2018 Soybean Production and Dicamba Survey

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11/9/2018

Demographics

Question 1 - County

Question 2 - Your Role

Table 1: Primary role of survey respondents from Nebraska and Wiscosnin

		Respondents	
State	Role	#	%
Nebraska	Decision influencer	72	23
	Farmer	244	77
Wisconsin	Decision influencer	49	33
	Farmer	100	67

[1] Decision influencer: agronomist, coop, industry rep, and university rep

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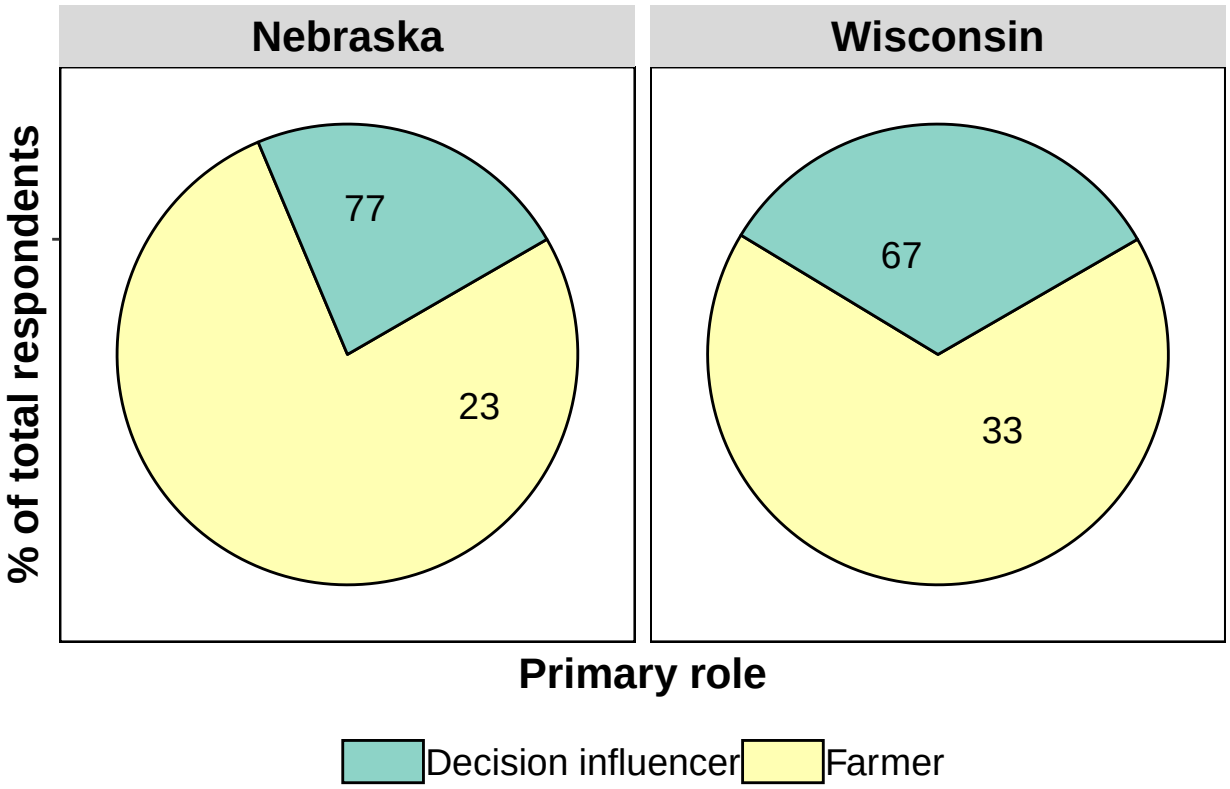

Figure 1: Primary role of survey respondents from Nebraska and Wiscosnin

Question 3 - Total soybean ha planted/managed in

2017

Table 2: Total soybean ha planted/managed in 2017 according to survey respondents from Nebraska and Wisconsin

State	Role	Respondents #	Estimate Soybean ha	Total Soybean ha
Nebraska	Decision influencer	60	4690	281385
	Farmer	238	332	79116
Wisconsin	Decision influencer	43	3586	154181
	Farmer	99	208	20582

[1] Decision influencer: agronomist, coop, industry rep, and university rep

2018

2019

Table 3: Total soybean ha planted/managed in 2018 according to survey respondents from Nebraska and Wisconsin

State	Role	Respondents #	Estimate Soybean ha	Total Soybean ha
Nebraska	Decision influencer	60	4978	298656
	Farmer	239	341	81483
Wisconsin	Decision influencer	45	3988	179481
	Farmer	99	225	22238

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Table 4: Total expected soybean ha to be planted/managed in 2019 according to survey respondents from Nebraska and Wisconsin

State	Role	Respondents #	Estimate Soybean ha	Total Soybean ha
Nebraska	Decision influencer	56	5477	306716
	Farmer	219	352	77032
Wisconsin	Decision influencer	44	4969	218640
	Farmer	95	212	20187

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 4 - Total Xtend soybean ha planted/managed in

2017

Table 5: Total Xtend soybean ha planted/managed in 2017 according to survey respondents from Nebraska and Wisconsin

State	Role	Respondents #	Estimate Soybean ha	Total Soybean ha
Nebraska	Decision influencer	60	782	46929
	Farmer	224	67	15048
Wisconsin	Decision influencer	43	172	7392
	Farmer	94	19	1763

[1] Decision influencer: agronomist, coop, industry rep, and university rep

2018

2019

Table 6: Total Xtend soybean ha planted/managed in 2018 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	62	3033	188048
	Farmer	232	188	43587
Wisconsin	Decision influencer	45	619	27868
	Farmer	93	73	6790

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Table 7: Total expected Xtend soybean ha to be planted/managed in 2019 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	57	4227	240915
	Farmer	189	260	49107
Wisconsin	Decision influencer	43	1565	67298
	Farmer	80	121	9713

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 5 - Total Xtend soybean ha sprayed with dicamba burndown (preplant or pre-emergence) in

2017

Table 8: Total Xtend soybean ha sprayed with dicamba burndown (preplant or pre-emergence) in 2017 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	60	463	27766
	Farmer	216	30	6440
Wisconsin	Decision influencer	42	68	2862
	Farmer	93	1	129

[1] Decision influencer: agronomist, coop, industry rep, and university rep

2018

2019

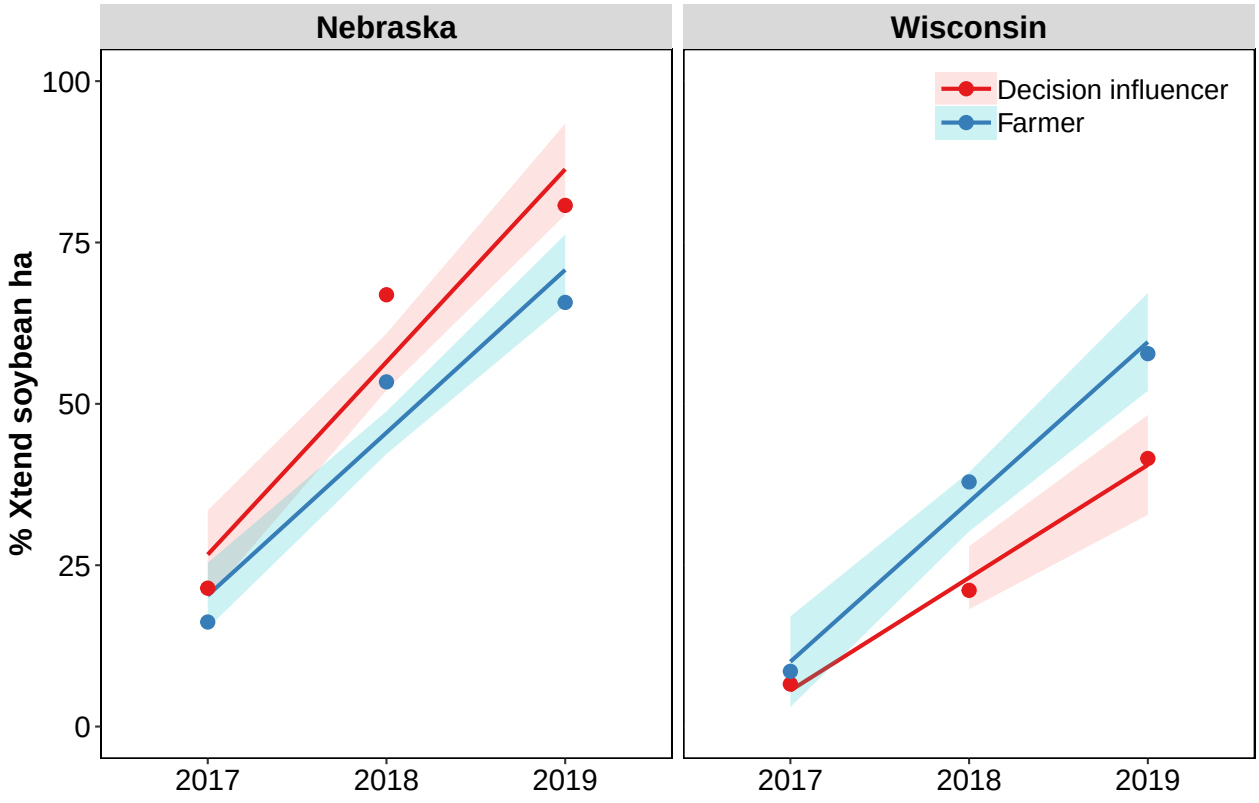

Figure 2: Share of the total Xtend soybean ha planted/managed in 2017, 2018, and 2019 according to survey respondents from Nebraska and Wisconsin

Table 9: Total Xtend soybean ha sprayed with dicamba burndown (preplant or pre-emergence) in 2018 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	63	1275	80339
	Farmer	228	80	18254
Wisconsin	Decision influencer	43	166	7135
	Farmer	93	4	372

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Table 10: Total expected Xtend soybean ha to be sprayed with dicamba burndown (preplant or pre-emergence) in 2019 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	57	2328	132669
	Farmer	195	143	27807
Wisconsin	Decision influencer	44	647	28466
	Farmer	87	38	3283

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 6 - Total Xtend soybean ha sprayed post-emergence with dicamba in

2017

Table 11: Total Xtend soybean ha sprayed post-emergence with dicamba burdown in 2017 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	60	589	35318
	Farmer	216	34	7372
Wisconsin	Decision influencer	43	91	3910
	Farmer	92	13	1235

[1] Decision influencer: agronomist, coop, industry rep, and university rep

2018

2019

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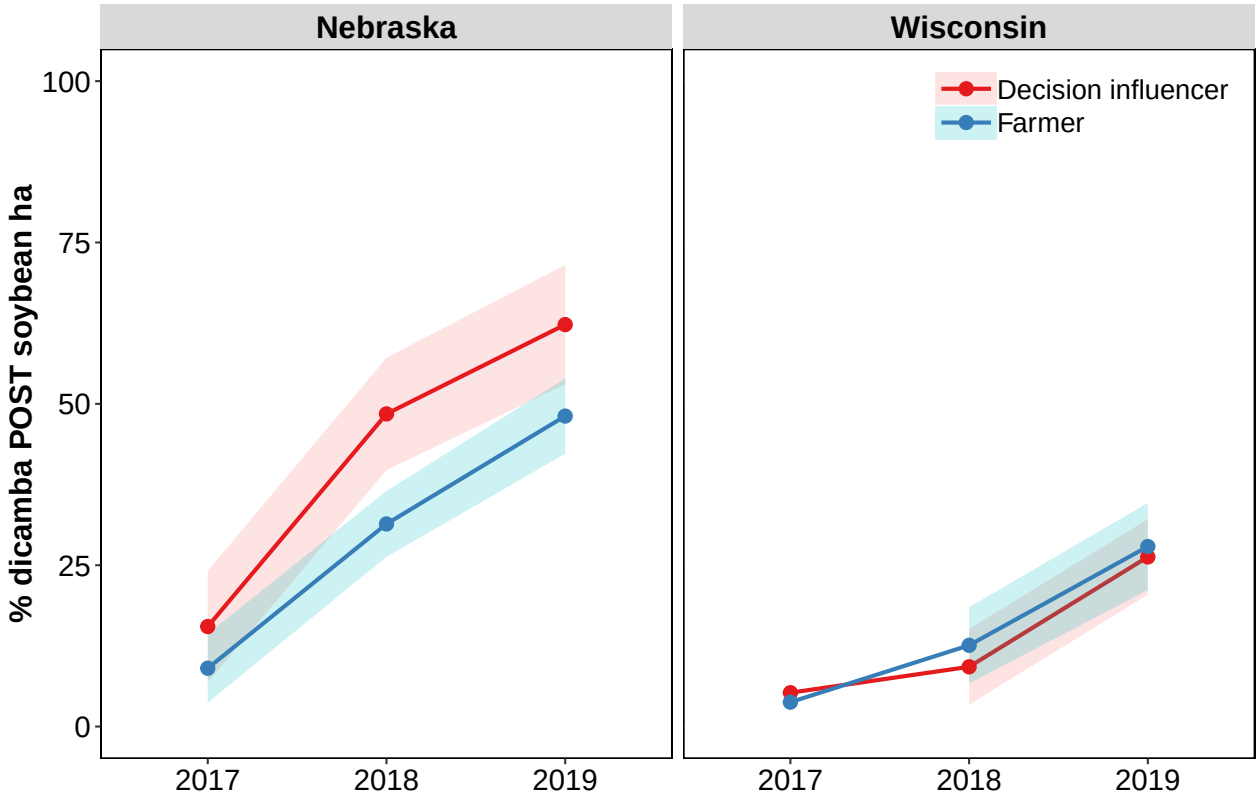

Figure 3: Share of the total Xtend soybean ha sprayed with dicamba POST in 2017, 2018, and 2019 according to survey respondents from Nebraska and Wisconsin

Table 12: Total Xtend soybean ha sprayed post-emergence with dicamba burdown in 2018 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	62	2280	141370
	Farmer	229	110	25149
Wisconsin	Decision influencer	44	284	12506
	Farmer	92	33	3035

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Table 13: Total expected Xtend soybean ha to be sprayed post-emergence with dicamba burdown in 2018 according to survey respondents from Nebraska and Wisconsin

		Respondents	Estimate	Total
State	Role	#	Soybean ha	Soybean ha
Nebraska	Decision influencer	56	3022	169222
	Farmer	185	185	34261
Wisconsin	Decision influencer	44	1549	68143
	Farmer	80	80	6369

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 7 - Do you own a sprayer/spray your herbicide programs

Table 14: Own a sprayer/spray your herbicide programs

			Respondents	
State	Role	Answer	#	%
Nebraska	Decision influencer	No	32	48
		Yes	35	52
	Farmer	No	53	22
		Yes	189	78
Wisconsin	Decision influencer	No	18	38
		Yes	29	62
	Farmer	No	22	22
		Yes	76	78

[1] Decision influencer: agronomist, coop, industry rep, and university rep

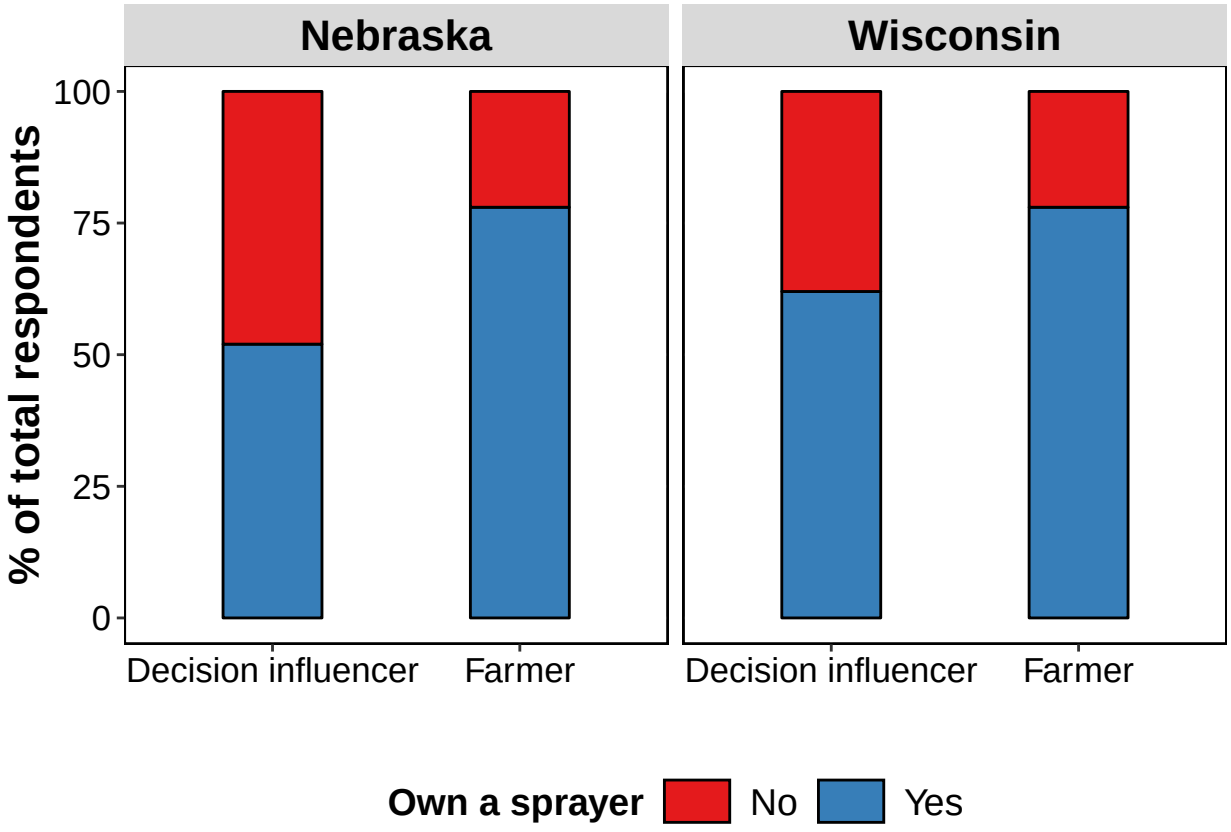

Figure 4: Own a sprayer/spray your herbicide programs

Question 8 - At the start of the season, did you use an effective pre-emergence herbicide program with multiple effective sites of action before or at planting?

Table 15: Use an effective pre-emergence herbicide program with multiple effective sites of action before or at planting

			Respondents	
State	Role	Answer	#	%
Nebraska	Decision influencer	No	2	3
		Not sure	2	3
		Yes	62	94
	Farmer	No	17	7
		Not sure	4	2
		Yes	220	91
Wisconsin	Decision influencer	No	7	15
		Not sure	5	10
		Yes	36	75
	Farmer	No	27	27
		Not sure	2	2
		Yes	70	71

[1] Decision influencer: agronomist, coop, industry rep, and university rep

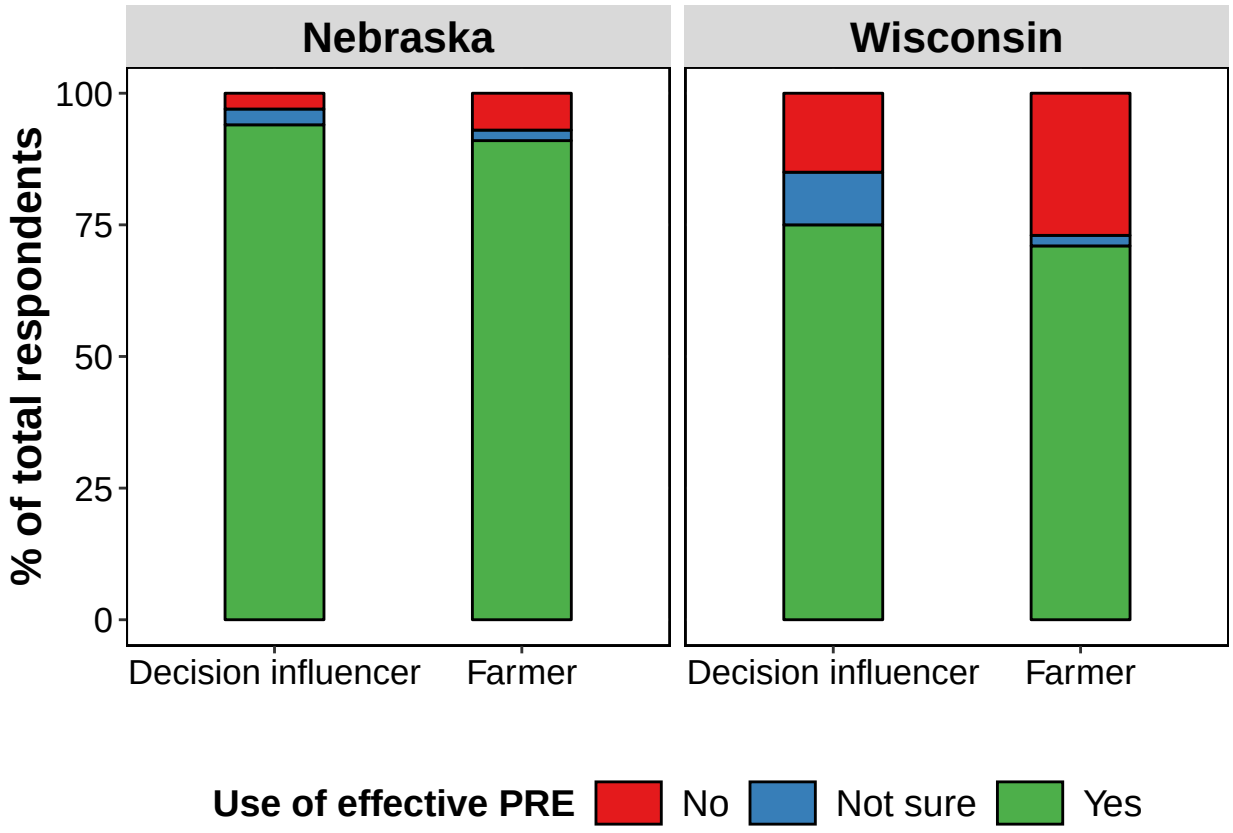

Figure 5: Use an effective pre-emergence herbicide program with multiple effective sites of action before or at planting

DICAMBA APPLICATION POST-EMERGENCE IN XTEND SOYBEAN

Question 9 - Which dicamba formulation did you use in Xtend soybeans?

Table 16: Dicamba formulation used in Xtend soybeans according to survey participants from Nebraska and Wisconsin

		Dicamba	Respondents		2017		2018		2019	
State	Role	Formulation	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	Engenia	35	62	27863	929	111736	3604	154796	5338
		Fexapan	5	9	607	152	2258	565	3238	1079
		XtendiMax	16	29	15181	949	43560	2722	47997	3200
	Farmer	Engenia	50	54	7240	148	18841	377	20452	465
		Fexapan	1	1	0	0	324	324	304	304
		XtendiMax	42	45	4634	122	13743	335	14772	448
Wisconsin	Decision influencer	Engenia	10	48	3235	359	9292	1032	25830	2870
		Fexapan	2	10	303	152	2227	1114	7288	3644
		XtendiMax	9	43	3571	446	7885	876	15152	2165
	Farmer	Engenia	9	39	164	18	1260	140	1438	180
		Fexapan	5	22	0	0	364	73	481	96
		XtendiMax	9	39	1206	134	2290	254	2518	280

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 11 - Did you include a drift reduction agent (DRA) in the tank-mix?

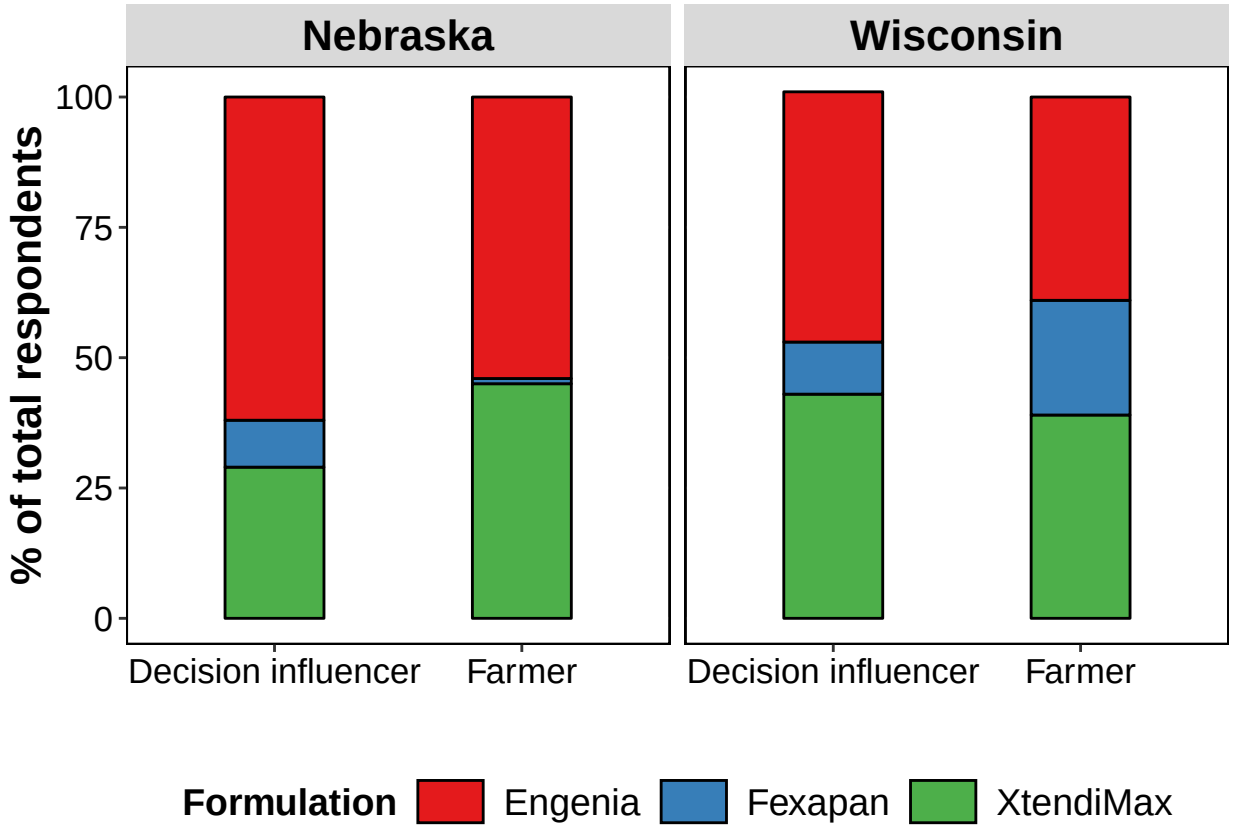

Figure 6: Dicamba formulation used in Xtend soybeans according to survey participants from Nebraska and Wisconsin

Table 17: Addition of a drift reduction agent (DRA) in the tank-mix according to survey participants from Nebraska and Wisconsin

		Add drift reduction	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	2	4	1214	607	4856	2428	8499	4249
		Yes	55	96	41830	854	141933	2839	179482	3902
	Farmer	No	12	13	1109	101	1989	166	1364	136
		Not sure	4	4	127	32	559	140	944	315
		Yes	79	83	10897	140	30840	395	34744	496
Wisconsin	Decision influencer	No	1	4	0	0	810	810	1619	1619
		Not sure	1	4	0	0	0	0	0	0
		Yes	22	92	7190	360	20618	982	50901	2679
	Farmer	No	12	34	164	14	615	51	1148	104
		Not sure	2	6	0	0	97	48	109	54
		Yes	21	60	1208	58	3263	155	3825	191

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 12 - Did you include glyphosate in the tank-mix?

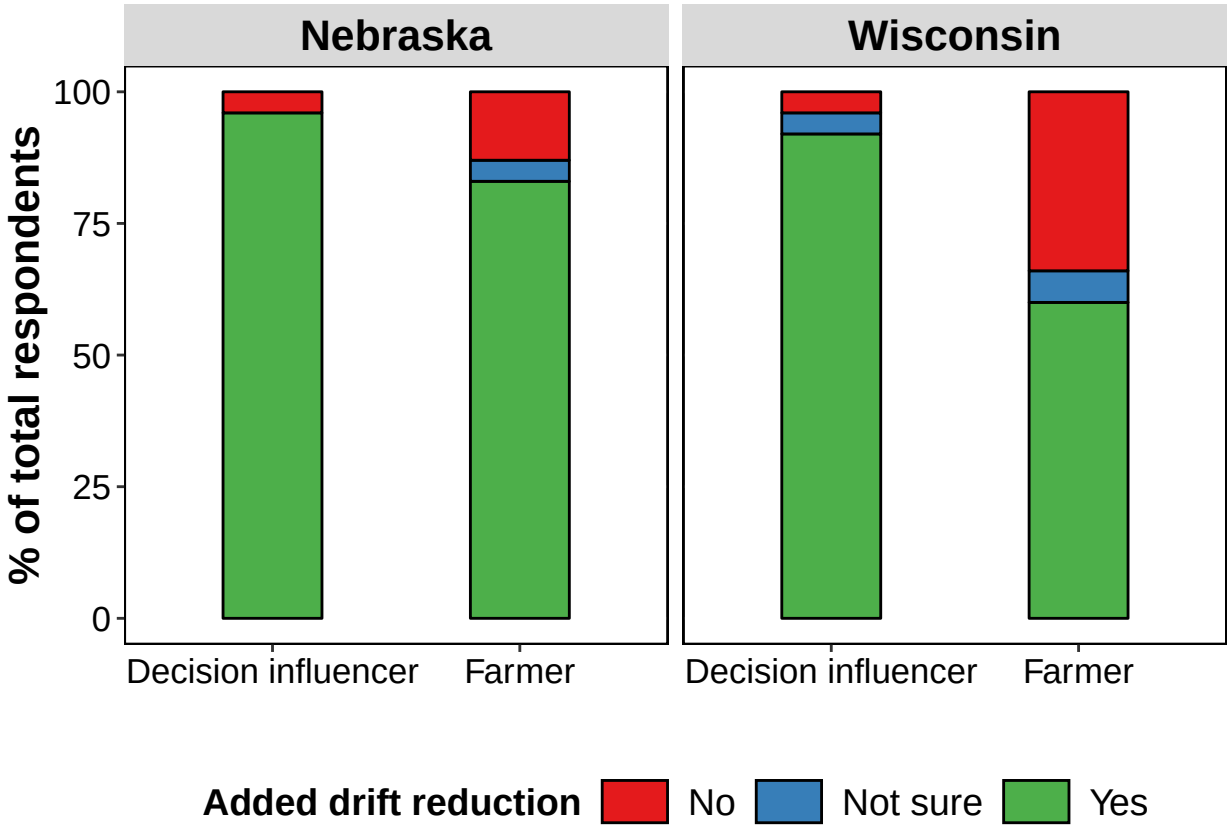

Figure 7: Addition of a drift reduction agent (DRA) in the tank-mix according to survey participants from Nebraska and Wisconsin

Table 18: Addition of glyphosate in the tank-mix according to survey participants from Nebraska and Wisconsin

		Include glyphosate	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	3	5	1416	708	3035	1518	3440	1720
		Yes	54	95	41628	850	143754	2875	184541	4012
	Farmer	No	19	19	292	16	3792	200	3355	224
		Not sure	3	3	16	5	237	79	283	142
		Yes	78	78	11825	156	30237	393	34224	496
Wisconsin	Decision influencer	No	3	13	567	189	2511	837	5384	1795
		Not sure	1	4	0	0	0	0	0	0
		Yes	19	83	6542	385	18715	1040	46934	2933
	Farmer	No	16	44	34	2	457	29	1354	85
		Yes	20	56	1338	67	3521	176	3728	207

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 13 - Did you include post-emergence herbicides other than glyphosate in the tank-mix?

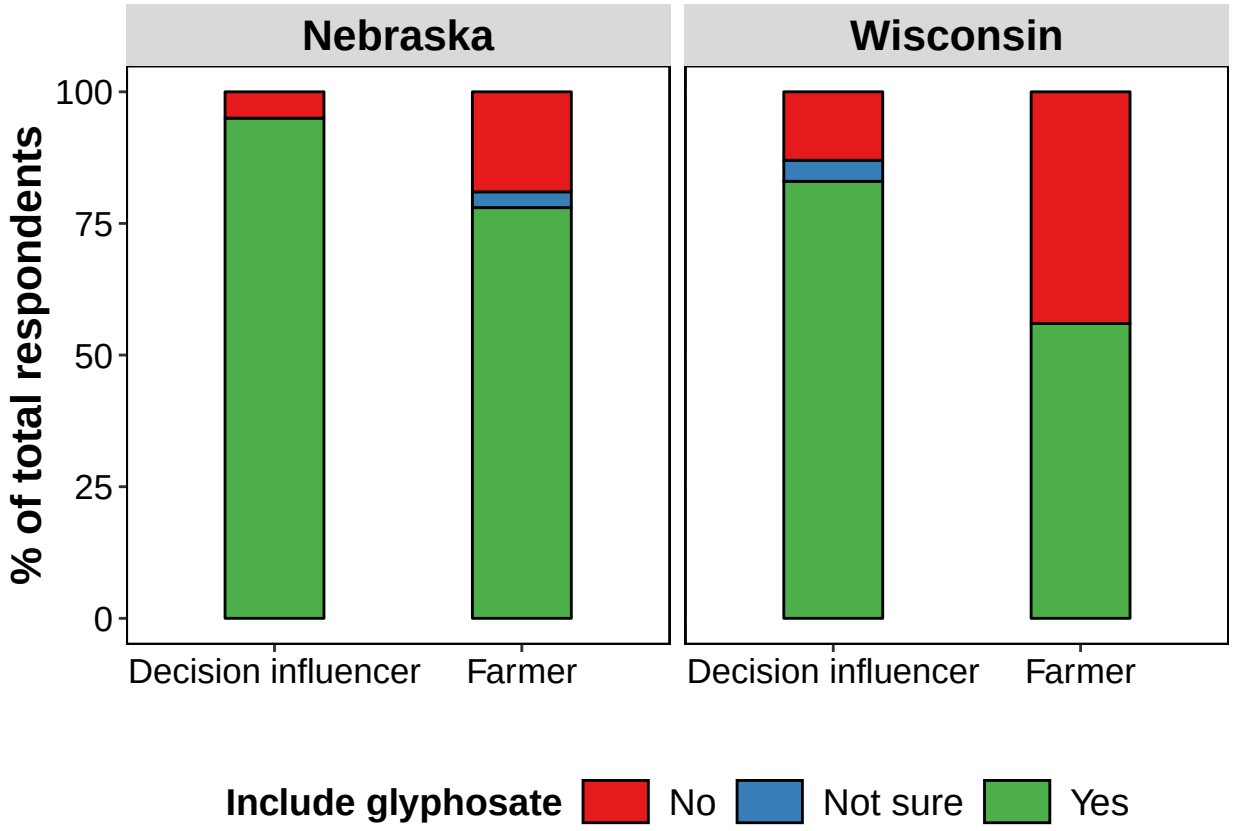

Figure 8: Addition of glyphosate in the tank-mix according to survey participants from Nebraska and Wisconsin

Table 19: Addition of post-emergence herbicides other than glyphosate in the tank-mix according to survey participants from Nebraska and Wisconsin

		Include POST	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	13	24	15217	1383	38365	3197	50182	5018
		Not sure	1	2	405	405	3238	3238	4047	4047
		Yes	41	75	27423	703	105186	2697	133752	3615
	Farmer	No	39	39	2743	74	8564	220	7364	238
		Not sure	9	9	263	29	1319	147	1295	216
		Yes	53	52	9126	179	24409	469	29203	584
Wisconsin	Decision influencer	No	9	41	2874	359	8908	990	21620	2702
		Not sure	2	9	16	8	304	152	607	304
		Yes	11	50	4219	422	11913	1191	30091	3009
	Farmer	No	26	74	228	9	1566	60	2446	94
		Yes	9	26	1144	127	2384	265	2636	330

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 14 - Did you include soil-residual herbicides (Group 15) in the POST-emergence tank-mix?

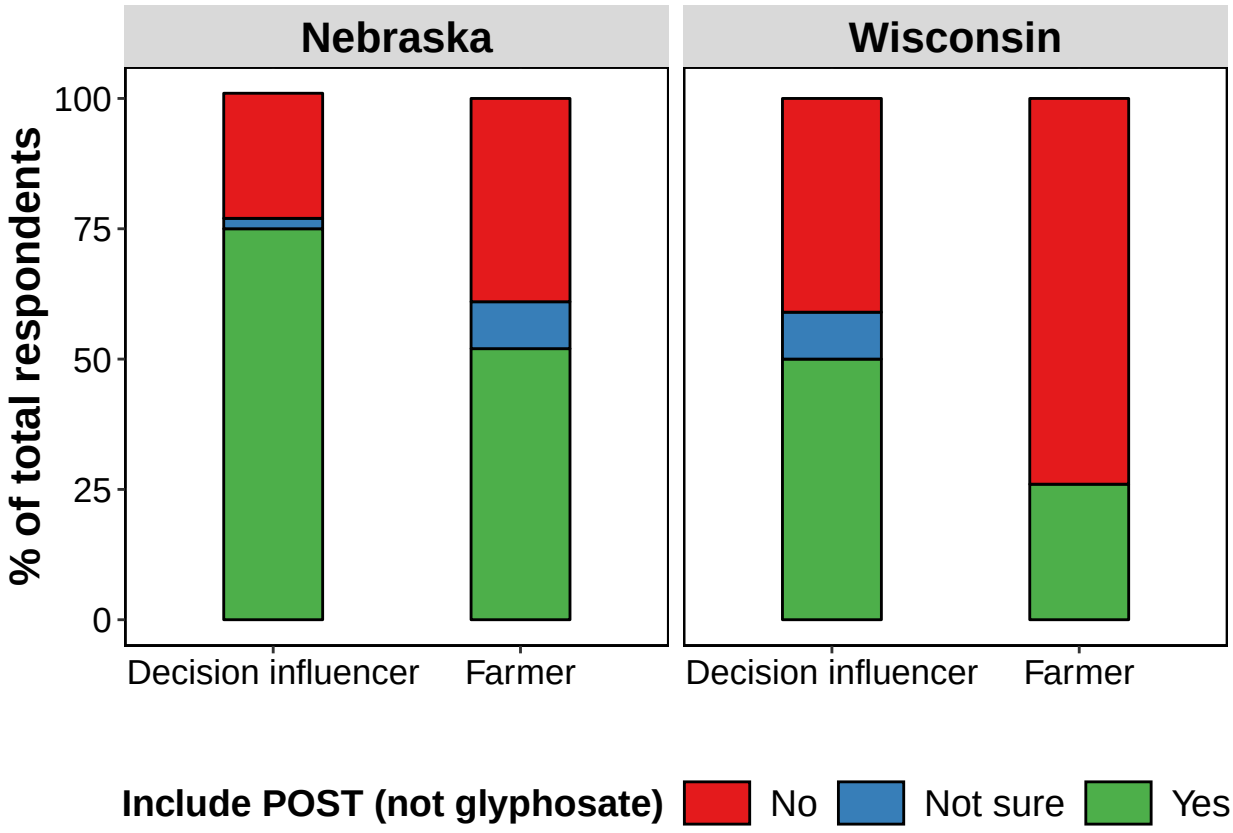

Figure 9: Addition of post-emergence herbicides other than glyphosate in the tank-mix according to survey participants from Nebraska and Wisconsin

Table 20: Addition of soil-residual herbicides (Group 15) in the POST-emergence tank-mix according to survey participants from Nebraska and Wisconsin

		Include group 15	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	8	16	4088	584	16916	2417	21085	3012
		Not sure	3	6	405	135	1801	600	2064	688
		Yes	40	78	37580	989	120383	3168	155929	4455
	Farmer	No	33	33	2254	73	6496	203	5977	206
		Not sure	13	13	474	36	2333	179	2298	230
		Yes	53	54	9227	177	24950	471	29000	630
Wisconsin	Decision influencer	No	7	29	2773	462	7977	1140	12308	2051
		Not sure	2	8	16	8	304	152	607	304
		Yes	15	62	4320	332	12961	926	39464	3036
	Farmer	No	25	66	229	9	1520	61	2317	97
		Not sure	2	5	0	0	28	14	16	16
		Yes	11	29	1143	104	2243	204	2425	242

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 15 - Did dicamba application in your Xtend soybeans injured neighboring soybean fields?

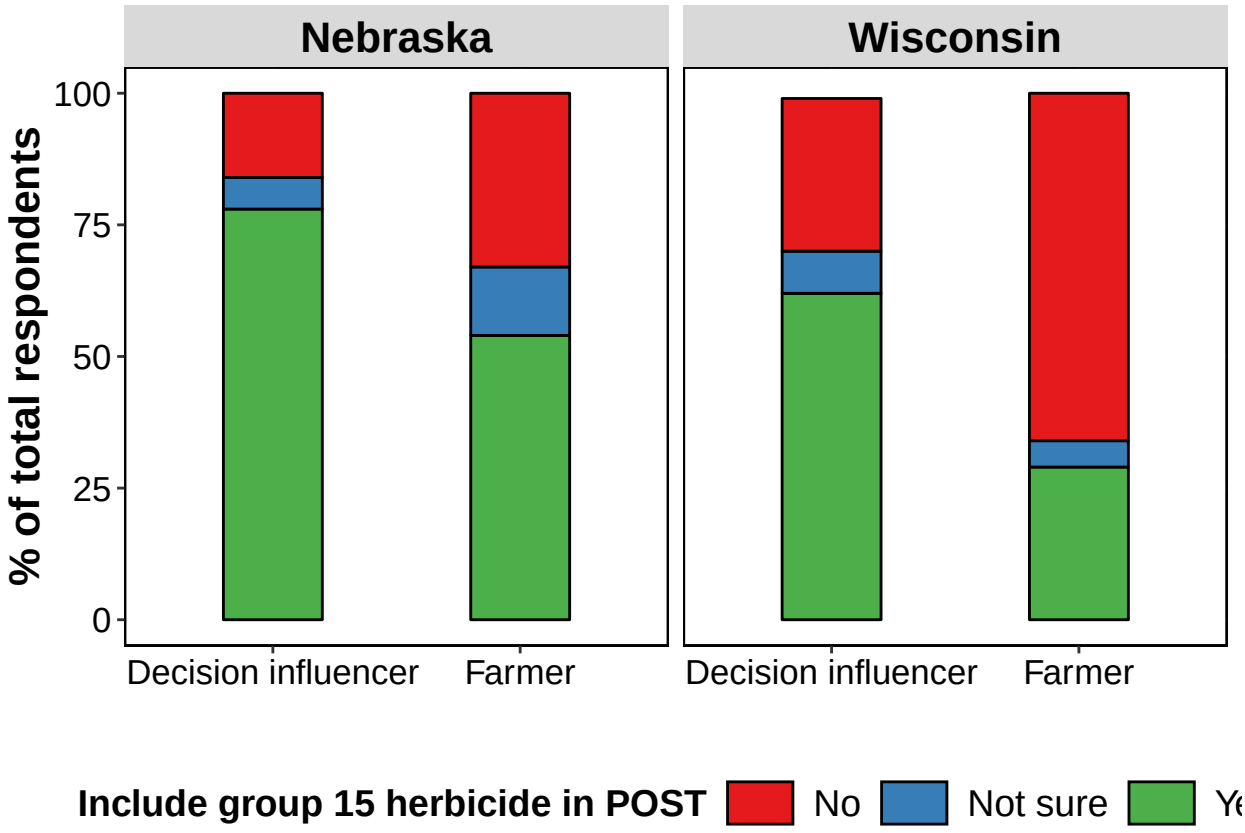

Figure 10: Addition of soil-residual herbicides (Group 15) in the POST-emergence tank-mix according to survey participants from Nebraska and Wisconsin

Table 21: Dicamba application in your Xtend soybeans injured neighboring soybean fields according to survey participants from Nebraska and Wisconsin

		Injury	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	40	73	27949	755	98711	2668	122703	3609
		Not sure	6	11	7487	1497	11938	2388	13274	2655
		Yes	9	16	7204	900	32517	3613	47956	5995
	Farmer	No	88	85	9085	107	25091	288	27744	360
		Not sure	10	10	789	79	1943	194	1336	191
		Yes	5	5	2121	424	7430	1486	8822	1764
Wisconsin	Decision influencer	No	23	79	5085	231	16930	736	48370	2103
		Not sure	5	17	2024	506	4312	862	4049	1350
		Yes	1	3	0	NaN	0	NaN	0	NaN
	Farmer	No	43	98	1376	32	4512	105	5819	142
		Yes	1	2	16	16	16	16	16	16

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 16 - Has weed management in soybeans significantly improved with the adoption of Xtend soybean?

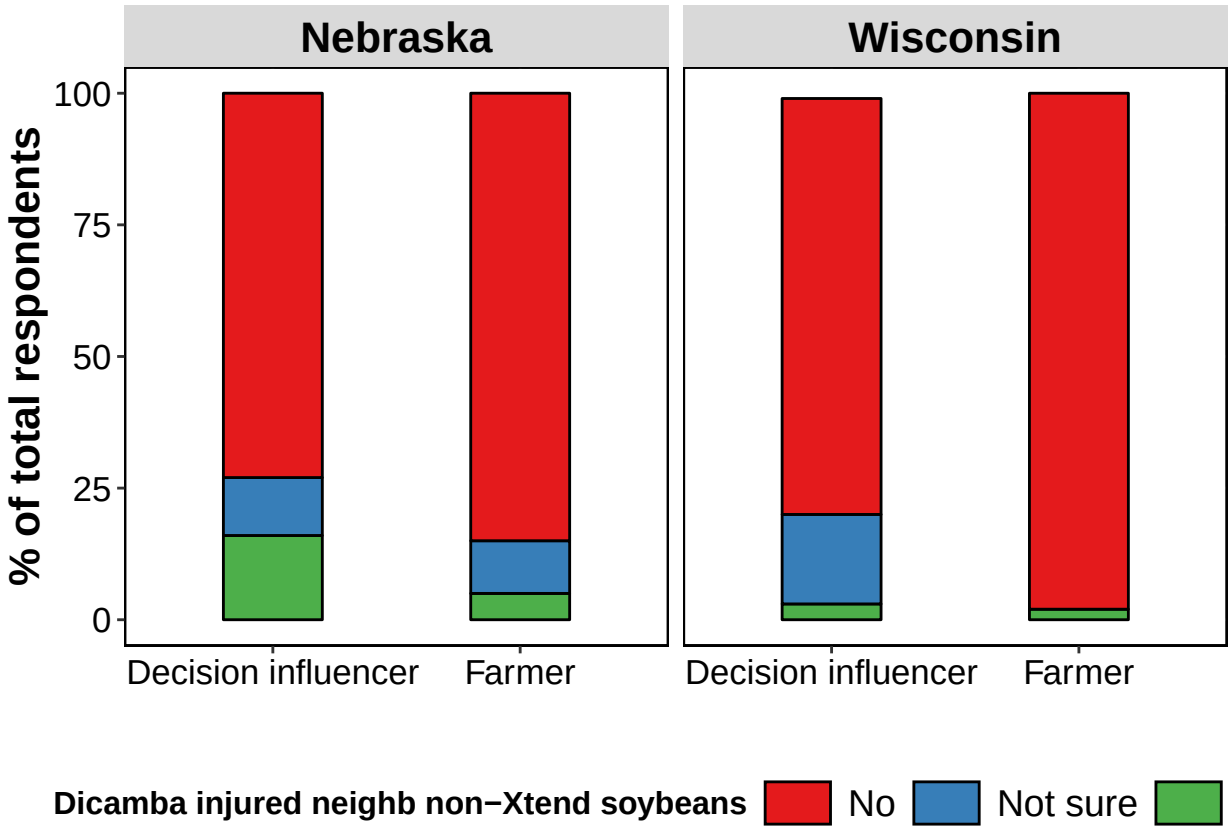

Figure 11: Dicamba application in your Xtend soybeans injured neighboring soybean fields according to survey participants from Nebraska and Wisconsin

Table 22: Weed management in soybeans significantly improved with the adoption of Xtend soybean according to survey participants from Nebraska and Wisconsin

		Improve weed control	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	4	7	1012	253	6677	1669	15378	3845
		Yes	52	93	42235	880	138574	2887	172602	3836
	Farmer	No	18	17	338	19	2483	138	1461	86
		Yes	89	83	11414	133	31845	362	37048	469
Wisconsin	Decision influencer	No	8	25	283	40	1174	147	4291	613
		Yes	24	75	7109	323	20302	883	50882	2313
	Farmer	No	16	34	16	1	153	10	404	25
		Yes	31	66	1376	44	4388	142	5350	184

[1] Decision influencer: agronomist, coop, industry rep, and university rep

NON-XTEND SOYBEAN ACRES

Question 17 - Did you notice dicamba injury in your non-Xtend soybeans?

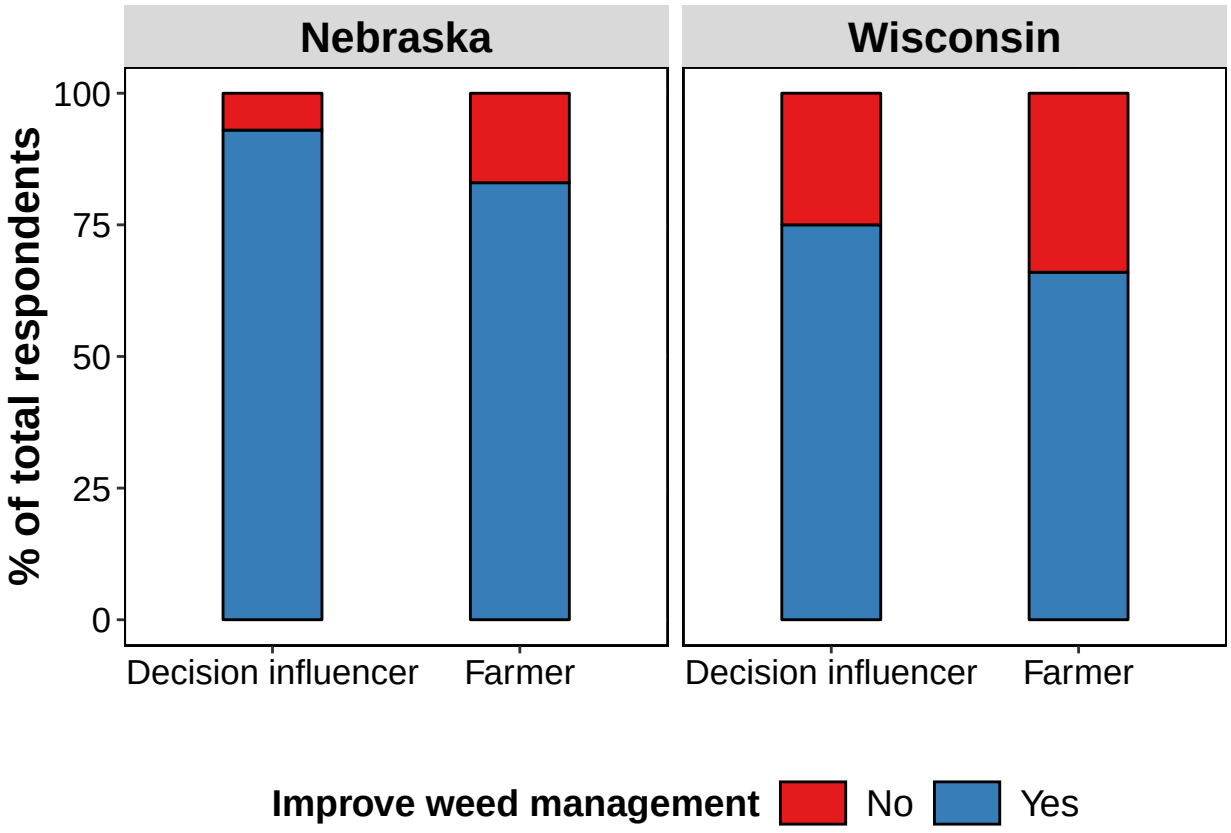

Figure 12: Weed management in soybeans significantly improved with the adoption of Xtend soybean according to survey participants from Nebraska and Wisconsin

Table 23: Dicamba injury in your non-Xtend soybeans according to survey participants from Nebraska and Wisconsin

		Injury	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	27	53	17119	658	72541	2790	85552	3422
		Yes	24	47	24140	1150	52347	2379	75799	3445
	Farmer	No	73	51	4658	71	17987	261	20325	344
		Yes	70	49	872	13	6202	93	7762	149
Wisconsin	Decision influencer	No	24	77	4157	198	12382	563	33675	1604
		Yes	7	23	2769	462	7754	1108	18887	3148
	Farmer	No	41	82	1329	34	3690	97	5747	169
		Yes	9	18	65	7	586	65	647	108

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 18- Did you file an official complaint with the Department of Agriculture?

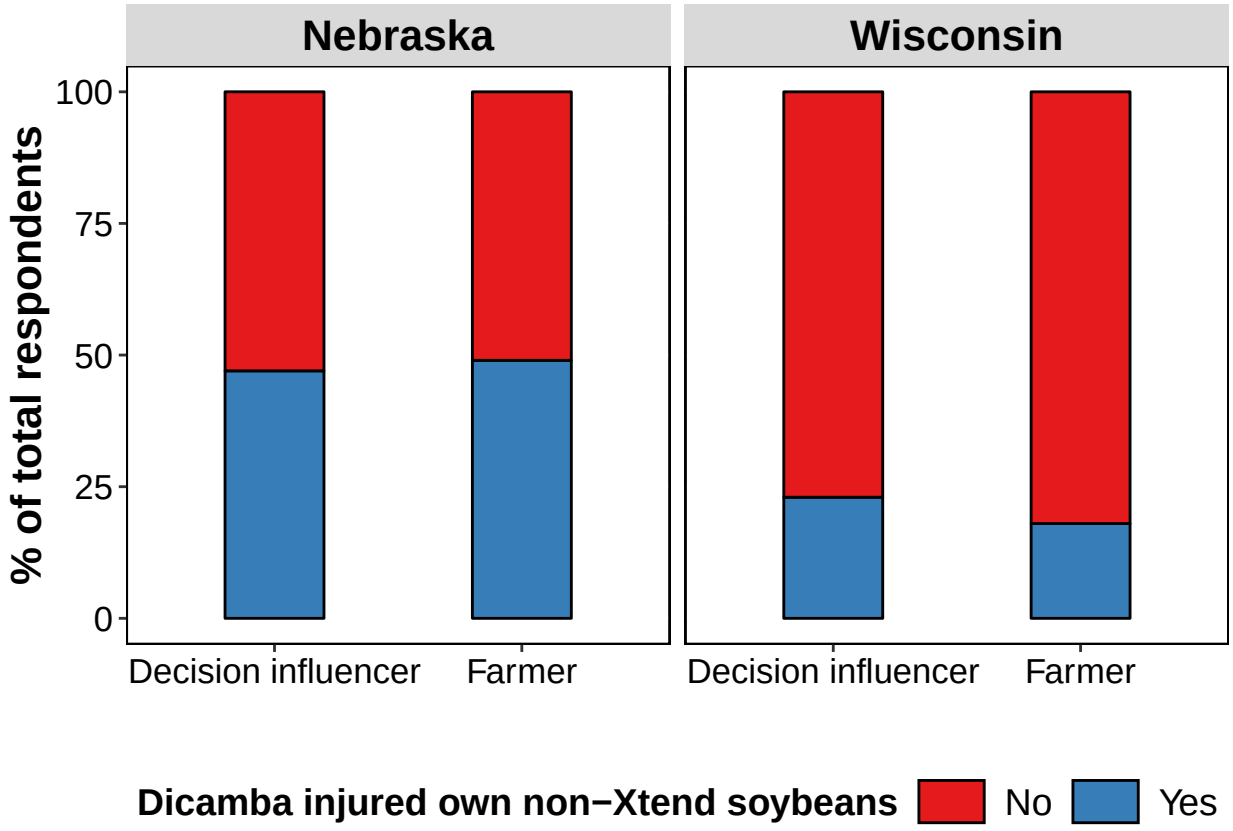

Figure 13: Dicamba injury in your non-Xtend soybeans according to survey participants from Nebraska and Wisconsin

Table 24: File an official complaint with the Department of Agriculture according to survey participants from Nebraska and Wisconsin

		File official complaint	Respondents		2017		2018		2019	
State	Role	Answer	#	%	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha	T Xtend ha	A Xtend ha
Nebraska	Decision influencer	No	44	94	37171	907	114508	2793	141158	3443
		Yes	3	6	202	101	2570	857	9308	4654
	Farmer	No	119	97	4603	43	21586	191	25456	277
		Yes	4	3	0	0	316	79	0	0
Wisconsin	Decision influencer	No	26	100	6635	302	18102	754	45467	2067
	Farmer		41	100	1394	35	3430	88	4506	141

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 19 - What do you believe was (were) the main cause(s) for dicamba injury on your non-Xtend soybean?

Need to work on this Table

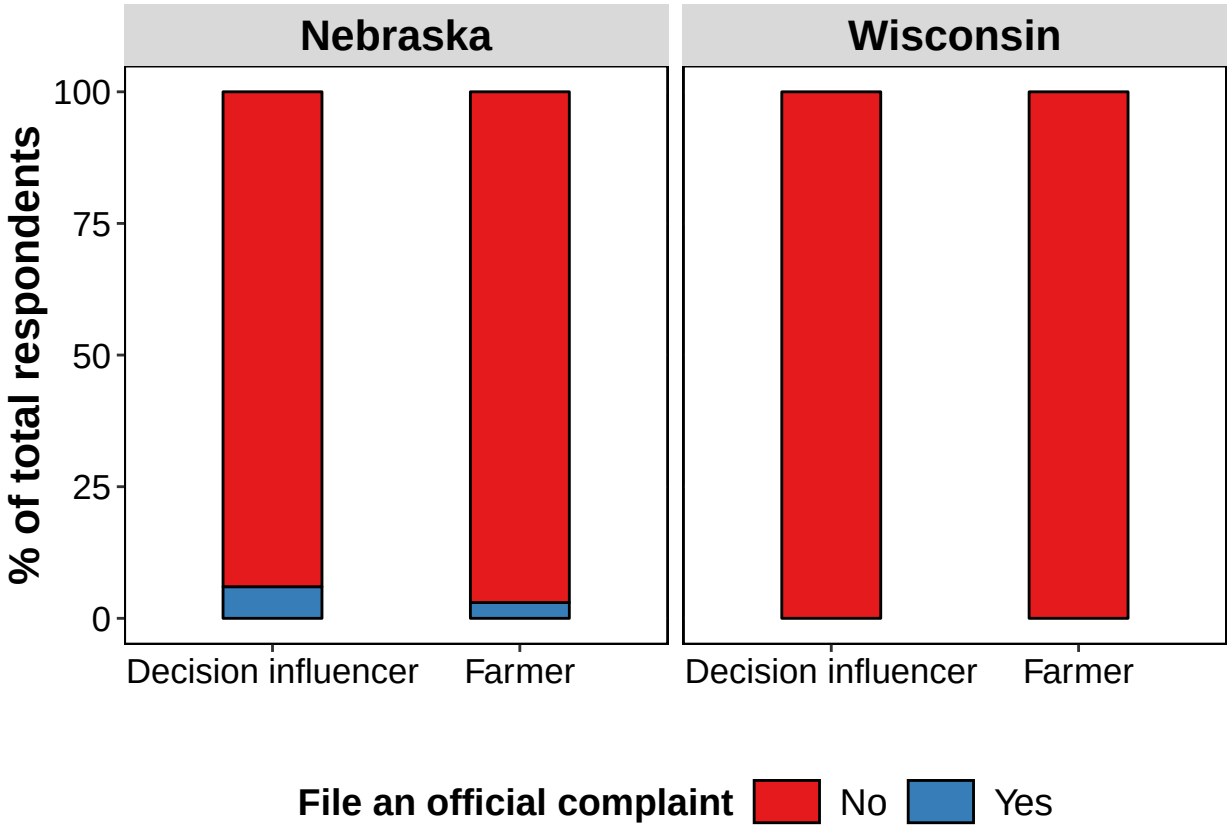

Figure 14: File an official complaint with the Department of Agriculture according to survey participants from Nebraska and Wisconsin

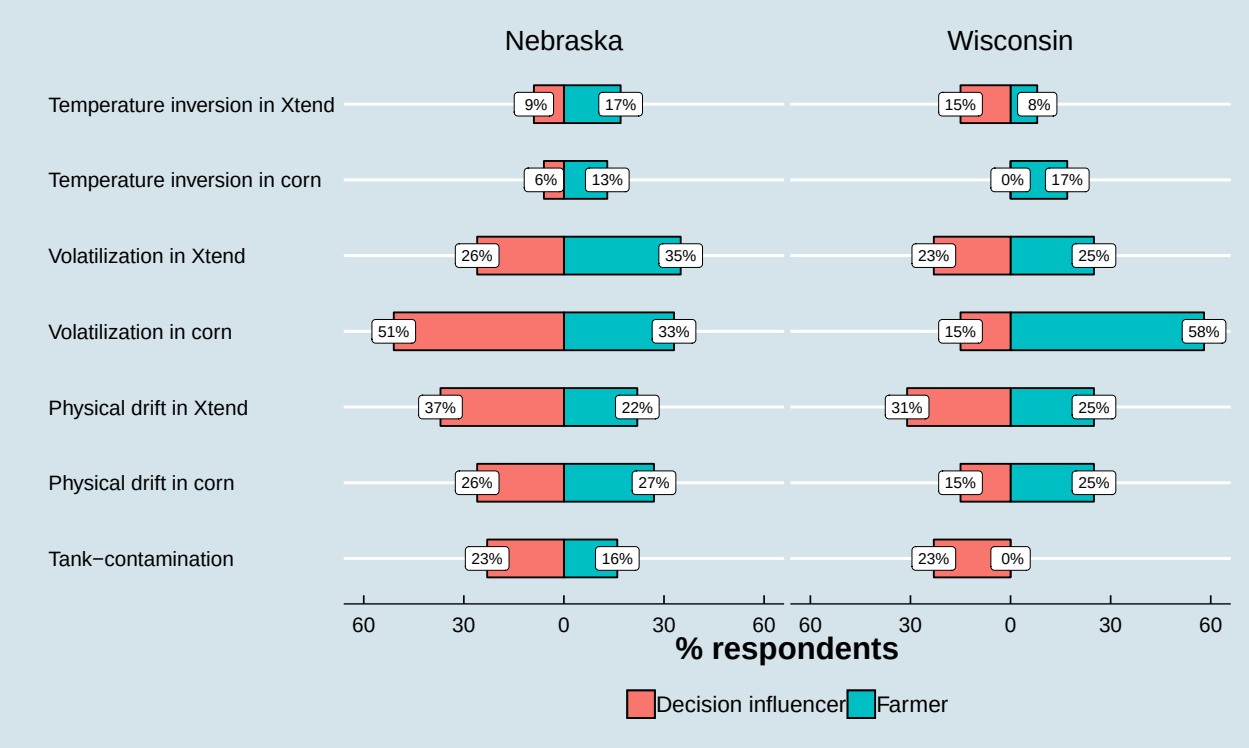

Figure 15: Main cause(s) for dicamba injury on your non-Xtend soybean according to survey participants from Nebraska and Wisconsin

Question 20 - Do you expect yield reduction in your dicamba injured soybean?

Table 25: Expect yield reduction in your dicamba injured soybean according to survey participants from Nebraska and Wisconsin

		Expected yield reduction	Respondents		2017		2018		2019	
State	Role	Answer	#	%	Xtend ha	Xtend ha	Xtend ha	Xtend ha	Xtend ha	Xtend ha
Nebraska	Decision influencer	No	32	80	34136	1177	97592	3365	116148	3872
		Yes	8	20	2185	312	10664	1333	20437	2920
	Farmer	No	49	57	3869	84	14268	304	17648	441
		Yes	37	43	500	15	2906	83	2918	97
Wisconsin	Decision influencer	No	18	86	3963	264	12798	800	40304	2519
		Yes	3	14	2024	1012	4211	1404	4110	2055
	Farmer	No	22	73	295	14	2510	120	3150	175
		Yes	8	27	16	2	64	8	16	3

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 21 - Do you think the technology should be available to producers next growing season

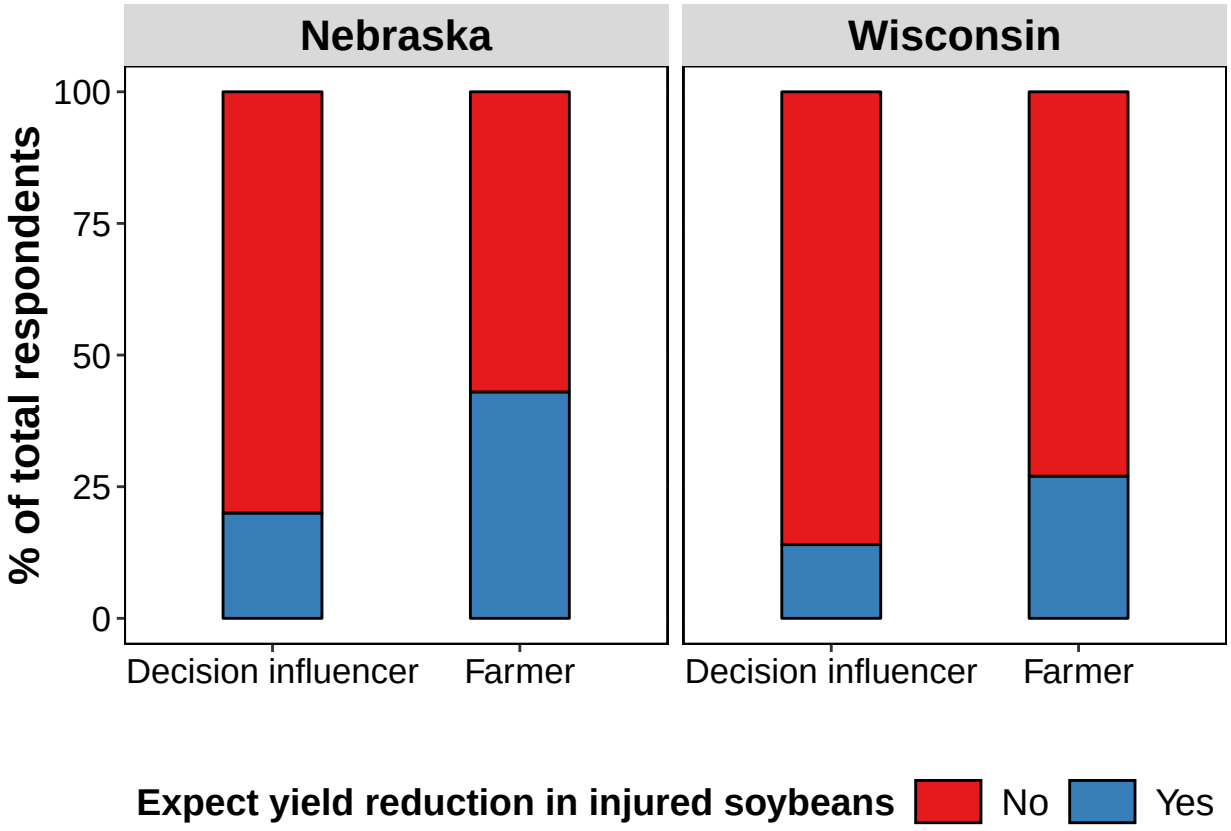

Figure 16: Expect yield reduction in your dicamba injured soybean according to survey participants from Nebraska and Wisconsin

Table 26: The Xtend technology should be available to producers next growing season according to survey participants from Nebraska and Wisconsin

		Keep Xtend	Respondents		2017		2018		2019	
State	Role	Answer	#	%	Xtend ha	Xtend ha	Xtend ha	Xtend ha	Xtend ha	Xtend ha
Nebraska	Decision influencer	No	6	10	1174	235	3865	644	11534	2307
		Yes	57	90	42517	868	138877	2778	174504	3794
	Farmer	No	33	16	439	15	1846	60	648	23
		Yes	171	84	12659	80	38361	235	45252	328
Wisconsin	Decision influencer	No	3	8	0	0	162	54	0	0
		Yes	37	92	7392	224	22209	653	57925	1755
	Farmer	No	10	12	0	0	40	4	0	0
		Yes	71	88	1493	22	6087	92	9022	158

[1] Decision influencer: agronomist, coop, industry rep, and university rep

Question 22

Any thoughts you would like to share regarding Xtend soybean

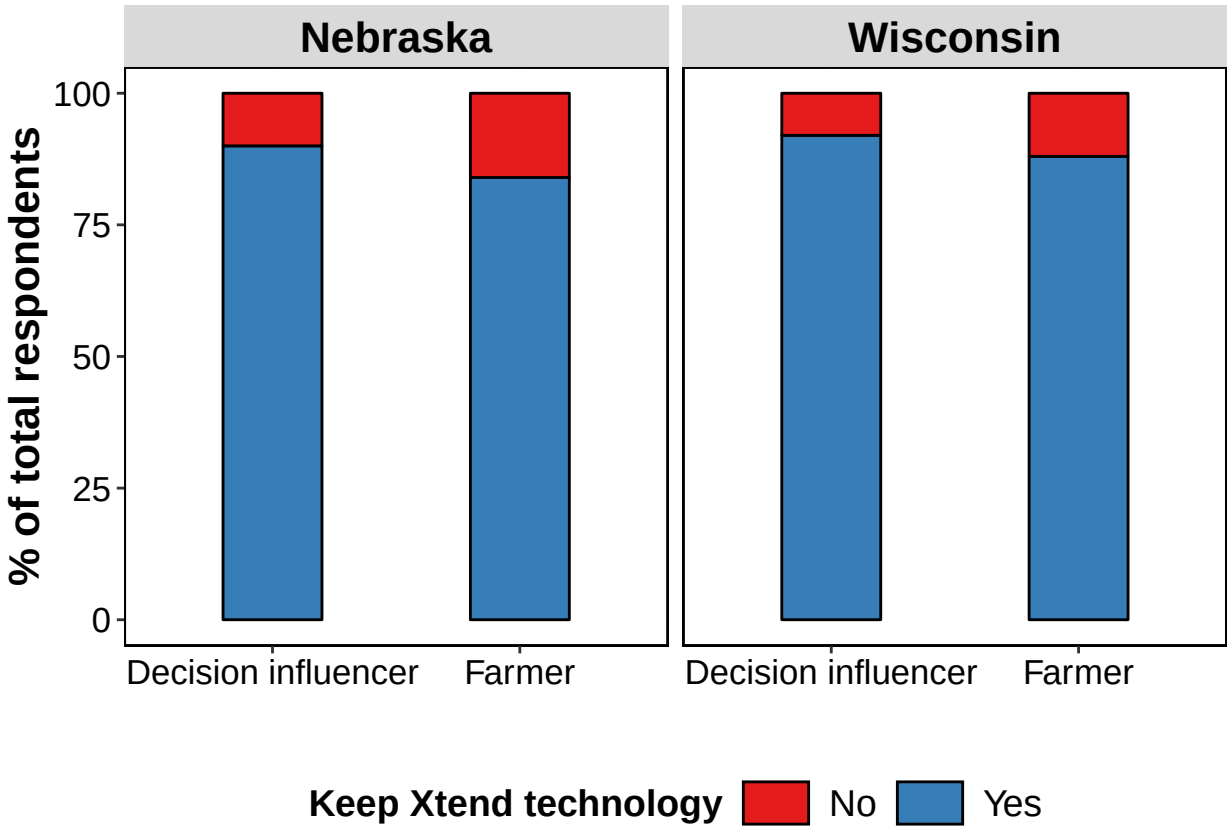

Figure 17: The Xtend technology should be available to producers next growing season according to survey participants from Nebraska and Wisconsin