Evaluation of Foramsulfuron tank mixes in corn. Li, Jianmei, Jimmy D. Wait, and Kevin W. Bradley. The objective of this study was to evaluate crop phytotoxicity and weed control with tank mixes of foramsulfuron with mesotrione or mesotrione plus atrazine in corn. This study was conducted at the Bradford Research and Extension Center near Columbia, MO. The soil was a Mexico silt loam with a pH of 5.5 and 2.3% organic matter. 'Pioneer 33R79' glufosinate-resistant corn was planted 2.0 inch deep on April 19 in 30 inch rows. Treatments were arranged in a randomized complete block design with four replications of 10 by 35 foot plots. Herbicide applications were made with a CO_2 backpack sprayer equipped with XR8002 flat fan nozzles calibrated to deliver 15 GPA at 15 PSI.

Application data are listed below:

Date	April 21	May 24
Treatment	PRE	MPOST
Temperature (C)		
air	19.4	28.3
soil	17.7	26.7
Soil moisture	wet	wet
Wind (mph)	9	8
Cloud cover (%)	40	30
Relative humidity (%)	57	65
Precipitation after application		
week 1 (inch)	0.66	2.05
week 2 (inch)	1.40	0
Corn		
leaf no.	--	V4
height (inch)	--	10
Common waterhemp		
leaf no.	--	4
height (inch)	--	3
infestation	--	4/ft^2
Common sunflower		
leaf no.	--	5
height (inch)	--	10
infestation	--	6/ft^2
Common ragweed		
leaf no.	--	5
height (inch)	--	4
infestation	--	3/ft^2

Crop injury ranged from 7 to 15% 8 days after application, and was reduced to 1 to 8% by 15 days after application. At 29 days after application, no visible signs of corn injury were observed with any herbicide combinations. Control of common cocklebur and ivyleaf morningglory ranged from 83 to 95% 29 days after application. The addition of mesotrione or mesotrione plus atrazine did not significantly enhance the control of common sunflower or common cocklebur 29 days after treatment. All tank-mixes improved the control of common ragweed compared to applications of foramsulfuron alone. (Department of Agronomy, University of Missouri-Columbia)

Table. Weed control by foramsulfuron tank mixes in corn (Li, Wait and Bradley).

			Corn injury			Weed control							
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Application	Rate	Time	6-1	6-8	6-22	6-8	6-22	6-8	6-22	6-8	6-22	6-8	6-22
	(lb/A)		----------					%----------					
Flufenacet	0.625	PRE	0	0	0	0	0	0	0	0	0	0	0
Untreated													
Flufenacet+ Foramsulfuron+ MSO+AMS	0.625+ 0.033+ 1.25%+1.5	PRE MPOST	13	4	0	78	89	72	60	88	78	98	86
Flufenacet+ Foramsulfuron+Mesotrione+ MSO+AMS	0.625+ 0.033+0.031+ 1.25%+1.5	PRE MPOST	13	8	0	81	94	82	76	88	81	99	94
Flufenacet+ Foramsulfuron+Mesotrione+ Atrazine+MSO+AMS	0.625+ 0.033+0.031+ 0.25+1.25%+1.5	PRE MPOST	15	6	0	96	95	99	94	96	85	99	93
Flufenacet+ Foramsulfuron+Mesotrione+ MSO+AMS	0.625+ 0.033+0.047+ 1.25%+1.5	PRE MPOST	15	8	0	89	96	92	86	93	84	99	83
Flufenacet+ Foramsulfuron+Mesotrione+ Atrazine+MSO+AMS	0.625+ 0.033+0.047+ 0.25+1.25%+1.5	PRE MPOST	12	6	0	99	96	99	91	96	83	99	94
Flufenacet+ Foramsulfuron+Mesotrione+ MSO+AMS	0.625+ 0.033+0.063+ 1.25%+1.5	PRE MPOST	14	1	0	95	95	97	95	95	89	99	94
Flufenacet+ Foramsulfuron+Mesotrione+ Atrazine+MSO+AMS	0.625+ 0.033+0.063+ 0.25+1.25%+1.5	PRE MPOST	14	6	0	99	95	99	94	96	80	99	93
Flufenacet+ Foramsulfuron+Mesotrione+ MSO+AMS	0.625+ 0.033+0.094+ 1.25%+1.5	PRE MPOST	13	5	0	95	93	85	84	97	87	99	88
Flufenacet+ Foramsulfuron+Mesotrione+ Atrazien+MSO+AMS	0.625+ 0.033+0.094+ 0.25+1.25%+1.5	PRE MPOST	15	1	0	99	96	99	96	99	91	99	95
Flufenacet+ Nicosulfuron&Rimsulfuron+ Mesotrione+atrazine+ MSO+AMS	0.625+ 0.023&0.012+ 0.047+0.25+ 1.25%+1.5	PRE MPOST	7	4	0	93	93	95	90	91	86	99	95
LSD(0.05)			4	5	0	9	9	7	15	4	14	14	6