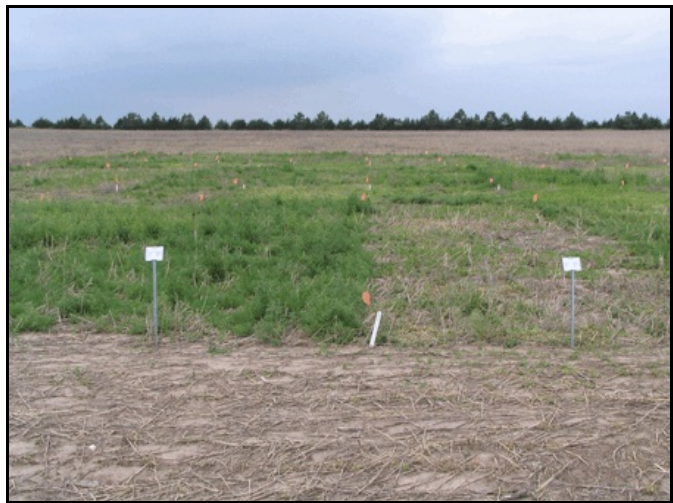


Burndown of ALS-Resistant Kochia and Russian Thistle

A field study was conducted to evaluate the control of ALS-resistant weeds with various tank mixtures including Harmony GT and Express herbicides. The study was conducted at the High Plains Agricultural Laboratory located near Sidney, NE. The experimental design was a randomized complete block with three replications. Plots were 10 feet wide by 30 feet long. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 12 gallons/acre at 3 miles/hour and 15 psi. The study was located on an Alliance silt loam soil with an organic matter content of 3.5% and a pH of 6.7. Herbicide treatments were applied on May 20, 2008 to ALS-resistant kochia and Russian thistle plants. Kochia plants were 4 to 6 inches in height and Russian thistle was 1 to 3 inches in height at the time of application. Weed densities for both species were high and uniformly distributed.

The control of ALS-resistant kochia and Russian thistle was best when Harmony GT and Express were tank mixed with products containing dicamba, such as Clarity and Status. The addition of atrazine with crop oil concentrate also improved the control of kochia, and to a lesser degree, Russian thistle. The addition of atrazine with nonionic surfactant was not effective at increasing weed control with Harmony GT and Express. The addition of Classic, Callisto, or Impact herbicides did very little to improve the control of these ALS-resistant weeds compared to Harmony GT plus Express alone.



Burndown of ALS-resistant kochia and Russian thistle.

Treatment	Rate	Weed control on June 7		Weed control on June 18	
		Kochia	Russian thistle	Kochia	Russian thistle
	oz ai/A	%			
Harmony GT Express AMS X-90	0.125 0.125 2 lb/A 0.25 % v/v	17	20	50	43
Harmony GT Express AMS X-90	0.25 0.125 2 lb/A 0.25 % v/v	17	10	23	23
Harmony GT Express Classic AMS X-90	0.25 0.125 0.083 2 lb/A 0.25 % v/v	13	18	37	27
Harmony GT Express Classic AMS X-90	0.25 0.125 0.188 2 lb/A 0.25 %v/v	10	3	37	43
Harmony GT Express Classic Clarity AMS X-77	0.25 0.125 0.083 6 oz/A 2 lb/A 0.25 % v/v	65	65	88	95
Harmony GT Express Classic Callisto AMS X-90	0.25 0.125 0.083 2 oz/A 2 lb/A 0.25 % v/v	20	12	60	47

Burndown of ALS-resistant kochia and Russian thistle.

Treatment	Rate	Weed control on June 7		Weed control on June 18	
		Kochia	Russian thistle	Kochia	Russian thistle
	oz ai/A	%			
Harmony GT	0.25				
Express	0.125				
Classic	0.083				
Impact	0.50 oz/A	43	33	50	37
AMS	2 lb/A				
X-90	0.25 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.083				
Atrazine	16	53	63	53	43
AMS	2 lb/A				
X-90	0.25 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.083				
Clarity	6 oz/A	68	73	93	95
AMS	2 lb/A				
COC	1% v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.083				
Callisto	2 oz/A	30	27	47	52
AMS	2 lb/A				
COC	1 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.083				
Impact	0.5 oz/A	30	37	50	57
AMS	2 lb/A				
COC	1 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.083				
Atrazine	16	80	77	80	63
AMS	2 lb/A				
COC	1 % v/v				

Burndown of ALS-resistant kochia and Russian thistle.

Treatment	Rate	Weed control on June 7		Weed control on June 18	
		Kochia	Russian thistle	Kochia	Russian thistle
	oz ai/A	%			
Harmony GT	0.25				
Express	0.125				
Classic	0.188				
Clarity	6 oz/A	73	77	90	95
AMS	2 lb/A				
X-90	0.25 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.188				
Callisto	2 oz/A	33	33	33	30
AMS	2 lb/A				
X-90	0.25 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.188				
Impact	0.50 oz/A	25	22	37	43
AMS	2 lb/A				
X-90	0.25 % v/v				
Harmony GT	0.25				
Express	0.125				
Classic	0.188				
Atrazine	16	52	55	60	37
AMS	2 lb/A				
X-90	0.25 % v/v				
Callisto	3 oz/A				
AMS	2 lb/A	42	28	57	17
COC	1 % v/v				
Status	5 oz/A				
AMS	2 lb/A	73	75	90	95
COC	1 % v/v				
Nontreated check		0	0	0	0
LSD (5%)		24	24	21	27