South Dakota State University

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2018 South Dakota Commodity Crop Producer Survey Results

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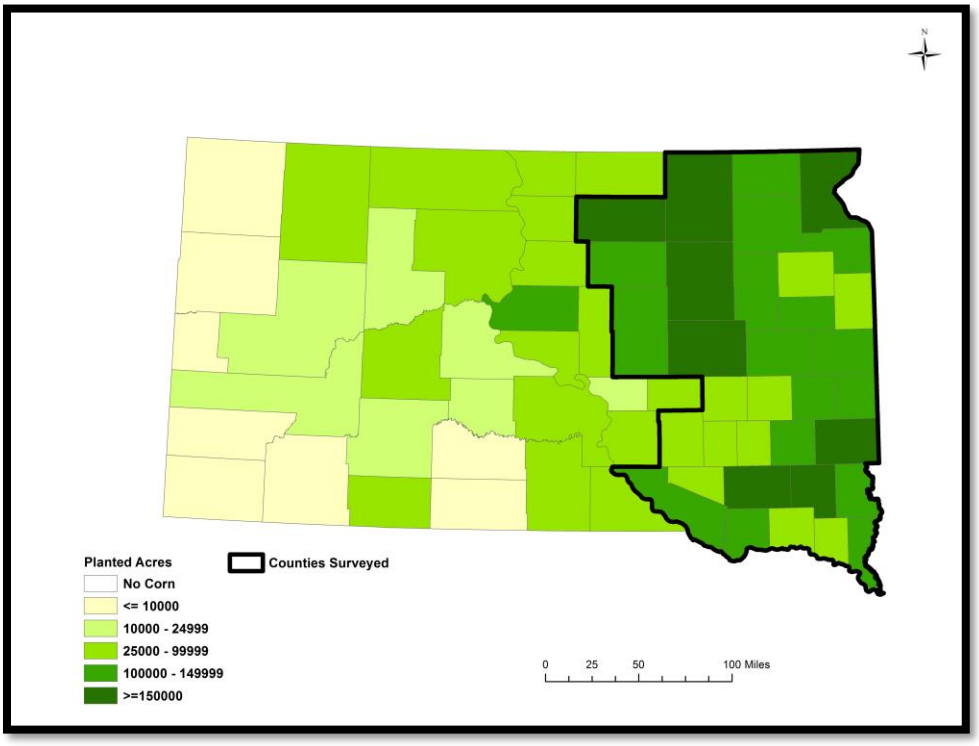
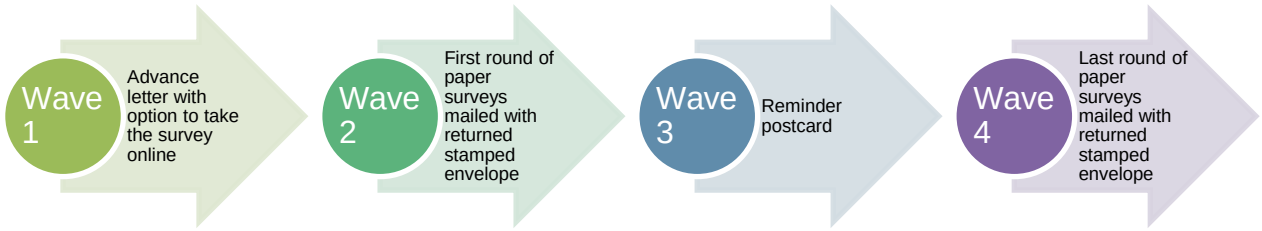
METHODS

From January to March 2018, we surveyed South Dakota commodity crop producers about their land management practices and attitudes. Farming operations in 34 South Dakota counties east of the Missouri River, where most of corn and soybean farming activities in the state are located, were targeted to take the questionnaire (see map below). We obtained a list of 10,000 farming operations that had participated in Farm Service Agency (FSA) programs in 2016 from the FSA and selected 3,000 operations to participate using proportionate stratified-random sampling according to number of farming operations in the study counties. The questionnaire directed the person in the operation who made most of the land management decisions to answer the questions.



An advance letter was sent to those in the final sample informing them about the project and including a link to answer the questionnaire online. One-half of the 3,000 selected for participation were also randomly selected to receive a $2 bill with the advance letter to test if the incentive increased response rates. Those who did not respond in the first wave were then mailed the paper questionnaires and addressed and stamped return envelopes, followed by a reminder postcard two weeks later, and a second paper copy of the survey and envelopes two weeks after that (see waves below).



Those operations who were not currently farming (e.g., rent out the land or no longer farming) were asked to notify us by returning a short form in the mail or online. The process used achieved a response rate of 30% after receiving 708 questionnaires back and removing bad addresses and non-farmers from the sample. All percentages shown are valid percentages (e.g., do not include the missing cases).

SECTION I: FARMING DECISIONS

1. Please rate the importance of the following information sources that may affect your decision making.

Source	Do not Use (0)	Not Important (1)	Slightly Important (2)	Somewhat Important (3)	Very Important (4)
a. SDSU Extension (IGrow, workshops, etc.) (n= 699)	16.9%	9.0%	18.7%	35.8 %	19.6%
b. Government organizations (e.g., NRCS) (n= 696)	9.3%	8.3%	21.6%	37.1%	23.7%
c. Commodity groups/farmer associations (n= 696)	12.6%	11.6%	21.8%	35.8%	18.1%
d. Private consultants or companies (e.g., agronomist) (n= 698)	12.9%	7.7%	12.5%	27.4%	39.5%
e. Family, friends, or neighbors (n= 699)	3.7%	3.9%	13.7%	39.9%	38./8%
f. Other (specify): (n= 258)	57.0%	12.4%	8.5%	13.6%	8.5%

2. In this section, we would like to know how you make decisions on farming activities that could influence your success as a business. Please indicate if you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
a. I am constantly trying to find ways to increase my income or profit (e.g., creating new ideas, finding new innovations, trying various technologies and management practices). (n= 690)	2.2%	6.8%	63.9%	27.1%
b. I always have a written business plan for my operation. (n= 688)	9.5%	50.0%	36.1%	4.5%
c. I am always taking steps to protect the land I farm from increased weather variability (e.g., diversify crops, build soil quality, adding drainage or irrigation systems) (n= 692)	0.7%	5.1%	63.0%	31.2%
d. I pay close attention to various funding sources (e.g., government subsidies or private loans) that may impact my operation. (n= 693)	7.7%	26.4%	54.1%	11.8%
e. I am often looking for ways to diversify my farm operation. (n= 691)	2.2%	22.6%	59.9%	15.3%
f. I always look for opportunities to create or build social networks that can help my business. (n= 690)	5.9%	38.8%	48.1%	7.1%
g. My social networks help increase my awareness of funding opportunities such as government subsidies or programs. (n= 688)	8.6%	41.9%	45.9%	3.6%
h. I use my social networks to learn new innovative ideas that help develop my business. (n= 685)	7.2%	34.0%	53.3%	5.6%
i. I am always willing to seek training opportunities to grow, improve, and/or expand my farm business. (n= 691)	2.3%	21.3%	61.4%	15.1%
j. I constantly update my knowledge and skills to ensure my business remains environmentally sustainable. (n= 691)	2.0%	13.0%	69.8%	15.2%
k. I regularly attend SDSU Extension training workshops. (n= 690)	16.7%	56.4%	24.4%	2.6%

SECTION II: FARM MANAGEMENT PRACTICES

Tillage	No-tillage (1)	Reduced tillage, strip-till, or mulch-till (2)	Conventional tillage (3)
1. In 2017, what type of tillage practices did you predominantly use on the land you farm? (n= 678)	29.2%	35.7%	35.1%

Rotation	Continuous (any crop) (1)	2 Year Rotation (2)	3 Year Rotation (3)	4 year or greater rotation (4)
2. What are your typical crop rotations? (n= 678)	18.7%	57.7%	17.4%	6.2%

Nutrition Time	Fall only (1)	Spring only (2)	Fall and spring (3)	Spring and summer (4)
3. In 2017, what best describes when you applied nutrients to the land you farm? (n= 672)	3.7%	31.4%	53.9%	11.0%

Enhanced Efficiency Nitrogen Fertilizer	Yes (1)	No (2)
4. In 2017, on the land you operate, did you use Enhanced Efficiency Nitrogen Fertilizer products that stabilize or provide controlled release of the Nitrogen fertilizer? (e.g., N-Serve, Poly Coated Ureas, Super U, Agrotain, etc.) (n= 685)	55.6%	44. 4%

5. How knowledgeable are you about the following practices?

PRACTICES	LEVEL OF KNOWLEDGE			
	Unfamiliar with (1)	**A little (2)**	**Moderately (3)**	**Very (4)**
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n= 688)	3.6%	29.4%	41.9%	25.2%
b. Cover crops (n= 683)	10.1%	45.7%	33.5%	10.7%
c. Diversified crop rotation (3 or more crops) (n= 686)	10.8%	34.6%	37.9%	16.8%
d. Integrated crop and livestock management (n= 685)	18.3%	35.3%	32.0%	14.5%

6. Please indicate how much you agree or disagree with the following statements.

	Not Applicable (0)	**Strongly Disagree (1)**	**Disagree (2)**	**Agree (3)**	**Strongly Agree (4)**
a. I manage the land I own differently from the land I rent. (n= 689)	16.6%	28.7%	41.7%	9.6%	3.5%
b. In general, I follow the manufacturer's recommended guidelines for fertilizer application. (n= 690)	5.1%	1.2%	5.5%	56.1%	32.2%
c. In general, I follow the manufacturer's recommend guidelines for pesticide application. (n= 690)	6.1%	0.7%	1.0%	47.4%	44.8%
d. I am willing to change my management practices to reduce my fertilizer and pesticide use. (n=685)	2.9%	0.7%	5.8%	66.0%	24.5%
e. I understand how the chemicals I apply work. (n= 689)	3.5%	0.3%	6.8%	58.8%	30.6%
f. Conducting regular soil tests helps me apply nutrients more efficiently. (n= 687)	5.4%	1.2%	5.8%	39.9%	47.7%
g. Timing nutrient applications with plant uptake needs reduces my fertilizer losses. (n= 688)	9.5%	0.7%	6.7%	52.8%	30.4%
h. Using precision agriculture to vary nutrient application helps me save money. (n= 688)	18.0%	2.2%	10.6%	43.0%	26.2%

7. How many years have you been using the following practices? Please check the relevant box if you have not adopted certain practices yet or have discontinued usage of certain practices.

PRACTICES	CURRENT YEARS OF USAGE				Never Used (5)	Discontinued usage (average years of usage) (6)
	Less than 3 (1)	3-5 (2)	6-10 (3)	10+ (4)		
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=684)	7.5%	11.7%	13.7%	42.8%	21.1%	3.2% (12.7 years, n=18)
b. Cover crops (n= 682)	21.7%	10.9%	7.6%	6.3%	51.3%	2.2% (2.6 years, n=10)
c. Diversified crop rotation (3 or more crops) (n= 680)	11.2%	7.1%	7.7%	31.0%	35.3%	7.8% (16.2 years, n=44)
d. Integrated crop and livestock management (n= 678)	9.2%	5.9%	7.0%	32.5%	40.2%	5.8% (24.1 years, n=23)

8. On what percentage of your operated land in 2017 did you use the following practices? If you did not use these practices in 2017, just write 0.

PRACTICES	Percentage of Usage (average for those who use practice)
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=487)	77.9%
b. Cover crops (n=232)	28.2%
c. Diversified crop rotation (3 or more crops) (n=284)	65.0%
d. Integrated crop and livestock management (n=308)	60.2%

9. How likely is it that you will continue (or try if you are not currently using) using each practice in the future?

PRACTICES	FUTURE USAGE				
	Not at all likely (1)	**Somewhat likely (2)**	**Moderately likely (3)**	**Very likely (4)**	**Extremely likely (5)**
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=672)	12.1%	13.4%	9.8%	30.8%	33.9%
b. Cover crops (n= 671)	20.0%	33.8%	16.5%	17.7%	11.9%
c. Diversified crop rotation (3 or more crops) (n= 671)	25.5%	25.2%	13.1%	19.8%	16.4%
d. Integrated crop and livestock management (n= 664)	35.1%	16.1%	12.2%	20.8%	15.8%

SECTION III: BENEFITS AND CHALLENGES TO THE ADOPTION OF FARMING PRACTICES

1. Please rate how much you agree or disagree that each of the following potential **benefits associated with conservation tillage** (e.g., no-till, strip-till, or mulch-till) impact your current or potential usage.

BENEFITS	**Strongly disagree (1)**	**Disagree (2)**	**Agree (3)**	**Strongly agree (4)**
a. Builds soil structure and health (n= 666)	1.5%	3.8%	56.3%	38.4%
b. Increases crop yields during water-deficient years (n= 663)	1.5%	5.4%	55.8%	37.3%
c. Reduces fuel and labor costs (n= 662)	0.9%	4.4%	57.9%	36.9%
d. Reduces wear and tear on equipment (n= 662)	1.2%	7.7%	58.9%	32.2%

2. Please rate how important each of the following potential **challenges associated with conservation tillage** (e.g., no-till, strip-till, or mulch-till) are to your operation (in your current or potential usage).

CHALLENGES	Not important (1)	Slightly important (2)	Moderately important (3)	Very important (4)
a. Too much soil moisture (n= 660)	15.0%	27.0%	35.3%	22.7%
b. Delayed planting due to slow soil warming in spring (n= 660)	10.6%	24.6%	39.1%	25.8%
c. Reduced crop yields (n= 655)	16.2%	24.0%	33.1%	26.7%
d. Increased dependence on herbicide/ fungicides (n= 657)	11.7%	23.0%	42.0%	23.3%
e. Negative neighborhood opinions (n= 657)	60.4%	22.7%	11.3%	5.6%

3. Please rate how much you agree or disagree that each of the following potential **benefits associated with cover crops** impact your current or potential usage.

BENEFITS	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
a. Improves soil health (n= 632)	1.0%	5.1%	69.5%	24.5%
b. Increases water infiltration (n= 633)	1.4%	7.3%	69.2%	22.1%
c. Suppresses weeds (n=627)	2.7%	14.2%	67.0%	16.1%
d. Breaks pest and disease cycle (n=631)	2.1%	17.0%	66.9%	14.1%
e. Increases subsequent cash crop yields (n= 626)	4.3%	28.8%	54.8%	12.1%
f. Reduces fertilizer inputs on cash crop (n= 624)	2.9%	21.0%	58.5%	17.6%
g. Helps with livestock cropland integration (n= 411)	2.9%	13.1%	62.8%	21.2%

4. Please rate how important each of the following potential **challenges associated with cover crops** are to your operation (in your current or potential usage).

CHALLENGES	Not important (1)	Slightly important (2)	Moderately important (3)	Very important (4)
a. Difficulties in cover crop establishment (n= 619)	10.7%	29.6%	40.2%	19.6%
b. High seed cost (n= 617)	8.4%	22.0%	41.2%	28.4%
c. Not sure about right seed mix (n= 614)	14.0%	30.6%	41.7%	13.7%
d. Narrow planting window (n= 617)	8.6%	21.6%	41.7%	28.2%
e. Lack of time/labor (n= 615)	13.5%	26.3%	35.1%	25.0%
f. Hard to eradicate (n= 615)	21.5%	36.9%	31.5%	10.1%
g. Lack of equipment (e.g. seeder) (n= 616)	25.2%	25.0%	30.2%	19.6%
h. Taking too much soil moisture (n= 617)	19.6%	30.5%	33.7%	16.2%
i. Less predictable N release (n= 616)	15.3%	37.5%	36.4%	10.9%
j. Yield reduction in following cash crop (n= 614)	15.6%	28.8%	32.4%	23.1%
k. Negative neighborhood opinions (n= 616)	65.8%	20.5%	10.7%	3.1%

5. Please rate how much you agree or disagree that each of the following potential **benefits associated with diversified crop rotations** (3 or more crops) impact your current or potential usage.

BENEFITS	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
a. Breaks pest and disease cycle (n= 634)	1.3%	6.9%	63.1%	28.7%
b. Reduces herbicide usage (n= 630)	1.8%	20.3%	61.4%	16.5%
c. Reduces fertilizer requirement (n= 631)	1.9%	30.9%	55.6%	11.6%
d. Increases soil fertility and productivity (n= 635)	0.9%	11.5%	68.7%	18.9%
e. Increases crop yields (n= 634)	1.4%	15.3%	66.7%	16.6%
f. Promotes ecological diversity (n= 631)	1.4%	10.1%	68.6%	19.8%
g. Protects against commodity price volatility (n= 629)	8.1%	41.5%	42.0%	8.4%

6. Please rate how important each of the following potential **challenges associated with diversified crop rotation** (3 or more crops) are to your operation (in your current or potential usage).

CHALLENGES	Not important (1)	Slightly important (2)	Moderately important (3)	Very important (4)
1. Lack of a profitable 3rd / 4th crop (n= 621)	12.1%	23.0%	31.7%	33.2%
2. Lack access to the specialized planting equipment (n= 620)	23.2%	27.7%	29.4%	19.7%
3. Crop insurance constraints (n= 621)	25.6%	27.9%	28.8%	17.7%
4. Lack of marketing information (n= 617)	25.5%	31.4%	29.8%	13.3%
5. Negative neighborhood opinions (n= 618)	69.4%	20.6%	7.3%	2.8%

7. Please rate how much you agree or disagree that each of the following potential **benefits associated with integrated crop and livestock systems** impact your current or potential usage.

BENEFITS	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
1. Reduced fuel and fertilizer cost (n= 605)	2.6%	17.5%	63.8%	16.0%
2. Reduced feed purchase cost for livestock (n= 600)	2.8%	7.7%	65.7%	23.8%
3. Increased soil fertility and productivity (n= 605)	1.5%	9.8%	66.3%	22.5%
4. Increased crop yields (n= 605)	2.5%	19.7%	60.5%	17.4%

8. Please rate how important each of the following potential **challenges associated with integrated crop and livestock systems** are to your operation (in your current or potential usage).

CHALLENGES	Not important (1)	Slightly important (2)	Moderately important (3)	Very important (4)
a. Soil compaction caused by hoof traffic (n= 601)	18.3%	27.3%	32.0%	22.5%
b. No water available for livestock (n= 601)	18.3%	17.8%	30.0%	33.9%
c. No labor available for livestock management (n= 599)	25.5%	25.2%	30.7%	18.5%
d. Negative neighborhood opinions (n= 595)	66.1%	21.5%	8.9%	3.5%
e. Insufficient knowledge on grazing practices (n= 599)	32.9%	36.1%	25.0%	6.0%
f. High fencing cost (n= 601)	22.1%	24.5%	32.6%	20.8%

SECTION IV: PERCEPTIONS OF COSTS AND BENEFITS

1. On average, how do you rate your **total production cost** change after adopting the following practices? **(If you have not adopted the practice yet, please rate your perceived change).**

PRACTICES	TOTAL PRODUCTION COST				
	Reduced by >15% (1)	Reduced by 5%-15% (2)	Very little change (within 5%) (3)	Increased by 5%-15% (4)	Increased by >15% (5)
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=613)	13.2%	36.1%	34.8%	11.4%	4.6%
b. Cover crops (n= 584)	3.6%	13.4%	49.5%	28.8%	4.8%
c. Diversified crop rotation (3 or more crops) (n= 600)	3.8%	16.8%	55.8%	18.7%	4.8%
d. Integrated crop and livestock management (n= 586)	6.7%	20.1%	51.9%	17.2%	4.1%

2. On average, how do you rate your **cash crop yield change** after adopting the following practices? If you have not adopted the practice yet, please rate your perceived change.

PRACTICES	CASH CROP YIELD				
	Reduced by >15%	**Reduced by 5%-15%**	**Very little change (within 5%)**	**Increased by 5%-15%**	**Increased by >15%**
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=613)	3.3%	12.6%	44.9%	31.2%	8.2%
b. Cover crops (n= 589)	4.9%	13.4%	59.3%	20.5%	1.9%
c. Diversified crop rotation (3 or more crops) (n= 601)	2.2%	8.8%	53.4%	31.1%	4.5%
d. Integrated crop and livestock management (n= 586)	2.9%	8.9%	58.2%	25.4%	4.6%

3. On average, how do you rate **your profits** after adopting the following practices? (If you have not adopted the practice yet, please rate your perceived change).

PRACTICES	PROFITABILITY				
	Reduced by >15% (1)	**Reduced by 5%-15% (2)**	**Very little change (within 5%) (3)**	**Increased by 5%-15% (4)**	**Increased by >15% (5)**
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=613)	2.1%	7.3%	43.2%	39.5%	7.8%
b. Cover crops (n= 593)	2.9%	13.0%	62.4%	19.2%	2.5%
c. Diversified crop rotation (3 or more crops) (n= 604)	2.0%	10.6%	54.8%	28.0%	4.6%
d. Integrated crop and livestock management (n= 592)	2.2%	7.3%	57.9%	27.5%	5.1%

4. For the practices you already adopted, how much government subsidies did you receive to offset your initial expenses? For the conservation practices that you have not adopted yet, please provide the amount of subsidies you would require in order to adopt them.

CONSERVATION PRACTICES	COST SHARE RECEIVED/REQUIRED				
	None (1)	**Yes, <10% (2)**	**Yes, 10%-20% (3)**	**Yes, 20%-30% (4)**	**Yes, >30% (5)**
a. Conservation tillage (e.g., no-till, strip-till, or mulch-till) (n=612)	74.0%	9.6%	9.5%	3.6%	3.3%
b. Cover crops (n= 596)	64.6%	10.7%	12.8%	7.1%	4.9%
c. Diversified crop rotation (3 or more crops) (n= 602)	71.4%	8.5%	13.0%	4.2%	3.0%
d. Integrated crop and livestock management (n= 594)	72.4%	8.3%	11.8%	4.2%	3.4%

5. Which of the following programs did you enroll the land you operated in 2017? (check all that apply)

PROGRAM ENROLLED THE LAND	Yes (1)	No (2)
a. Conservation Reserve Program (CRP) (n= 707)	51.7%	48.3%
b. Conservation Stewardship Program (CSP) (n= 708)	72.6%	27.4%
c. Environmental Quality Incentive Program (EQIP) (n= 708)	84.3%	15.7%
d. Other (please specify: (n= 708)	94.6%	5.4%

SECTION V: COMMUNITY AND ENVIRONMENT

1. The following questions are about how you feel about the land you farm. Please rate how much you agree or disagree with the following statements.

	Strongly disagree (1)	Somewhat disagree (2)	Somewhat agree (3)	Strongly agree (4)
a. When I think of home, I think of the land I farm. (n= 647)	0.9%	4.8%	29.7%	64.6%
b. I feel happiest when I am on the land I farm. (n= 645)	0.9%	3.3%	31.2%	64.7%
c. The land I farm is my favorite place to be. (n= 647)	0.8%	5.9%	31.7%	61.7%
d. The land I farm is an important part of who I am. (n= 643)	0.9%	4.0%	28.9%	66.1%
e. My personal history is closely tied to the land I farm. (n= 646)	2.0%	7.9%	27.2%	62.9%
f. Even if I were no longer farming, the land I farm will always be a part of who I am. (n= 648)	1.9%	7.3%	29.9%	61.0%
g. It is important to me that the land I farm stay in my family. (n= 644)	1.9%	5.6%	26.6%	66.0%
h. The friendships I have developed through farming activities in the area where I farm are important to me. (n= 646)	0.9%	5.3%	39.8%	54.0%
i. Farmers in the area where I farm generally have beliefs and values similar to mine. (n= 644)	3.0%	10.4%	50.2%	36.5%
j. I have a trusted network of people I talk with about farming in the area where I farm. (n= 638)	1.7%	11.8%	50.5%	36.1%
k. There aren't many job opportunities available to me other than farming. (n= 641)	22.6%	30.4%	30.9%	16.1%
l. The land I farm is important to my economic well-being. (n= 647)	3.4%	7.3%	34.3%	55.0%
m. The characteristics of the land I farm (soil type, topography, etc.) are largely responsible for my success as a farmer. (n= 646)	3.6%	13.9%	51.6%	31.0%
n. If I could farm anywhere in the world, it would be the land I farm now. (n= 647)	5.9%	18.9%	40.2%	35.1%
o. Even though there might be better places to farm, I would rather farm in the area where I farm than anywhere else. (n= 645)	3.1%	12.7%	45.6%	38.6%
p. I would feel out of place farming anywhere else. (n= 643)	7.6%	24.1%	42.5%	25.8%

2. A sense of responsibility for one's own well-being and for the well-being of others can play an important role in peoples' decisions and actions. Rate how responsible you feel to the following groups of people for conserving the soil and water resources on the land you farm.

	Responsible (1)	**Slightly responsible (2)**	**Moderately responsible (3)**	**Very responsible (4)**
a. Previous generations of my family (n= 639)	7.5%	15.8%	35.2%	41.5%
b. Myself (n= 642)	0.3%	3.0%	27.9%	68.8%
c. My immediate family (n= 636)	1.9%	8.5%	31.9%	57.7%
d. My neighbors (n= 637)	9.0%	25.3%	40.7%	25.1%
e. People in the area where I farm (n= 637)	8.8%	27.3%	39.9%	24.0%
f. People in my watershed (n= 637)	9.6%	22.5%	41.3%	26.7%
g. Everyone on planet earth (n= 635)	11.5%	32.1%	35.9%	20.5%
h. Future generations (n= 637)	3.6%	12.2%	38.2%	46.0%

3. Soil and water conservation practices can have on-farm and off-farm benefits for the natural environment such as preventing erosion, reducing loss of nutrients into waterways, improving wildlife habitat, etc. In general, how beneficial do you feel the conservation practices on the land you farm are for the natural environment in the following places?

	Not beneficial (1)	**Slightly beneficial (2)**	**Moderately beneficial (3)**	**Very beneficial (4)**
a. My farm (n= 631)	1.0%	6.8%	38.0%	54.2%
b. The area where I farm (n= 630)	1.3%	7.8%	45.9%	45.1%
c. My watershed (n= 631)	3.0%	10.1%	45.6%	41.2%
d. My state (n= 632)	1.4%	15.2%	48.9%	34.5%
e. The Midwest (n= 631)	2.5%	16.2%	47.2%	34.1%
f. The country (n= 632)	3.3%	21.8%	40.7%	34.2%
g. The planet earth (n= 629)	4.9%	22.1%	38.8%	34.2%

	I do not plan on moving to a new community (1)	**I plan to move within the next year (2)**	**I plan to move in the next 5 years (3)**
4. Do you plan to move to a new community in the future? (n= 648)	95.4%	0.3%	4.3%

5. These questions are designed to measure your attitudes towards the environment. Please indicate how much you agree or disagree with the following statements. There are no right or wrong answers.

	Strongly disagree (1)	**Disagree (2)**	**Agree (3)**	**Strongly agree (4)**
a. Technical advances in seeds, fertilizers, and pesticides can offset the adverse effects of soil erosion on productivity. (n= 632)	10.0%	26.6%	50.2%	13.3%
b. I am concerned with how much fuel I use for farming. (n= 633)	1.9%	24.8%	61.3%	12.0%
c. I would be willing to use a bio-based fuel. (n= 633)	4.0%	12.5%	61.8%	21.8%
d. Chemical carry over is a concern for me. (n= 635)	0.8%	12.4%	55.9%	30.9%
e. Reducing soil erosion makes economic sense for my farm. (n= 635)	0.2%	1.9%	50.6%	47.4%
f. Farmers should bear the clean-up costs associated with chemicals entering waterways beyond the boundaries of their farm. (n= 626)	12.9%	40.7%	37.2%	9.1%
g. A farmer's priority task should be profit maximization. (n= 628)	5.3%	43.6%	43.6%	7.5%
h. Receiving a conservation award is worth a great deal and can compensate for lower profits. (n= 629)	14.8%	52.5%	28.5%	4.3%
i. Farmers have a responsibility to use farm practices known to cause minimal soil erosion. (n= 630)	1.3%	8.1%	64.4%	26.2%
j. Maximizing profits this year is more important than maintaining cropland productivity in the future. (n= 634)	19.6%	64.7%	12.6%	3.2%
k. Bailing stover or straw harms soil development. (n= 632)	6.3%	35.8%	44.8%	13.1%

SECTION VI: ABOUT YOU AND YOUR FARM

	Acres
1. What is the total acreage of farmland you operated this planting season (2017)? (n=611)	Mean=1157.2 Range=1-31,202

	Own-Acres (1)	**Lease-Acres (2)**
2. Of the land you operated in 2017, how many acres do you own versus rent?	Mean=630.8 Range=1-9,000 (n=552)	Mean=775.4 Range= 5-25,025 (n=461)

3. On the acres that you lease, what are your lease terms? (check all that apply)

	Yes (1)	**No (2)**
a. Shared Lease (n= 707)	78.2%	21.8%
b. Cash Lease (n= 707)	38.5%	61.5%
c. I own all of the operated land. (n= 707)	80.3%	19.7%

4. In 2017, how many acres of the following did you operate and what was your yield? If none, please enter a zero.

	Acres operated	**Average yield**
a. Corn	Mean=451.6 Range=3-4,125 N=488	Mean=162.9 bu/acre Range=5-298 N=460
b. Soybeans	Mean=564.6 Range=2-27,762 N=196	Mean=47.9 bu/acre Range=5-80 N=469
c. Small grains	Mean=177.4 Range=3-2,200 N=168	Mean=62.5 Range=1-130 N=140
d. Clover/alfalfa	Mean=113.7 Range=1-3,400 N=284	Mean=3.9 ton/acre Range=1-8 N=161
e. Pasture	Mean=452.3 Range=.5-12,000 N=313	N/A
f. Conservation set aside/CRP	Mean=89.0 Range=1-1,680 N-143	N/A

g. Forest/woodland	Mean=32.9 Range=.1-400 N=62	N/A
h. Non-row crops for energy	Mean=13.0 Range=6-20 N=2	N/A
i. Other (specify):	Mean=127.8 Range=.4-1,500 N=65	N/A

	Organic (certified and non-certified) (1)	**Non-organic (0)**
5. I consider the land I operate to primarily be:	7.0%	93.0%

	Yes (1)	**No (2)**	**Do not Know (3)**
6. In 2017, was any of the crop acreage that you farmed impacted by salt impacted soils (e.g., saline or sodic conditions)? (n=633)	35.7% (Mean=66.7 acres, Range=1-600 acres, N=207)	53.4%	10.9%

	Acres
7. Approximately, how many years have you been the primary decision-maker for this operation? (n=626)	Mean=26.6 Range=0-70

	Less than 20% (1)	**20% to 40% (2)**	**41% to 60% (3)**	**61% to 80% (4)**	**81% or more (5)**
8. In 2017, what percentage of your total household income came from off-farm employment? (n= 628)	50.0%	15.5%	12.7%	6.9%	15.0%

	Less than $50K (1)	$50K-99,999 (2)	$100K-249,999 (3)	$250K-499,999 (4)	$500K-999,999 (5)	$1 million or more (6)
9. Please indicate the level of your gross operation sales in a typical year. (n= 617)	16.9%	15.2%	18.8%	24.3%	14.9%	9.9%

	Male (1)	Female (2)
10. What is your gender? (n= 646)	97.2%	2.8%

	Less than HS (1)	HS diploma/GED (2)	Some college/tech. school (3)	College graduate (4)	Post-grad. degree (5)
11. What is the highest level of school you have completed? (n= 646)	2.5%	25.1%	34.7%	32.0%	5.7%

	No (1)	Yes (2)
12. Have you completed an agricultural major or minor in college (e.g., agronomy, animal science, agricultural business)? (n= 240)	47.1%	52.9 %