

# Weed Management Trials from 2025

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# Quick overview

- Kochia management takeaways from 2025
- Dry bean cover cropping



# Kochia management with group 14 resistance

Treatment	Rate	Kochia 14 DAE	Kochia 28 DAT	Kochia 42 dat	Co Lambsquarters 42 dat
Non-treated		0.0	0.0	0.0	0.0
TRICOR	0.25 lb/a	81.3	77.5	75.0	48.8
TRICOR	0.5 lb/a	92.3	91.3	93.8	88.8
SPARTAN	4 oz/a	42.5	37.5	40.0	68.8
SPARTAN	8 oz/a	70.0	55.0	41.3	80.0
TRICOR	0.25 lb/a + 4 oz/a	77.5	75.0	73.8	70.0
TRICOR	0.5 lb/a + 4 oz/a	94.5	97.0	96.0	98.0
TRICOR	0.25 lb/a + 8 oz/a	86.3	76.3	72.5	98.0
TRICOR	0.5 lb/a + 8 oz/a	98.0	97.0	96.0	99.0
LSD (0.05)		6.8	3.7	2.5	2.5

# 2024 data

Treatment	Rate	Kochia % control	
		14 DAE	28 DAE
Non-treated		0.0	0.0
TRICOR	0.25 lb/a	85.0	73.8
TRICOR	0.5 lb/a	93.8	83.8
SPARTAN	4 oz/a	42.5	0.0
SPARTAN	8 oz/a	60.0	10.0
TRICOR	0.25 lb/a + 4 oz/a	90.0	75.0
TRICOR	0.5 lb/a + 4 oz/a	97.0	85.0
TRICOR	0.25 lb/a + 8 oz/a	87.5	73.8
TRICOR	0.5 lb/a + 8 oz/a	98.0	89.8
LSD (0.05)		7.0	6.7



Low metribuzin on top, high on bottom  
low sulfentrazone on left, high on right



# Kochia management with Enlist and mixes

Treatment	Rate	Kochia Control	-----Kochia Control-----			
		7 DAT	14 DAT no PRE	14 DAT w/PRE	14 DAT Res Control*	14 DAT Res Control w/PRE*
	oz/a	%	%	%	%	%
Check		0.0	0.0	55.0	0.0	76.3
Liberty 280 + AMS	32	97.0	90.0	93.8	0.0	83.8
Liberty 280 + Enlist One + AMS	32 + 32	95.8	91.3	99.0	47.5	85.0
Liberty 280 + Enlist One + MSO + AMS	32 + 32	96.0	93.8	99.0	50.0	81.3
Liberty <b>Ultra</b> + Enlist One + MSO + AMS	24 + 32	93.5	88.8	93.5	50.0	81.3
Liberty 280 + Enlist One + Dual II Magnum + AMS	32 + 32 + 24	96.0	95.0	98.0	87.5	93.8
Liberty 280 + Enlist One + Dual II Magnum + MSO + AMS	32 + 32 + 24	98.0	91.3	96.0	78.8	92.3
Liberty <b>Ultra</b> + Enlist One + Dual II Magnum + MSO + AMS	24 + 32 + 24	81.3	90.0	91.3	83.8	92.3
LSD (0.05)		3.7	2.4	3.9	4.6	4.9

- PRE product was Authority Elite

# Multiple applications

Treatment	Rate oz/a	-----Kochia control %-----			
		7 DAT A	7 DAT B	21 DAT B	28 DAT B
Check		0.0	0.0	0.0	0.0
Liberty Ultra	24	70.0	61.3	28.8	25.0
Liberty Ultra	44	77.5	75.0	43.8	40.0
Enlist One	32	31.3	41.3	15.0	11.3
Liberty Ultra <b>fb</b> Liberty Ultra	44 fb 44	80.0	95.0	96.0	97.0
Liberty Ultra + Enlist One	44 + 32	77.5	71.3	33.8	26.3
Liberty Ultra + Enlist One <b>fb</b> Liberty Ultra	44 + 32 fb 24	87.5	96.0	91.3	95.0
Liberty Ultra + Zidua SC	44 + 2	80.0	80.0	50.0	53.8
Liberty Ultra <b>fb</b> Enlist One	44 fb 32	72.5	68.8	78.8	78.8
Enlist One <b>fb</b> Liberty Ultra	32 fb 44	31.3	90.0	96.0	97.0
Zidua SC PRE <b>fb</b> Liberty Ultra (V3)	2.5 fb 44	20.0	70.0	53.8	51.3
LSD (0.05)		4.6	4.1	5.7	5.5



# One vs two passes



# Take-aways

- Sulfentrazone products are providing a control rating of N-P (in ND Weed Control Guide) at typical use-rates when group 14 resistance is present
  - 0.5 lb metribuzin better, but 0.25 lb still added 40% to sulfentrazone
- Enlist One adds a 'flash' of injury to kochia, but is usually short-lived
  - But there can be some residual effect
- Kochia management is a three pass system in soybeans
  - Layered residuals are a reality in ND

# Dry bean planting into spring cover crops



## Cover Crops and Herbicides

Cover Crop	Herbicide	Cereal Stand Plant/a	Stand %	Yield lb/a
Oats	Check	726493	0.0	2208
Oats	Sonalan (2pt)	482356	57.5	2193
Oats	Sonalan (3pt)	464601	63.8	2502
Oats	Dual II	517867	32.5	2489
Oats	Outlook	449804	50.0	2391
Oats	Prowl H2O	469039	50.0	2546
Oats	Spartan Elite	639196	17.5	2328
Barley	Check	733891	0.0	2208
Barley	Sonalan (2pt)	591848	36.3	2261
Barley	Sonalan (3pt)	599246	30.0	2383
Barley	Dual II	643635	28.8	2314
Barley	Outlook	611083	37.5	2291
Barley	Prowl H2O	674707	10.0	2229
Barley	Spartan Elite	588889	20.0	2270
Rye	Check	656951	2.5	2041
Rye	Sonalan (2pt)	408375	53.8	2461
Rye	Sonalan (3pt)	551898	47.5	2317
Rye	Dual II	412814	66.3	2777
Rye	Outlook	466080	56.3	2629
Rye	Prowl H2O	588889	22.5	2311
Rye	Spartan Elite	511948	56.3	2543
LSD (0.05)		248096	16.7	370

Cover Crop Planting Date	CC Seeding Rate	Termination Timing	Dry bean
	bu/a		lb/a
Early	0	V2	3727
Early	0	V4	3680
Early	0.5	V2	3417
Early	0.5	V4	3591
Early	1	V2	3511
Early	1	V4	3774
Early	2	V2	3701
Early	2	V4	3644
At-planting	0	V2	3661
At-planting	0	V4	3487
At-planting	0.5	V2	3609
At-planting	0.5	V4	3664
At-planting	1	V2	3430
At-planting	1	V4	3584
At-planting	2	V2	3575
At-planting	2	V4	3462

Too little or too much



# Comparison to rye/soybean



# Harvest Weed Seed Control



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Thank you!

