

Certified Crop Advisor response data for giant ragweed survey questionnaire.

Your County

1. What is the name of the state or province you selected?	<u>Responses</u>	<u>% of total respondents</u>
Arkansas	9	0.9
Colorado	11	1.1
Illinois	165	17.0
Indiana	128	13.2
Iowa	133	13.7
Kansas	18	1.9
Kentucky	24	2.5
Minnesota	99	10.2
Missouri	43	4.4
Nebraska	42	4.3
Ohio	105	10.8
Oklahoma	6	0.6
Ontario, Canada	48	5.0
Pennsylvania	9	0.9
Tennessee	15	1.5
<u>Wisconsin</u>	<u>113</u>	<u>11.7</u>
Total	968	100.0

What is the name of the county you selected?

(Ontario, Canada not included)

<u>Selected state (total counties per state)</u>	<u>Counties selected</u>	<u>Responses per county</u>	
Arkansas (75)	Clay	1	
	Craighead	1	
	Crittenden	1	
	Cross	2	
	Drew	1	
	Jackson	1	
	Poinsett	1	
	Saline	1	
	Colorado (64)	Alamosa	1
		Fremont	1
Morgan		2	
Phillips		2	
Prowers		1	
	Washington	1	

	Weld	2
	Yuma	1
Illinois (102)	Bond	1
	Bureau	6
	Carroll	1
	Cass	1
	Champaign	8
	Christian	4
	Clark	3
	Clinton	1
	Coles	1
	Crawford	1
	Cumberland	2
	DeKalb	7
	Douglas	1
	Fayette	1
	Fulton	3
	Gallatin	2
	Greene	2
	Grundy	1
	Hamilton	2
	Hancock	3
	Henderson	1
	Henry	6
	Iroquois	2
	Jasper	3
	Jefferson	1
	Jo Daviess	1
	Kane	5
	Kankakee	3
	Kendall	1
	Knox	3
	LaSalle	4
	Lawrence	1
	Lee	2
	Livingston	4
	Logan	2
	McDonough	4
	McHenry	2
	McLean	7
	Macoupin	2
	Marion	1
	Marshall	1

	Mason	2
	Menard	2
	Mercer	6
	Morgan	4
	Ogle	5
	Peoria	2
	Perry	1
	Piatt	2
	Pike	1
	Randolph	1
	Rock Island	1
	St. Clair	1
	Sangamon	3
	Schuyler	1
	Scott	3
	Shelby	2
	Stark	3
	Stephenson	2
	Tazewell	2
	Vermilion	1
	Warren	4
	Washington	3
	Wayne	1
	White	2
	Whiteside	1
	Will	1
	Williamson	1
Indiana (92)	Adams	3
	Allen	4
	Bartholomew	1
	Benton	6
	Blackford	1
	Boone	5
	Carroll	3
	Cass	1
	Clay	2
	Clinton	2
	Daviess	2
	Decatur	3
	DeKalb	1
	Delaware	2
	Dubois	1

	Elkhart	1
	Fayette	1
	Fulton	4
	Gibson	2
	Greene	1
	Hamilton	1
	Hancock	1
	Hendricks	4
	Henry	2
	Huntington	1
	Jasper	9
	Johnson	1
	Knox	3
	Kosciusko	2
	LaGrange	1
	LaPorte	4
	Lawrence	1
	Madison	3
	Marshall	2
	Montgomery	5
	Newton	1
	Noble	4
	Owen	2
	Putnam	1
	Randolph	3
	Rush	3
	St. Joseph	1
	Shelby	1
	Starke	3
	Sullivan	1
	Switzerland	1
	Tippecanoe	7
	Vermillion	2
	Vigo	1
	Warren	1
	Washington	1
	Wells	3
	White	1
	Whitley	3
Iowa (99)	Adair	3

Allamakee	1
Audubon	1
Benton	5
Black Hawk	1
Boone	1
Buchanan	1
Buena Vista	2
Calhoun	2
Cass	2
Cedar	8
Cerro Gordo	3
Clay	1
Clayton	2
Clinton	2
Dallas	1
Delaware	2
Des Moines	1
Dubuque	5
Fayette	2
Floyd	1
Franklin	2
Fremont	2
Grundy	1
Guthrie	2
Hamilton	2
Hardin	5
Henry	1
Howard	2
Humboldt	1
Iowa	5
Jasper	1
Johnson	3
Jones	2
Kossuth	1
Lee	2
Linn	3
Louisa	1
Lyon	2
Madison	1
Mahaska	2

	Marion	1
	Marshall	1
	Mills	1
	Monroe	1
	Montgomery	2
	Muscatine	2
	O'Brien	1
	Osceola	1
	Plymouth	2
	Pocahontas	2
	Polk	2
	Pottawattamie	1
	Poweshiek	2
	Sac	2
	Scott	1
	Sioux	1
	Story	4
	Tama	2
	Warren	1
	Washington	2
	Winnebago	3
	Winneshiek	2
	Woodbury	1
	Worth	2
	Wright	1
Kansas (105)	Brown	1
	Clay	1
	Doniphan	1
	Douglas	1
	Gove	2
	Harper	1
	Harvey	1
	Lyon	1
	Nemaha	3
	Neosho	1
	Norton	2
	Osage	1
	Republic	1
	Riley	1
Kentucky (120)	Anderson	1

	Bourbon	2
	Breckinridge	1
	Butler	1
	Caldwell	1
	Christian	1
	Daviess	2
	Fayette	1
	Graves	2
	Hardin	1
	McCracken	1
	McLean	5
	Madison	1
	Nelson	1
	Shelby	1
	Simpson	1
	Warren	1
Minnesota (87)	Becker	1
	Benton	1
	Blue Earth	2
	Brown	2
	Carver	1
	Chippewa	2
	Cottonwood	1
	Dakota	1
	Dodge	4
	Fillmore	3
	Freeborn	5
	Goodhue	1
	Grant	1
	Hennepin	2
	Hubbard	1
	Jackson	1
	Kandiyohi	3
	Le Sueur	1
	Lincoln	2
	Lyon	4
	McLeod	1
	Martin	4
	Meeker	1
	Morrison	1

	Mower	2
	Murray	2
	Nicollet	1
	Olmsted	4
	Otter Tail	1
	Polk	1
	Pope	2
	Ramsey	1
	Red Lake	1
	Redwood	2
	Renville	3
	Rice	1
	Rock	2
	St. Louis	1
	Scott	1
	Sibley	1
	Stearns	4
	Steele	4
	Stevens	1
	Todd	1
	Wabasha	1
	Waseca	4
	Watonwan	1
	Winona	2
	Wright	4
	Yellow	
	Medicine	5
Missouri (115)	Andrew	1
	Atchison	1
	Audrain	3
	Bates	2
	Boone	3
	Buchanan	2
	Carroll	3
	Clark	1
	Cooper	1
	Grundy	2
	Harrison	1
	Henry	1
	Holt	3

	Howard	1
	Johnson	1
	Lafayette	1
	Lincoln	1
	Marion	2
	Mississippi	3
	Pettis	1
	Pike	1
	Ray	2
	Saline	3
	Scott	1
	Shelby	1
	Warren	1
Nebraska (93)	Antelope	2
	Boone	2
	Buffalo	2
	Burt	2
	Butler	1
	Cass	2
	Clay	2
	Colfax	1
	Cuming	1
	Dawson	1
	Dixon	1
	Fillmore	1
	Frontier	1
	Gage	1
	Greeley	1
	Hamilton	1
	Holt	1
	Madison	1
	Nance	2
	Otoe	1
	Pierce	1
	Platte	2
	Polk	3
	Red Willow	1
	Saunders	2
	Scotts Bluff	1
	Seward	2
	Washington	1
	Wayne	1

	York	1
Ohio (88)	Allen	1
	Brown	2
	Butler	2
	Champaign	2
	Clark	1
	Clinton	3
	Crawford	4
	Darke	5
	Delaware	3
	Erie	1
	Fairfield	2
	Fayette	3
	Franklin	1
	Fulton	1
	Greene	5
	Hancock	5
	Hardin	2
	Henry	1
	Highland	2
	Huron	1
	Knox	3
	Licking	1
	Lucas	1
	Madison	3
	Marion	3
	Mercer	2
	Miami	1
	Montgomery	2
	Pickaway	2
	Preble	7
	Putnam	2
	Ross	1
	Sandusky	5
	Seneca	5
	Shelby	3
	Trumbull	1
	Tuscarawas	2
	Union	2
	Van Wert	2
	Wayne	3
	Williams	2
	Wood	4

	Wyandot	1
Oklahoma (77)	Carter	1
	Garfield	1
	Kingfisher	1
	Oklahoma	1
	Seminole	1
	Texas	1
Pennsylvania (67)	Adams	1
	Berks	1
	Crawford	1
	Cumberland	1
	Lancaster	2
	Montour	1
	York	2
Tennessee (95)	Chester	1
	Crockett	2
	Dyer	1
	Gibson	1
	Greene	1
	Haywood	1
	Lake	1
	Lauderdale	1
	Loudon	1
	Macon	1
	Marion	1
	Rhea	1
	Robertson	1
	Weakley	1
Wisconsin (72)	Adams	1
	Barron	4
	Brown	4
	Buffalo	4
	Calumet	1
	Chippewa	2
	Clark	2
	Columbia	7
	Dane	4
	Dodge	3
	Dunn	2
	Eau Claire	1
	Fond du Lac	1
	Grant	6
	Green	3

Green Lake	4
Iowa	1
Jackson	2
Jefferson	2
Juneau	3
Kenosha	1
Kewaunee	3
La Crosse	2
Lafayette	3
Langlade	2
Manitowoc	3
Marathon	2
Marinette	1
Monroe	1
Ozaukee	1
Pepin	2
Pierce	5
Polk	2
Portage	1
Racine	1
Richland	2
Rock	4
St. Croix	1
Sauk	1
Shawano	1
Sheboygan	1
Trempealeau	3
Walworth	4
Washburn	1
Washington	1
Waukesha	2
Waupaca	2
Winnebago	2
Wood	1
Total	460 counties

Presence of Ragweed

2. To the best of your knowledge how long ago was giant ragweed first observed in crop fields in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
In the last 5 years	46	4.8

In the last 6 to 10 years	51	5.3
In the last 11 to 15 years	55	5.7
In the last 16 to 20 years	91	9.4
More than 20 years	566	58.5
Never observed ragweed in crop fields	35	3.6
Don't know	84	8.7
<u>Didn't answer</u>	<u>40</u>	<u>4.1</u>
Total	968	100.0

3. To the best of your knowledge how long ago was giant ragweed first observed in areas outside of crop fields in your county (e.g., field borders, fence rows, river banks, roadsides, etc.)?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
In the last 5 years	16	1.7
In the last 6 to 10 years	34	3.5
In the last 11 to 15 years	43	4.4
In the last 16 to 20 years	62	6.4
More than 20 years	655	67.7
Never observed ragweed outside of crop fields	16	1.7
Don't know	96	9.9
<u>Didn't answer</u>	<u>46</u>	<u>4.8</u>
Total	968	100.0

Ragweed First Appearance

4. In your county, did giant ragweed first appear in crop fields or in non-crop environments?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
First appeared in crop fields	73	10.3
First appeared in non-crop fields	256	36.0
<u>Don't know</u>	<u>383</u>	<u>53.8</u>
Total	712	100.0

Ragweed in Crops

5. What percentage of crop acreage in your county has giant ragweed present (*i.e.*, before measures are taken to control it)?

(please select one)

<u>Responses</u>	<u>% of total respondents</u>
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0%	0	0.0
1% to 5%	84	9.0
6% to 20%	128	13.7
21% to 40%	113	12.1
41% to 60%	114	12.2
61% to 80%	162	17.4
More than 80%	216	23.2
Don't know	33	3.5
<u>Didn't answer</u>	<u>83</u>	<u>8.9</u>
Total	933	100.0

6. In which of the following crops did giant ragweed first appear in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
Corn	256	27.4
Soybean	277	29.7
Wheat	38	4.1
Cotton	1	0.1
Alfalfa/hay	9	1.0
Other	17	1.8
Don't know	255	27.3
<u>Didn't answer</u>	<u>80</u>	<u>8.6</u>
Total	933	100.0

7. When does giant ragweed first emerge as seedlings in crop fields in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
February	5	0.5
March	112	12.0
April	456	48.9
May	225	24.1
June	34	3.6
July	0	0.0
August	1	0.1
Don't know	19	2.0
<u>Didn't answer</u>	<u>81</u>	<u>8.7</u>
Total	933	100.0

8. When does giant ragweed last emerge as seedlings in crop fields in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
February	0	0
March	0	0
April	8	0.9
May	56	6.0
June	220	23.6
July	257	27.5
August	156	16.7
September	66	7.1
Don't know	90	9.6
<u>Didn't answer</u>	<u>80</u>	<u>8.6</u>
Total	933	100.0

Ragweed Management

9. In terms of management, how would you rate giant ragweed?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
The most difficult weed in my area	30	3.2
One of the most difficult weeds in my area	355	38.0
Slightly more difficult to manage than most other weeds	337	36.1
Does not add any additional problems	121	13.0
<u>Didn't answer</u>	<u>90</u>	<u>9.6</u>
Total	933	100.0

10. In your experience, when giant ragweed becomes established in a field, effective management:

(Please check *all* that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Does not require any changes in production practices	113	11.7
Requires changes in the herbicides used	722	74.6
Requires changes in tillage practices	162	16.7
Requires changes in crop rotation	158	16.3

(n=933 respondents)

Ragweed in Non-Crop Environments

11. In your county, in which of the following non-crop environments have you observed giant ragweed?

(Please check **all** that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Fence rows	789	84.6
River banks	562	60.2
Roadsides	642	68.8
Flood plains (non-cultivated)	405	43.4
Ditch banks	684	73.3
Forest borders	408	43.7
Railroad sidings	504	54.0
Waterways	470	50.4
Other	39	4.2
	(n=933 respondents)	

12. In your county, in what percentage of the non-crop environments you selected in the previous question is giant ragweed present?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
0%	0	0
1% to 5%	84	8.8
6% to 20%	144	15.1
21% to 40%	162	17.0
41% to 60%	167	17.5
61% to 80%	135	14.2
More than 80%	127	13.3
Don't know	29	3.0
<u>Didn't answer</u>	<u>104</u>	<u>10.9</u>
Total	952	100.0

13. In which of the following non-crop environments did giant ragweed first appear in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
Fence rows	194	20.8
River banks	64	6.9
Roadsides	46	4.9
Flood plains (non-cultivated)	40	4.3
Ditch banks	70	7.5
Forest borders	13	1.4
Waterways	28	3.0
Don't know	379	40.6
Other	13	1.4

<u>Didn't answer</u>	<u>86</u>	<u>9.2</u>
Total	933	100.0

Soils

14. In which types of soils have you observed giant ragweed in your county?

(Please check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Poorly drained	482	49.8
Moderately drained	664	68.6
Well drained	520	53.7
Low fertility	468	48.3
Moderate fertility	611	63.1
High fertility	569	58.8
Other	29	3.0
	(n=968 respondents)	

15. In what percentage of crop acreage are nightcrawlers (the common earthworm, *Lumbricus terrestris*) present?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
0%	3	0.3
1% to 5%	18	1.9
6% to 20%	40	4.1
21% to 40%	65	6.7
41% to 60%	104	10.7
61% to 80%	125	12.9
More than 80%	306	31.6
Don't know	181	18.7
<u>Didn't answer</u>	<u>126</u>	<u>13.0</u>
Total	968	100.0

Corn

Is corn grown in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
Yes	779	80.5
No	189	19.5
<u>Don't know</u>	<u>0</u>	<u>0.0</u>
Total	968	100.0

In your county, on what percentage of the corn acreage is each of the following tillage practices used?*

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% Conventional tillage (e.g., moldboard plow, <30% cover of crop residues remaining on the surface)		
0%	96	12.3
1% to 5%	132	16.9
6% to 20%	230	29.5
21% to 40%	153	19.6
41% to 60%	90	11.6
61% to 80%	55	7.1
More than 80%	22	2.8
<u>Didn't answer</u>	<u>1</u>	<u>0.1</u>
Total	779	100.0
% Minimum tillage (e.g. chisel plow, ≥ 30% cover of crop residues remaining on the surface)		
0%	8	1.0
1% to 5%	11	1.4
6% to 20%	98	12.6
21% to 40%	195	25.0
41% to 60%	194	24.9
61% to 80%	205	26.3
More than 80%	67	8.6
<u>Didn't answer</u>	<u>1</u>	<u>0.1</u>
Total	779	100.0
% No tillage		
0%	55	7.1
1% to 5%	95	12.2
6% to 20%	294	37.7
21% to 40%	208	26.7
41% to 60%	78	10.0
61% to 80%	36	4.6
More than 80%	11	1.4
<u>Didn't answer</u>	<u>2</u>	<u>0.3</u>
Total	779	100.0

In your county, what percentage of the corn acres was rotated at least once in the last three years?

	<u>Responses</u>	<u>% of total respondents</u>
0%	0	0
1% to 5%	2	0.3
6% to 20%	7	0.9

21% to 40%	66	8.5
41% to 60%	102	13.1
61% to 80%	209	26.8
More than 80%	377	48.4
Don't know	9	1.2
<u>Didn't answer</u>	<u>7</u>	<u>0.9</u>
Total	779	100.0

In your county, on what percentage of the corn acreage is each of the following herbicide practices used?*

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% Pre Only - Herbicide applied before the emergence of the specified crop or weed, surface applied or incorporated.		
0%	185	23.7
1% to 5%	106	13.6
6% to 20%	237	30.4
21% to 40%	151	19.4
41% to 60%	59	7.6
61% to 80%	30	3.9
More than 80%	3	0.4
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

% Post Only - Herbicide applied after the emergence of the specified crop or weed.

0%	112	14.4
1% to 5%	87	11.2
6% to 20%	279	35.8
21% to 40%	185	23.7
41% to 60%	72	9.2
61% to 80%	30	3.9
More than 80%	6	0.8
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

% Pre and Post - Herbicide applied before and after the emergence of the specified crop or weed.

0%	7	0.9
1% to 5%	6	0.8
6% to 20%	80	10.3
21% to 40%	139	17.8

41% to 60%	163	20.9
61% to 80%	226	29.0
More than 80%	150	19.3
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

% No Pre and/or Post Herbicide Applied

0%	662	85.0
1% to 5%	94	12.1
6% to 20%	10	1.3
21% to 40%	3	0.4
41% to 60%	1	0.1
61% to 80%	0	0.0
More than 80%	1	0.1
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

In corn fields in your county, what percentage uses each of the following number of post applications:

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% No Post applications		
0%	222	28.5
1% to 5%	104	13.4
6% to 20%	231	29.7
21% to 40%	128	16.4
41% to 60%	56	7.2
61% to 80%	27	3.5
More than 80%	3	0.4
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

% 1 Post application

0%	5	0.6
1% to 5%	3	0.4
6% to 20%	23	3.0
21% to 40%	93	11.9
41% to 60%	172	22.1
61% to 80%	269	34.5
More than 80%	206	26.4
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

% 2 Post applications

0%	194	24.9
1% to 5%	133	17.1
6% to 20%	280	35.9
21% to 40%	102	13.1
41% to 60%	38	4.9
61% to 80%	17	2.2
More than 80%	7	0.9
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

% more than 2 Post applications

0%	637	81.8
1% to 5%	91	11.7
6% to 20%	35	4.5
21% to 40%	7	0.9
41% to 60%	1	0.1
61% to 80%	0	0.0
More than 80%	0	0.0
<u>Didn't answer</u>	<u>8</u>	<u>1.0</u>
Total	779	100.0

Of the Round-up Ready corn acres in your county, on what percent of the acres is glyphosate the only herbicide applied post-emergence?

	<u>Responses</u>	<u>% of total respondents</u>
0%	43	5.5
1% to 5%	128	16.4
6% to 20%	208	26.7
21% to 40%	133	17.1
41% to 60%	100	12.8
61% to 80%	81	10.4
More than 80%	47	6.0
Don't know	25	3.2
<u>Didn't answer</u>	<u>14</u>	<u>1.8</u>
Total	779	100.0

In corn fields in your county, has herbicide-resistant giant ragweed been suspected or confirmed (by University weed scientists or another entity)? (*Herbicide resistance is the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type.*)

<i>(please select one per row)</i>	<u>Responses</u>	<u>% of total respondents</u>
Resistant to ALS-Inhibiting herbicides (e.g., Accent, Option, Permit, Beacon)		
Yes, suspected	227	29.1
Yes, confirmed	108	13.9
No	242	31.1
Don't know	174	22.3
<u>Didn't answer</u>	<u>28</u>	<u>3.6</u>
Total	779	100.0
Resistant to glyphosate (e.g., Roundup, Glyphomax, Buccaneer)		
Yes, suspected	256	32.9
Yes, confirmed	133	17.1
No	246	31.6
Don't know	126	16.2
<u>Didn't answer</u>	<u>18</u>	<u>2.3</u>
Total	779	100.0
Resistant to both ALS-inhibiting herbicides and glyphosate		
Yes, suspected	181	23.2
Yes, confirmed	49	6.3
No	294	37.7
Don't know	221	28.4
<u>Didn't answer</u>	<u>34</u>	<u>4.4</u>
Total	779	100.0

In corn fields in your county with confirmed or suspected herbicide-resistant giant ragweed, do the populations occur in:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Fields in floodplains	211	27.1
Fields above the floodplain	285	36.6
Don't know	118	15.1
	(n=779 respondents)	

In corn fields where confirmed or suspected herbicide-resistant giant ragweed occurs, which of the following appear to be sources of that population:

<i>(check all that apply)</i>	<u>Responses</u>	<u>% of total respondents</u>
Management practices selected for resistant giant ragweed	343	44.0
Equipment contaminated with ragweed seed	141	18.1
Custom operation (e.g., tillage, planting, harvesting, etc.)	90	11.6
Crop seed contamination	10	1.3
Manure contaminated with ragweed seed	123	15.8
Seed brought in through floodwaters	153	19.6
Don't know	59	7.6
Not applicable	12	1.5
Other	21	2.7
	(n=779 respondents)	

Cotton

Is cotton grown in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
Yes	14	1.4
No	954	98.6
<u>Don't know</u>	0	0.0
Total	968	100.0

For the cotton crops grown in your county, what percentage of crop acreage uses each of the following tillage practices?

(percentages must sum to 100%)

% Conventional tillage <i>(e.g., moldboard plow, <30% cover of crop residues remaining on the surface)</i>	<u>Responses</u>	<u>% of total respondents</u>
0%	7	50.0
1% to 5%	1	7.1
6% to 20%	3	21.4
21% to 40%	1	7.1
41% to 60%	1	7.1
61% to 80%	0	0.0
More than 80%	1	7.1
<u>Didn't answer</u>	0	0.0
Total	14	100.0

% Minimum tillage (e.g. chisel plow, \geq 30% cover of crop residues remaining on the surface)

0%	5	35.7
1% to 5%	0	0.0
6% to 20%	3	21.4
21% to 40%	3	21.4
41% to 60%	0	0.0
61% to 80%	1	7.1
More than 80%	2	14.3
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

% No tillage

0%	3	21.4
1% to 5%	0	0.0
6% to 20%	1	7.1
21% to 40%	2	14.3
41% to 60%	2	14.3
61% to 80%	0	0.0
More than 80%	6	42.9
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

In your county, what percentage of the cotton acres was rotated at least once in the last three years?

	<u>Responses</u>	<u>% of total respondents</u>
0%	0	0.0
1% to 5%	0	0.0
6% to 20%	0	0.0
21% to 40%	3	21.4
41% to 60%	3	21.4
61% to 80%	0	0.0
More than 80%	4	28.6
Don't know	0	0.0
<u>Didn't answer</u>	<u>4</u>	<u>28.6</u>
Total	14	100.0

In your county, on what percentage of the cotton acreage is each of the following herbicide practices used?*

(percentages must sum to 100%)

% Pre Only - Herbicide applied before the emergence of the specified crop or weed, surface applied or incorporated.

	<u>Responses</u>	<u>% of total respondents</u>
0%	12	85.7

1% to 5%	1	7.1
6% to 20%	1	7.1
21% to 40%	0	0.0
41% to 60%	0	0.0
61% to 80%	0	0.0
More than 80%	0	0.0
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

% Post Only - Herbicide applied after the emergence of the specified crop or weed.

0%	10	71.4
1% to 5%	1	7.1
6% to 20%	2	14.3
21% to 40%	0	0.0
41% to 60%	0	0.0
61% to 80%	0	0.0
More than 80%	1	7.1
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

% Pre and Post - Herbicide applied before and after the emergence of the specified crop or weed.

0%	1	7.1
1% to 5%	0	0.0
6% to 20%	0	0.0
21% to 40%	0	0.0
41% to 60%	0	0.0
61% to 80%	3	21.4
More than 80%	10	71.4
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

% No Pre and/or Post Herbicide Applied

0%	13	92.9
1% to 5%	1	7.1
6% to 20%	0	0.0
21% to 40%	0	0.0
41% to 60%	0	0.0
61% to 80%	0	0.0
More than 80%	0	0.0
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

In cotton fields in your county, what percentage uses each of the following number of post applications:

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% No Post applications		
0%	13	92.9
1% to 5%	1	7.1
6% to 20%	0	0.0
21% to 40%	0	0.0
41% to 60%	0	0.0
61% to 80%	0	0.0
More than 80%	0	0.0
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0
% 1 Post application		
0%	11	78.6
1% to 5%	0	0.0
6% to 20%	2	14.3
21% to 40%	0	0.0
41% to 60%	0	0.0
61% to 80%	0	0.0
More than 80%	1	7.1
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0
% 2 Post applications		
0%	5	35.7
1% to 5%	0	0.0
6% to 20%	0	0.0
21% to 40%	1	7.1
41% to 60%	1	7.1
61% to 80%	2	14.3
More than 80%	5	35.7
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0
% more than 2 Post applications		
0%	5	35.7
1% to 5%	0	0.0
6% to 20%	3	21.4
21% to 40%	0	0.0

41% to 60%	1	7.1
61% to 80%	1	7.1
More than 80%	4	28.6
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

Of the Round-up Ready cotton acres in your county, on what percent of the acres is glyphosate the only herbicide applied post-emergence?

	<u>Responses</u>	<u>% of total respondents</u>
0%	7	50.0
1% to 5%	0	0.0
6% to 20%	2	14.3
21% to 40%	1	7.1
41% to 60%	0	0.0
61% to 80%	0	0.0
More than 80%	2	14.3
Don't know	2	14.3
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

In cotton fields in your county, has herbicide-resistant giant ragweed been suspected or confirmed (by University weed scientists or another entity)? (*Herbicide resistance is the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type.*)

(please select one per row)

Resistant to ALS-Inhibiting herbicides (e.g., Envoke, Staple)

	<u>Responses</u>	<u>% of total respondents</u>
Yes, suspected	3	21.4
Yes, confirmed	2	14.3
No	7	50.0
Don't know	2	14.3
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

Resistant to glyphosate (e.g., Roundup, Glyphomax, Buccaneer)

Yes, suspected	2	14.3
Yes, confirmed	3	21.4
No	7	50.0
Don't know	2	14.3

<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

Resistant to both ALS-inhibiting herbicides and glyphosate

Yes, suspected	2	14.3
Yes, confirmed	2	14.3
No	7	50.0
Don't know	3	21.4
<u>Didn't answer</u>	<u>0</u>	<u>0.0</u>
Total	14	100.0

In cotton fields in your county with confirmed or suspected herbicide-resistant giant ragweed, do the populations occur in:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Fields in floodplains	2	14.3
Fields above the floodplain	3	21.4
Don't know	2	14.3
	(n=14 respondents)	

In cotton fields where confirmed or suspected herbicide-resistant giant ragweed occurs, which of the following appear to be sources of that population:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Management practices selected for resistant giant ragweed	2	14.3
Equipment contaminated with ragweed seed	3	21.4
Custom operation (e.g., tillage, planting, harvesting, etc.)	2	14.3
Crop seed contamination	0	0.0
Manure contaminated with ragweed seed	0	0.0
Seed brought in through floodwaters	1	7.1
Don't know	2	14.3
Not applicable	-	-
Other	-	-
Didn't answer	4	28.6
	(n=14 respondents)	

Soybean

Are soybeans grown in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
Yes	726	75.0
No	242	25.0
<u>Don't know</u>	<u>0</u>	<u>0.0</u>
Total	968	100.0

For the soybean crops grown in your county, what percentage of crop acreage uses each of the following tillage practices?

(percentages must sum to 100%)

% Conventional tillage (e.g., moldboard plow, <30% cover of crop residues remaining on the surface)

	<u>Responses</u>	<u>% of total respondents</u>
0%	214	29.5
1% to 5%	124	17.1
6% to 20%	234	32.2
21% to 40%	90	12.4
41% to 60%	33	4.5
61% to 80%	21	2.9
More than 80%	7	1.0
<u>Didn't answer</u>	<u>3</u>	<u>0.4</u>
Total	726	100.0

% Minimum tillage (e.g. chisel plow, ≥ 30% cover of crop residues remaining on the surface)

0%	21	2.9
1% to 5%	16	2.2
6% to 20%	132	18.2
21% to 40%	244	33.6
41% to 60%	172	23.7
61% to 80%	103	14.2
More than 80%	36	5.0
<u>Didn't answer</u>	<u>2</u>	<u>0.3</u>
Total	726	100.0

% No tillage

0%	25	3.4
1% to 5%	25	3.4
6% to 20%	129	17.8
21% to 40%	183	25.2
41% to 60%	200	27.5

61% to 80%	118	16.3
More than 80%	43	5.9
<u>Didn't answer</u>	<u>3</u>	<u>0.4</u>
Total	726	100.0

In your county, what percentage of the soybean acres was rotated at least once in the last three years?

	<u>Responses</u>	<u>% of total respondents</u>
0%	0	0.0
1% to 5%	0	0.0
6% to 20%	8	1.1
21% to 40%	22	3.0
41% to 60%	44	6.1
61% to 80%	79	10.9
More than 80%	562	77.4
Don't know	3	0.4
<u>Didn't answer</u>	<u>8</u>	<u>1.1</u>
Total	726	100.0

In your county, on what percentage of the soybean acreage is each of the following herbicide practices used?*

(percentages must sum to 100%)

% Pre Only - Herbicide applied before the emergence of the specified crop or weed, surface applied or incorporated.

	<u>Responses</u>	<u>% of total respondents</u>
0%	473	65.2
1% to 5%	120	16.5
6% to 20%	98	13.5
21% to 40%	23	3.2
41% to 60%	5	0.7
61% to 80%	1	0.1
More than 80%	0	0.0
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

% Post Only - Herbicide applied after the emergence of the specified crop or weed.

0%	48	6.6
1% to 5%	16	2.2
6% to 20%	140	19.3
21% to 40%	181	24.9
41% to 60%	153	21.1
61% to 80%	132	18.2

More than 80%	50	6.9
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

% Pre and Post - Herbicide applied before and after the emergence of the specified crop or weed.

0%	10	1.4
1% to 5%	11	1.5
6% to 20%	112	15.4
21% to 40%	156	21.5
41% to 60%	146	20.1
61% to 80%	173	23.8
More than 80%	112	15.4
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

% No Pre and/or Post Herbicide Applied

0%	650	89.5
1% to 5%	59	8.1
6% to 20%	9	1.2
21% to 40%	1	0.1
41% to 60%	1	0.1
61% to 80%	0	0.0
More than 80%	0	0.0
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

In soybean fields in your county, what percentage uses each of the following number of post applications:

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% No Post applications		
0%	517	71.2
1% to 5%	128	17.6
6% to 20%	57	7.9
21% to 40%	9	1.2
41% to 60%	4	0.6
61% to 80%	3	0.4
More than 80%	2	0.3
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

% 1 Post application

0%	31	4.3
1% to 5%	11	1.5
6% to 20%	82	11.3
21% to 40%	125	17.2
41% to 60%	170	23.4
61% to 80%	201	27.7
More than 80%	100	13.8
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

% 2 Post applications

0%	32	4.4
1% to 5%	26	3.6
6% to 20%	181	24.9
21% to 40%	180	24.8
41% to 60%	164	22.6
61% to 80%	98	13.5
More than 80%	39	5.4
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

% more than 2 Post applications

0%	476	65.6
1% to 5%	98	13.5
6% to 20%	124	17.1
21% to 40%	18	2.5
41% to 60%	3	0.4
61% to 80%	0	0.0
More than 80%	1	0.1
<u>Didn't answer</u>	<u>6</u>	<u>0.8</u>
Total	726	100.0

Of the Round-up Ready soybean acres in your county, on what percent of the acres is glyphosate the only herbicide applied post-emergence?

	<u>Responses</u>	<u>% of total respondents</u>
0%	20	2.8
1% to 5%	28	3.9
6% to 20%	104	14.3
21% to 40%	113	15.6
41% to 60%	145	20.0
61% to 80%	157	21.6
More than 80%	129	17.8
Don't know	16	2.2

<u>Didn't answer</u>	<u>14</u>	<u>1.9</u>
Total	726	100.0

In soybean fields in your county, has herbicide-resistant giant ragweed been suspected or confirmed (by University weed scientists or another entity)? (*Herbicide resistance is the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type.*)

(please select one per row)

Resistant to ALS-Inhibiting herbicides (e.g., Classic, FirstRate, Raptor, Pursuit)

	<u>Responses</u>	<u>% of total respondents</u>
Yes, suspected	219	30.2
Yes, confirmed	128	17.6
No	206	28.4
Don't know	147	20.2
<u>Didn't answer</u>	<u>26</u>	<u>3.6</u>
Total	726	100.0

Resistant to glyphosate (e.g., Roundup, Glyphomax, Buccaneer)

Yes, suspected	228	31.4
Yes, confirmed	131	18.0
No	229	31.5
Don't know	118	16.3
<u>Didn't answer</u>	<u>20</u>	<u>2.8</u>
Total	726	100.0

Resistant to both ALS-inhibiting herbicides and glyphosate

Yes, suspected	181	24.9
Yes, confirmed	62	8.5
No	261	36.0
Don't know	190	26.2
<u>Didn't answer</u>	<u>32</u>	<u>4.4</u>
Total	726	100.0

In soybean fields in your county with confirmed or suspected herbicide-resistant giant ragweed, do the populations occur in:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
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Fields in floodplains	244	33.6
Fields above the floodplain	295	40.6
Don't know	89	12.3
	(n=726 respondents)	

In soybean fields where confirmed or suspected herbicide-resistant giant ragweed occurs, which of the following appear to be sources of that population:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Management practices selected for resistant giant ragweed	327	45.0
Equipment contaminated with ragweed seed	145	20.0
Custom operation (e.g., tillage, planting, harvesting, etc.)	101	13.9
Crop seed contamination	17	2.3
Manure contaminated with ragweed seed	121	16.7
Seed brought in through floodwaters	148	20.4
Don't know	54	7.4
Not applicable	11	1.5
Other	19	2.6
	(n=726 respondents)	

Wheat

Is wheat grown in your county?

(please select one)

	<u>Responses</u>	<u>% of total respondents</u>
Yes	496	51.2
No	472	48.8
<u>Don't know</u>	<u>0</u>	<u>0.0</u>
Total	968	100.0

For the wheat crops grown in your county, what percentage of crop acreage uses each of the following tillage practices?

(percentages must sum to 100%)

% Conventional tillage (e.g., moldboard plow, <30% cover of crop residues remaining on the surface)	<u>Responses</u>	<u>% of total respondents</u>
0%	226	45.6

1% to 5%	50	10.1
6% to 20%	98	19.8
21% to 40%	45	9.1
41% to 60%	28	5.6
61% to 80%	21	4.2
More than 80%	27	5.4
<u>Didn't answer</u>	<u>1</u>	<u>0.2</u>
Total	496	100.0
% Minimum tillage (e.g. chisel plow, ≥ 30% cover of crop residues remaining on the surface)		
0%	56	11.3
1% to 5%	17	3.4
6% to 20%	108	21.8
21% to 40%	100	20.2
41% to 60%	81	16.3
61% to 80%	76	15.3
More than 80%	57	11.5
<u>Didn't answer</u>	<u>1</u>	<u>0.2</u>
Total	496	100.0
% No tillage		
0%	79	15.9
1% to 5%	18	3.6
6% to 20%	89	17.9
21% to 40%	82	16.5
41% to 60%	87	17.5
61% to 80%	79	15.9
More than 80%	61	12.3
<u>Didn't answer</u>	<u>1</u>	<u>0.2</u>
Total	496	100.0

In your county, what percentage of the wheat acres was rotated at least once in the last three years?

	<u>Responses</u>	<u>% of total respondents</u>
0%	0	0.0
1% to 5%	10	2.0
6% to 20%	15	3.0
21% to 40%	14	2.8
41% to 60%	8	1.6
61% to 80%	27	5.4
More than 80%	417	84.1
Don't know	0	0.0
<u>Didn't answer</u>	<u>5</u>	<u>1.0</u>
Total	496	100.0

For the wheat crops grown in your county, what percentage of the crop acreage uses each of the following herbicide practices?

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% Pre Only - Herbicide applied before the emergence of the specified crop or weed, surface applied or incorporated.		
0%	388	78.2
1% to 5%	38	7.7
6% to 20%	44	8.9
21% to 40%	7	1.4
41% to 60%	5	1.0
61% to 80%	5	1.0
More than 80%	7	1.4
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

% Post Only - Herbicide applied after the emergence of the specified crop or weed.

0%	48	9.7
1% to 5%	14	2.8
6% to 20%	68	13.7
21% to 40%	49	9.9
41% to 60%	55	11.1
61% to 80%	88	17.7
More than 80%	172	34.7
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

% Pre and Post - Herbicide applied before and after the emergence of the specified crop or weed.

0%	349	70.4
1% to 5%	33	6.7
6% to 20%	60	12.1
21% to 40%	25	5.0
41% to 60%	8	1.6
61% to 80%	7	1.4
More than 80%	12	2.4
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

% No Pre and/or Post Herbicide Applied

0%	199	40.1
1% to 5%	30	6.0
6% to 20%	62	12.5
21% to 40%	47	9.5
41% to 60%	44	8.9
61% to 80%	53	10.7
More than 80%	59	11.9
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

In wheat fields in your county, what percentage uses each of the following number of post applications:

(percentages must sum to 100%)

	<u>Responses</u>	<u>% of total respondents</u>
% No Post applications		
0%	181	36.5
1% to 5%	22	4.4
6% to 20%	73	14.7
21% to 40%	49	9.9
41% to 60%	51	10.3
61% to 80%	55	11.1
More than 80%	63	12.7
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

% 1 Post application

0%	33	6.7
1% to 5%	14	2.8
6% to 20%	56	11.3
21% to 40%	59	11.9
41% to 60%	61	12.3
61% to 80%	97	19.6
More than 80%	174	35.1
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

% 2 Post applications

0%	352	71.0
1% to 5%	39	7.9
6% to 20%	60	12.1
21% to 40%	22	4.4
41% to 60%	9	1.8
61% to 80%	4	0.8

More than 80%	8	1.6
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

% more than 2 Post applications

0%	472	95.2
1% to 5%	13	2.6
6% to 20%	5	1.0
21% to 40%	2	0.4
41% to 60%	1	0.2
61% to 80%	1	0.2
More than 80%	0	0.0
<u>Didn't answer</u>	<u>2</u>	<u>0.4</u>
Total	496	100.0

In wheat fields in your county, has herbicide-resistant giant ragweed been suspected or confirmed (by University weed scientists or another entity)? (*Herbicide resistance is the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type.*)

(please select one per row)

Resistant to ALS-Inhibiting herbicides (e.g., Glean, Osprey, Peak, Harmony)

	<u>Responses</u>	<u>% of total respondents</u>
Yes, suspected	99	20.0
Yes, confirmed	54	10.9
No	183	36.9
Don't know	145	29.2
<u>Didn't answer</u>	<u>15</u>	<u>3.0</u>
Total	496	100.0

Resistant to glyphosate (e.g., Roundup, Glyphomax, Buccaneer)

Yes, suspected	97	19.6
Yes, confirmed	60	12.1
No	201	40.5
Don't know	123	24.8
<u>Didn't answer</u>	<u>15</u>	<u>3.0</u>
Total	496	100.0

Resistant to both ALS-inhibiting herbicides and glyphosate

Yes, suspected	78	15.7
Yes, confirmed	26	5.2
No	207	41.7
Don't know	159	32.1
<u>Didn't answer</u>	<u>26</u>	<u>5.2</u>
Total	496	100.0

In wheat fields in your county with confirmed or suspected herbicide-resistant giant ragweed, do the populations occur in:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Fields in floodplains	113	22.8
Fields above the floodplain	132	26.6
Don't know	44	8.9
	(n=496 respondents)	

In wheat fields where confirmed or suspected herbicide-resistant giant ragweed occurs, which of the following appear to be sources of that population:

(check all that apply)

	<u>Responses</u>	<u>% of total respondents</u>
Management practices selected for resistant giant ragweed	146	29.4
Equipment contaminated with ragweed seed	80	16.1
Custom operation (e.g., tillage, planting, harvesting, etc.)	49	9.9
Crop seed contamination	10	2.0
Manure contaminated with ragweed seed	54	10.9
Seed brought in through floodwaters	70	14.1
Don't know	25	5.0
Not applicable	7	1.4
Other	9	1.8
	(n=496 respondents)	

Demographics

16. How long have you been a certified crop advisor in your area?

	<u>Responses</u>	<u>% of total respondents</u>
Less than 1 year	13	1.3
1 to 5 years	78	8.1
6 to 10 years	103	10.6
11 - 15 years	167	17.3

16 - 20 years	217	22.4
More than 20 years	119	12.3
Didn't answer	<u>271</u>	<u>28.0</u>
Total	968	100.0