a]Visual control from 70-100% is illustrated on a color scale with green representing greater weed control values.
[b]Yield values with the same letter are not significantly different.
[c]Spray grade AMS applied at 8.5 lb/100 gal

Picture taken the day of application (5/13)

Common Lambsquarters

Picture taken the day of application (5/13)

Dandelion

Picture taken the day of application (5/13)

Purslane Speedwell

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Plot pictures taken on 5/22

9 days after the burndown application

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

9 days after Burndown (5/22)
Untreated Check

0%

9 days after Burndown (5/22)

BD: 8 oz Tough + 25 oz Roundup + 1.5 pt Dual II + COC + AMS

Marestail = 57%

Dandelion = 21%

9 days after Burndown (5/22)

BD: 8 oz Tough + 4.5 oz Callisto + 1.5 pt Dual II + COC + AMS

Marestail = 72%

Dandelion = 34%

9 days after Burndown (5/22)

BD: 8 oz Tough +4.5 oz Callisto +22 oz RU +1.5 pt Dual +COC +AMS

Marestail = 70%

Dandelion = 30%

9 days after Burndown (5/22)

BD: 1 oz Sharpen +25 oz Roundup +1.5 pt Dual II +MSO +AMS

Marestail = 100%

Dandelion = 100%

9 days after Burndown (5/22)
BD: 25 oz Roundup + 1.5 pt Dual II Magnum + AMS

Marestail = 62%
Dandelion = 9%

9 days after Burndown (5/22)
BD: 0.5 pt Clarity + 25 oz Roundup + 1.5 pt Dual II + AMS

Marestail = 83%
Dandelion = 24%

9 days after Burndown (5/22)

BD: 0.5 pt Clarity + 4.5 oz Callisto + 25 oz RU + 1.5 pt Dual II + AMS

Marestail = 86%

Dandelion = 20%

9 days after Burndown (5/22)
BD: 4.5 oz Callisto + 1.5 pt Dual II Magnum + COC + AMS

Marestail = 62%
Dandelion = 26%

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Plot pictures taken on 5/29

16 days after the burndown application

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

16 days after Burndown (5/29)
Untreated Check

0%

16 days after Burndown (5/29)
BD: 8 oz Tough + 25 oz Roundup + 1.5 pt Dual II + COC + AMS

Marestail = 72%
Dandelion = 81%

16 days after Burndown (5/29)
BD: 8 oz Tough + 4.5 oz Callisto + 1.5 pt Dual II + COC + AMS

Marestail = 95%
Dandelion = 90%

16 days after Burndown (5/29)

BD: 8 oz Tough +4.5 oz Callisto +22 oz RU +1.5 pt Dual +COC +AMS

Marestail = 97%

Dandelion = 80%

16 days after Burndown (5/29)

BD: 1 oz Sharpen +25 oz Roundup +1.5 pt Dual II +MSO +AMS

Marestail = 100%

Dandelion = 100%

16 days after Burndown (5/29)
BD: 25 oz Roundup + 1.5 pt Dual II Magnum + AMS

Marestail = 71%
Dandelion = 84%

16 days after Burndown (5/29)
BD: 0.5 pt Clarity + 25 oz Roundup + 1.5 pt Dual II + AMS

Marestail = 86%
Dandelion = 65%

16 days after Burndown (5/29)

BD: 0.5 pt Clarity + 4.5 oz Callisto + 25 oz RU + 1.5 pt Dual II + AMS

Marestail = 87%

Dandelion = 75%

16 days after Burndown (5/29)
BD: 4.5 oz Callisto + 1.5 pt Dual II Magnum + COC + AMS

Marestail = 82%
Dandelion = 74%

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Plot pictures taken on 6/3

21 days after the burndown application

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

21 days after Burndown (6/3)
Untreated Check

0%

21 days after Burndown (6/3)

BD: 8 oz Tough + 25 oz Roundup + 1.5 pt Dual II + COC + AMS

Marestail = 67%

Dandelion = 88%

21 days after Burndown (6/3)
BD: 8 oz Tough + 4.5 oz Callisto + 1.5 pt Dual II + COC + AMS

Marestail = 99%
Dandelion = 96%

21 days after Burndown (6/3)

BD: 8 oz Tough +4.5 oz Callisto +22 oz RU +1.5 pt Dual +COC +AMS

Marestail = 99%

Dandelion = 97%

21 days after Burndown (6/3)

BD: 1 oz Sharpen +25 oz Roundup +1.5 pt Dual II +MSO +AMS

Marestail = 100%

Dandelion = 99%

21 days after Burndown (6/3)
BD: 25 oz Roundup + 1.5 pt Dual II Magnum + AMS

Marestail = 78%
Dandelion = 91%

21 days after Burndown (6/3)

BD: 0.5 pt Clarity + 25 oz Roundup + 1.5 pt Dual II + AMS

Marestail = 92%

Dandelion = 73%

21 days after Burndown (6/3)

BD: 0.5 pt Clarity + 4.5 oz Callisto + 25 oz RU + 1.5 pt Dual II + AMS

Marestail = 95%

Dandelion = 83%

21 days after Burndown (6/3)
BD: 4.5 oz Callisto + 1.5 pt Dual II Magnum + COC + AMS

Marestail = 91%
Dandelion = 85%