



**Utah Soil Health Network
Crop Advisor Survey Results
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Executive Summary

A survey of crop advisors in Utah and Idaho was conducted during the winter of 2023. The survey was developed by a team of Utah State University social scientists, agronomists, and others who are part of the [Utah Soil Health Network On-Farm Soil Health Demonstration Project](#). In February and March, three announcements were sent out via Extension listservs and crop advisor lists. Potential respondents were invited to take the 10-minute survey online via Qualtrics and were asked to confirm at the beginning of the survey whether they were currently providing advice to Utah or Idaho crop producers in either a formal or informal way. Data was subsequently cleaned to only include those who were currently providing advice and completed more than half of the survey questions. Questions on the survey included the following broad topics: details of crop advisor work, advice to clients relative to soil health, and personal characteristics. One hundred twenty-five participants' data is included in this report. This summary focuses on (1) respondent's characteristics in terms of demographics and clients served (2) the responses that focused on soil health and (3) responses we felt would be the most fruitful for the team to know at this point in the project.

Crop Advisor Characteristics

- Respondents' average age was 47, with a range from 23 to 78 years old. The majority are men (82%) and have higher levels of education, with 52% having a 4-year degree and 35% having a graduate/professional degree. Seventy percent are full time crop advisors, with 28% having been a crop advisor for more than 20 years, 25% indicating they have been a crop advisor for 6-10 years, and another 25% indicating they have been a crop advisor for less than five years.
- Size of the crop advisors' clientele's acres is primarily between 100-250 acres or 251-500 acres (20% indicating for each), with 27% indicating the average farm size of their clientele is 1001 acres or more. The top three crops they advise on include alfalfa (91%), small grains (84%) and other hay (not alfalfa—76%).
- In terms of how many producers the advisors work with in a given year, 36% indicated six to 25 clients, followed by 22% indicating five or fewer clients per year. In terms of how many times per year they meet with their clients, 44% indicated three to five times on average, followed by 24% indicating less than two times per year. The top three types of advice they typically provide to their clients include agronomic (74%), daily management (65%) and conservation programs (57%).

Perspectives on Soil Health and Soil Health Recommendations Made

- Eighty-four percent of the crop advisors agree or strongly agree that they “Discuss soil health practices more today than I have in the past.” Sixty-eight percent agree or strongly agree that they “Provide farm/field specific recommendations regarding soil health practices” and 52% agree or strongly agree that “It is a crop advisor's responsibility to bring up soil health management with their clients, regardless of how the client will react.” In sum, these findings suggest an increasing motivation and comfort among crop advisors to discuss soil health with their clients.
- Important sources of information about soil health management to the advisors include in-field experience (93% very or extremely important), colleagues (84% very or extremely important), customers (i.e., crop producers—83% very or extremely important) and University extension (70% very or extremely important).¹

¹ Important sources of information varied somewhat by crop advisor affiliation. When looking at those crop advisors who indicated they are solely affiliated with private industry (n=28), their top three sources of information include in-field experience (92% indicating very or extremely important), customers (83%) and colleagues (79%). When looking at those crop advisors who indicated they are solely affiliated with NRCS (n=28), 100% indicated both in-field experience and customers are very or extremely important sources of information, with 86% indicating colleagues. Finally, when looking at those crop advisors who indicate they are solely affiliated with Extension (n=25), their top three sources of information include in-field experience and University Extension (86% indicating both sources very or extremely important), with colleagues as the third most important source of information (82% indicating very or extremely important). This analysis is not presented in the following report, but will be examined in more detail in subsequent publications.

- Over 50% of the crop advisors indicated they are “extremely likely” to recommend usage of the following indicators of soil health: nitrogen (56%), crop yield and phosphorous (54% each). These are indicators of soil fertility status and are likely used in fertilizer recommendations.
- Sixty-four percent recommend their clients conduct soil nutrient testing at least once a year. However, fewer are recommending soil health testing (not including nutrient testing) with 32% indicating they do not recommend additional soil health testing to their clients and only 30% recommend this additional testing to their clients at least once a year—suggesting most crop advisors in this survey do not go beyond recommending the basic soil health testing, even though this has been shown to be a source of frustration to the producers involved in the Utah Soil Health Network (USHN) On-Farm Trial². Low levels of recommending soil health tests as indicators of soil health could be due to the fact there are many options for soils tests, they cost more than routine fertility testing, and there are not clear management decisions associated with test information for many soil health indicators.
- Three soil health practices are recommended to clients by over 50% of the crop advisors on an “often” or “always” basis. These include diversified crop rotation (65%), conservation tillage (62%) and organic soil amendments (58%).

Perspectives on Clientele regarding Soil Health

- Crop advisors identified the top three information sources about soil health management for their clients to be: other producers (85% very or extremely important), them/crop advisors (69% very or extremely important), and University extension (54% very or extremely important).
- Top constraints the crop advisors see to their clients’ soil health management choices included: cost (indicated by 67% of advisors as a large constraint), lack of knowledge (indicated by 48%) and difficulty in managing (indicated by 45%).
- Eighty-eight percent of the advisors agree or strongly agree that “Many clients find it easier to just do the same thing they’ve always done”, 83% agree or strongly agree that “My clients are more open to suggestions when I’m able to have a face-to-face conversation with them”, 80% agree or strongly agree that “Farmers are going to have to change their mindset if they want to adapt and effectively manage soil health” and 62% agree or strongly agree that “Proactive farmers can usually manage soil health on their own.”

Differences Identified between Utah and Idaho Crop Advisors

- In terms of statistically significant comparisons between Utah and Idaho crop advisors, the results show that Idaho crop advisors tend to work with larger farmers in terms of acreage, with 24 indicating they work with clientele who have 1001 acres or more, compared to eight Utah crop advisors working with clientele with this size of acreage.
- Utah crop advisors are significantly more likely to advise their clientele on other hay (not alfalfa), corn, other oilseeds (not safflower), tart cherry, and other crops. Idaho crop advisors are significantly more likely to advise their clientele on alfalfa and safflower.
- Idaho crop advisors are significantly more likely to work with crop producers within specific counties, whereas Utah crop advisors are more likely to work with crop producers statewide.
- Utah crop advisors are significantly more likely to indicate their clients are more open to their suggestions when they are able to have a face-to-face conversation with them.
- Idaho crop advisors are significantly more likely to meet more times per year with their clients as compared to Utah advisors.

² Utah Soil Health Network On-Farm Trial Participant Interview Report November 2022. Please find online here: https://ag.utah.gov/wp-content/uploads/2022/11/USHN-On-Farm-Trial-Participant-Report_2022.pdf

- Idaho crop advisors are significantly more likely to recommend diversified crop rotation organic soil amendments to their clients, whereas Utah crop advisors are significantly more likely to recommend salinity management to their clients.
- Utah crop advisors are significantly more likely to indicate lack of knowledge constrains their clients' soil health management choices whereas Idaho crop advisors are significantly more likely to indicate lack of farm input supplies constrains their clients' soil health management choices.
- Utah crop advisors are significantly younger than Idaho crop advisors, with a mean age of 44, compared to Idaho crop advisors with a mean age of 49.

Full results of the survey, as well as statistical results showing significant comparisons between the Utah and Idaho crop advisors, are included in the pages that follow.

Soil Health Network Crop Advisor Survey Report
Percentage Distributions and Means
N=125

PART ONE: General information about your work.

Q1. As part of your job, do you currently provide advice to Utah/Idaho crop producers in either a formal or informal way? *125 respondents indicated 'yes' and make up this sample.*

Q2. Is crop advising currently a part-time or full-time job for you? (n=125)

Full-time	70%
Part-time	30%

Q3. Approximately how many years have you been a crop advisor? (n=123)

Less than 5 years	25%
6-10 years	25%
11-15 years	10%
16-20 years	12%
More than 20 years	28%

Q4. Are you certified by the American Society of Agronomy (ASA) as a Certified Crop Advisor (CCA)? (n=125)

Yes (skipped to Q6)	26%
No	74%

Q5. Do you plan to become certified? (n=92)

Yes	4%
Maybe	33%
No	63%

Q6. Is it part of your job to train other agricultural advisors? (n=124)

Yes	39.5%
No	60.5%

Q7. What is a rough estimate of the average farm size of your clientele of Utah/Idaho crop producers in acres? (n=120)

Less than 100 acres	16%
100-250 acres	20%
251-500 acres	20%
501-1000 acres	17%
1001-2500 acres	15%
Greater than 2500 acres	12%

Q8. Approximately how many Utah/Idaho crop producers do you typically advise in a given year? (n=122)

5 or fewer clients	22%
6 to 25 clients	36%
26 to 50 clients	10%
51 to 150 clients	20%
151 or more clients	12%

Q9. Which of the following are you affiliated with in your work as a crop advisor? Please select all that apply. (n=125)

Private Industry	42%
Natural Resources Conservation Service (NRCS)	37%
Utah Department of Agriculture and Food (UDAF)/ Idaho State Department of Agriculture	18%
University Extension	33%
Independent	15%
Other (Please specify): <i>see appendix</i>	5%

Q10. Do you or your employer charge a direct fee for the advice you provide to Utah/Idaho crop producers? (n=125)

Yes – Always	2%
Yes – Sometimes	3%
No – The advice is included as part of other products or services	42%
Never	54%

Q11. What crops do you advise for? Please select all that apply. (n=125)

Alfalfa	91%
Other hay (not alfalfa)	76%
Corn	60%
Small grains	84%
Safflower	22%
Other oilseeds (not safflower)	26%
Tart cherry	8%
Other fruit (not tart cherry)	15%
Onions	17%
Other vegetables (not onions)	39%
Other (Please specify: <i>see appendix</i>)	25%

Q12. Do you work with crop producers statewide, or within specific counties? (n=125)

Statewide (skipped to Q13)	16%
Within certain counties	84%

Q13. Which counties do you work with crop producers in? Please select all that apply.

Utah Counties (n=44)

Beaver—9%	Duchesne—16%	Kane—2%	San Juan—11%	Utah—11%
Box Elder—23%	Emery—16%	Millard—16%	Sanpete—21%	Wasatch—4%
Cache—21%	Garfield—4%	Morgan—9%	Sevier—14%	Washington—7%
Carbon—9%	Grand—7%	Piute—14%	Summit—4%	Wayne—18%
Daggett—14%	Iron—7%	Rich—7%	Tooele—4%	Weber—9%
Davis—7%	Juab—14%	Salt Lake—7%	Uintah—18%	

Idaho Counties (n=61)

Ada—12%	Bonneville—21%	Custer—5%	Kootenai—5%	Owyhee—15%
Adams—3%	Boundary—3%	Elmore—12%	Latah—10%	Payette—7%
Bannock—16%	Butte—5%	Franklin—12%	Lemhi—5%	Power—23%
Bear Lake—7%	Camas—7%	Fremont—12%	Lewis—12%	Shoshone—5%
Benewah—7%	Canyon—10%	Gem—7%	Lincoln—16%	Teton—7%
Bingham—28%	Caribou—13%	Gooding—12%	Washington—15%	Twin Falls--20%
Blaine—8%	Cassia—16%	Idaho—10%	Minidoka—16%	Valley—8%
Boise—5%	Clark—10%	Jefferson—21%	Nez Perce—8%	Washington—3%
Bonner—3%	Clearwater—10%	Jerome—20%	Oneida—10%	

PART TWO: Soil health practices and working with clients. *In this section we are asking you to think about a typical client or situation.*

Q14. What types of advice do you typically provide to clients? Please select all that apply. (n=125)

Financial	20%
Marketing	12%
Agronomic	74%
Daily management	65%
Equipment	22%
Full farm management	15%
Conservation practices	57%
Government programs/farm bill	35%
Other (Please specify: <i>see appendix</i>)	4%

Q15. How many minutes on average do you spend with a client each time you meet with them? (n=116)

Less than 30 minutes	23%
31-60 minutes	59%
61-90 minutes	15%
91-120 minutes	3%
More than 120 minutes	0%

Q16. How many times per year do you meet with your clients, on average? (n=115)

Less than 2 times	24%
3-5 times	44%
6-8 times	13%
9-10 times	6%
More than 10 times	13%

Q17. Please indicate how likely you are to recommend usage of each of the following indicators of soil health.

	<u>Extremely unlikely</u>	<u>Somewhat unlikely</u>	<u>Unsure</u>	<u>Somewhat likely</u>	<u>Extremely likely</u>
Organic carbon (n=107)	10%	12%	23%	37%	17%
Soil pH (n=109)	12%	10%	8%	38%	32%
Water-stable aggregation (n=106)	8%	12%	19%	40%	21%
Crop yield (n=108)	6%	3%	5%	32%	54%
Soil texture (n=110)	8%	7%	7%	49%	28%
Penetration resistance (n=106)	7%	8%	12%	48%	26%
Cation exchange capacity (n=107)	11%	15%	18%	34%	22%
Electrical conductivity (n=107)	14%	20%	24%	27%	15%
Nitrogen (n=109)	6%	7%	3%	28%	56%
Phosphorus (n=109)	6%	6%	2%	32%	54%
Potassium (n=107)	5%	11%	5%	34%	46%
Carbon mineralization (n=106)	11%	20%	26%	36%	7%
Nitrogen mineralization (n=108)	9%	16%	15%	45%	15%
Erosion rating (n=108)	7%	21%	17%	30%	25%
Base saturation (n=107)	11%	19%	19%	34%	18%
Bulk density (n=106)	12%	27%	17%	31%	12%
Available water holding capacity (n=106)	7%	9%	10%	39%	35%
Infiltration rate (n=106)	5%	10%	13%	37%	35%
Micronutrients (n=109)	6%	16%	9%	38%	31%
Haney test (n=105)	20%	21%	31%	20%	9%
Cornell assessment of soil health (CASH) (n=105)	26%	16%	41%	12%	5%
Other soil health test package (n=104)	14%	15%	33%	23%	15%
Other (<i>see appendix</i>) (n=27)	18%	7%	52%	4%	18%

Q18. In general, how often do you recommend to your clients to conduct soil nutrient testing? (n=115)

More than once a year	8%
Once a year	56%
Every two years	16%
Every three years	8%
Every four years	2%
Every five years	2%
Every six years or more	0%
I do not recommend routine nutrient testing to my clients	8%

Q19. In general, how often do you recommend to your clients to conduct soil health testing (not including soil nutrient testing)? (n=114)

More than once a year	4%
Once a year	26%
Every two years	12%
Every three years	15%
Every four years	3%
Every five years	6%
Every six years or more	2%
I do not recommend soil testing to my clients	32%

Q20. Please indicate how often you tend to recommend the following soil health practices to your clients.

	<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Often</u>	<u>Always</u>
Cover crops (n=113)	2%	10%	40%	34%	14%
Alternative or double forage crops (n=113)	1%	14%	37%	35%	12%
Diversified crop rotation (n=112)	1%	10%	25%	38%	27%
Crop diversification (n=112)	6%	34%	36%	21%	4%
Conservation tillage (n=112)	1%	4%	32%	38%	24%
Organic soil amendments (n=112)	3%	11%	29%	42%	16%
Chemical soil amendments (n=112)	9%	17%	38%	31%	5%
Biological soil amendments (n=112)	14%	28%	36%	18%	4%
Soil or water pH management (n=112)	8%	12%	37%	31%	12%
Salinity management (n=112)	14%	11%	32%	21%	21%

Q21. What percentage of your clients would you estimate are currently using each of the following soil health practices (on all or a portion of their land)?

	<u>Less than 25%</u>	<u>25-50%</u>	<u>51-75%</u>	<u>More than 75%</u>
Cover crops (n=108)	62%	25%	8%	5%
Alternative or double forage crops (n=106)	60%	23%	11%	6%
Diversified crop rotation (n=106)	42%	27%	14%	16%
Crop diversification (n=106)	78%	15%	6%	1%
Conservation tillage (n=106)	43%	32%	18%	7%
Organic soil amendments (n=106)	37%	35%	23%	6%
Chemical soil amendments (n=105)	54%	26%	13%	7%
Biological soil amendments (n=105)	69%	21%	8%	3%
Soil or water pH management (n=104)	53%	28%	16%	3%
Salinity management (n=102)	50%	24%	22%	4%

Q22. How much do you think each of the following constrain your clients' soil health management choices?

	<u>Not at all</u>	<u>Somewhat</u>	<u>A lot</u>
Lack of time (n=104)	12%	62%	26%
Lack of labor (n=104)	12%	55%	33%
Farm size (n=104)	18%	64%	18%
Cost (n=106)	1%	32%	67%
Lack of knowledge (n=105)	4%	48%	48%
Difficulty in managing (n=103)	5%	50%	45%
Lack of available technologies (n=102)	14%	67%	19%
Lack of equipment (n=104)	12%	45%	42%
Mixed messaging from their various sources (n=105)	12%	49%	39%
Lack of farm input supplies (n=104)	28%	58%	14%
Lack of adequate information pertaining to soil health in Utah/Idaho (n=104)	10%	58%	32%

Q23. Please provide your opinion on the following statements.

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neither agree /disagree</u>	<u>Agree</u>	<u>Strongly agree</u>
Overall, my clients are doing a good job managing soil health. (n=107)	0%	14%	40%	41%	5%
Proactive farmers can usually manage soil health on their own. (n=107)	1%	13%	24%	48%	14%
Many clients find it easier to just do the same thing they've always done. (n=107)	1%	5%	6%	48%	40%
Farmers are going to have to change their mindset if they want to adapt and effectively manage soil health. (n=107)	2%	5%	14%	50%	30%
My clients are more open to my suggestions when I'm able to have a face-to-face conversation with them. (n=106)	1%	2%	14%	53%	30%
Clients are tired of hearing about soil health practices. (n=106)	7%	23%	55%	10%	6%
Clients feel it is too difficult to implement soil health practices. (n=106)	1%	16%	40%	36%	8%

Q24. Please provide your opinion on the following statements.

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neither agree nor disagree</u>	<u>Agree</u>	<u>Strongly agree</u>
It is a crop advisor's responsibility to bring up soil health management with their clients, regardless of how the client will react. (n=105)	4%	11%	33%	41%	11%
I discuss soil health practices more today than I have in the past. (n=105)	1%	4%	11%	63%	21%
Farmers I work with seem to trust me with most of their farm management decisions. (n=105)	1%	9%	40%	40%	11%
I provide farm/field specific recommendations regarding soil health practices. (n=105)	1%	10%	22%	50%	18%
I have the information and answers about soil health practices that farmers will most likely need. (n=105)	3%	19%	35%	35%	8%

Q25. How important are the following sources of information about soil health management to you?

	<u>Not at all important</u>	<u>Slightly important</u>	<u>Moderately important</u>	<u>Very important</u>	<u>Extremely important</u>
In-field experience (n=106)	0%	2%	5%	42%	51%
Customers (i.e. crop producers) (n=105)	0%	3%	13%	52%	31%
Colleagues (n=104)	0%	0%	15%	64%	20%
University extension (n=106)	1%	8%	22%	46%	24%
Commodity groups (n=105)	5%	19%	36%	32%	8%
Government entities (n=105)	6%	17%	39%	31%	8%
Other (Please specify: <i>see appendix</i>) (n=16)	38%	6%	31%	12%	12%

Q26. How important are the following sources of information about soil health management to your clients?

	<u>Not at all important</u>	<u>Slightly important</u>	<u>Moderately important</u>	<u>Very important</u>	<u>Extremely important</u>	<u>Don't Know</u>
Me/Crop Advisors (n=104)	0%	3%	26%	42%	27%	2%
Other producers (n=105)	0%	1%	13%	41%	44%	1%
Landlords (n=99)	8%	20%	43%	18%	6%	4%
Lenders (n=99)	15%	29%	30%	15%	4%	6%
Retailers (n=100)	7%	21%	42%	21%	5%	4%
University extension (n=103)	2%	7%	36%	36%	18%	2%
Commodity groups (n=101)	2%	20%	36%	34%	4%	5%
Government entities (n=101)	7%	19%	37%	26%	10%	2%
Other (Please specify: <i>see appendix</i>) (n=16)	25%	6%	25%	19%	6%	19%

PART THREE: Background characteristics.

Q27. What is your gender? (n=104)

Female	17%
Male	82%
Not listed (please specify: <i>see appendix</i>)	1%

Q28. In what year were you born? _____ (n=99, mean=1976, Range 1945-2000).

Q29. What is the highest level of school that you completed? (n=105)

Some formal schooling	0%
High school diploma/GED	3%
Some college	4%
2-year degree, vocational, or technical certification	6%
4-year degree	52%
Graduate/professional degree	35%

Q30. Is there anything that we didn't ask about that you think would be important for us to know?

See Appendix

Chi-square and Independent t-test Differences Found Between States

Below are all questions which were found to be statistically significant when comparing for differences between Utah and Idaho Crop Advisor's responses. For categorical responses, chi-squares were conducted, and for scaled responses, independent t-tests of means were conducted. For the chi-square results, the level of significance is provided for each question, along with the frequencies. For the independent t-test results, the level of significance is provided for each question along with the means.

Chi-square results

Q7. What is a rough estimate of the average farm size of your clientele of Utah/Idaho crop producers in acres? * $p < .001$**

	Utah (n=55)	Idaho (n=65)
	Frequencies	
Less than 100 acres	12	7
100-250 acres	14	10
251-500 acres	17	7
501-1000 acres	4	17
1001-2500 acres	4	14
Greater than 2500 acres	4	10

Q.9 Affiliated with Utah Department of Agriculture and Food (UDAF)/Idaho State Department of Agriculture in your work as a crop advisor? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	15	8
No	43	59

Q11. Advise for alfalfa? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	56	58
No	2	9

Q11. Advise for other hay (not alfalfa)? * $p < .001$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	52	43
No	6	24

Q11. Advise for corn? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	41	34
No	17	33

Q11. Advise for safflower? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	40	57
No	18	10

Q11. Advise for other oilseeds (not safflower)? * $p < .01$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	49	43
No	9	24

Q11. Advise for tart cherry? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	8	2
No	50	65

Q11. Advise for other crops? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Yes	49	45
No	9	22

Q12. Do you work with crop producers statewide, or within specific counties? * $p < .05$

	Utah (n=58)	Idaho (n=67)
	Frequencies	
Statewide	14	6
Within certain counties	44	61

Q16. How many times per year do you meet with your clients, on average? * p<.05

	Utah (n=54)	Idaho (n=61)
	Frequencies	
Less than 2 times	12	15
3-5 times	28	23
6-8 times	9	6
9-10 times	4	3
More than 10 times	1	14

Q21. What percentage of your clients would you estimate are currently using salinity management (on all or a portion of their land)? *p<.05

	Utah (n=49)	Idaho (n=53)
	Frequencies	
Less than 25%	17	34
25-50%	14	11
51-75%	15	7
More than 75%	3	1

Q22. How much do you think lack of knowledge constrains your clients' soil health management choices? * p<.05

	Utah (n=50)	Idaho (n=55)
	Frequencies	
Not at all	0	4
Somewhat	20	30
A lot	30	21

Q22. How much do you think lack of farm input supplies constrains your clients' soil health management choices? * p<.05

	Utah (n=50)	Idaho (n=54)
	Frequencies	
Not at all	10	19
Somewhat	36	24
A lot	4	11

Independent t-test results

Independent t-tests were run on the questions that could be scaled. These included Questions 20, 23, 24, 25, and 26 (once “don’t know’s” were sent to system missing), and Q. 28. Below are the questions/statement found to be significant.

	<u>Means</u>	<u>Level of Significance</u>
Q20. Please indicate how often you tend to recommend diversified crop rotation to your clients. Utah (n=54) Idaho (n=58)	3.48 4.09	 p < .001
Q20. Please indicate how often you tend to recommend organic soil amendments to your clients. Utah (n=54) Idaho (n=58)	3.06 3.09	 p < .001
Q20. Please indicate how often you tend to recommend salinity management to your clients. Utah (n=54) Idaho (n=58)	3.98 2.57	 p < .001
Q23. My clients are more open to my suggestions when I’m able to have a face-to-face conversation with them. Utah (n=50) Idaho (n=56)	4.26 3.95	 p < .05
Q28. In what year were you born? Utah (n=48) Idaho (n=51)	1979 1974	 p < .05

Appendix—Comments provided under “other” for various questions. Unless otherwise noted, all comments have an n of 1.

Q9. Which of the following are you affiliated with in your work as a crop advisor?

Soil & Water Conservation District (n=3)
Seed Certification
Savory Institute
SHAC committee

Q11. What crops do you advise for?

Potatoes (n=11)
Sugar Beets (n=6)
Pasture (n=5)
Cover crop (n=2)
Apples, Peaches and Pears
Watermelon, Pumpkins
all seed crops
sorghum sudan grass
Dry beans
cover crop & weed suppression
pulses
Sunflowers seed production, alfalfa seed production
all crops in Idaho, including specialty crops
Legumes
Seed Carrots
chickpeas/lentils
native
Mint, Beans

Q14. What types of advice do you typically provide to clients?

Dairy
Soil Health
pest management and pesticides
irrigation

Q17. Please indicate how likely you are to recommend usage of each of the following indicators of soil health.

Salinity
soil biology
Temperature
Soil Sampling & Labs. CO2 Testing, Aggregation, Soil Profile Stratospheres
Sap and Tissue analysis
NRCS In-field soil health assessment
related to pesticide applications, only
I would refer to NRCS on soil specifics

Q25. How important are the following sources of information about soil health management to you?

Soil Health Organizations
Fertilizer Salesman
Innovation Leaders
NRCS

Q26. How important are the following sources of information about soil health management to your clients?

Soil Health Organizations
Fertilizer Salesman
Industry experts
NRCS
Customers/purchasers (i.e processors)

Q27. What is your gender?

WW/SW

Q30. Is there anything that we didn't ask about that you think would be important for us to know?

Many of my clients have told me that they are interested in soil health practices, but they have a hard time finding studies and other information sources that are relevant to their operations (mostly alfalfa in slightly to moderately saline soils). What I've seen a lot is that someone is interested in cover crops, crop diversification, etc. but the only info they can find is from Idaho (at the closest) or Kansas (more likely). As a result, they're very hesitant to try anything different from what they've been doing.

How long I have been working in my current job-3 weeks

I can always use additional training. Thanks for what you do.

If soil health in this survey is more narrowly defined as the amount of organic matter present in the soil and the amount of the associated natural biological activity we are probably talking about the same thing. It is my opinion the lack of (>3-5%) soil organic matter and associated low biological activity in most soils in the inter-mountain area is the most serious soil fertility/ soil health problem. This is caused by growers practicing traditional crop rotation scenarios i.e. growing alfalfa for 5-7 years, then small grains for 1-2 years, and a few growers may then grow corn for 1-2 years. The decision of what to grow and for how long is not a soil health decision. It is the guiding practical and economic decision. It is based on projections of available water supply and economics (cost of fertilizer, insect and weed control needs, etc.). You didn't ask about the degree of confidence I, as an Extension agent, have in the credibility of most of the available non research based information promoted by NRCS and UDAF. My answer is low and consider it to be somewhat pseudoscience or NRCS hype because it is based mostly or grower testimonials with little to no measured yield and economic data. Its mostly just hype trying to address a serious problem needing real research based answers. You didn't ask about my opinion of the availability or volume of credible research based information on cover crops there is out there for crop advisors and growers that is specific to Utah or other states or areas with similar climatic, soils, and cropping conditions. Which is very low. Extension and ARS in Utah and other surrounding states with somewhat similar growing conditions do not yet have enough multi state, multi location, multi year replicated field research of how to increase and measure soil health, effect on soil fertility measurements, crop yields, soil biological activity, water use, and crop profitability of various cover crop and inter seeding scenarios.

Most of the producer I work with have annual pasture/range or do alfalfa hay production and aren't super interested in changing that up. Less than 25% are willing to change things up and try soil health practices. Also, I have almost completed a graduate degree.

Farmers are skeptical until they see things implemented on the ground and can see the benefits- including profitability- of it.

Please teach that soil health is not just cover crops or no-till. It's not an all or nothing. Everyone is doing or can do something to help their operation. My biggest pet-peeve is that soils health is NOT an immediate return or fast acting without a lot of money and time. It is a different process for everyone with a long-term investment to make a change. Too many factors to determine how fast. Economics to what they can do is critical.

In addition to working for Valley Agronomics I also run our family farm in Banida raising Wheat safflower alfalfa and alfalfa seed I have planted cover crops and used no-till and reduced tillage Our farm has 300 irrigated acres and 2000 acres dry farm Cover crops have not been the silver bullet that it is presented as but I think there are benefits. Just been a little over sold

Too many people are using soil health related practices at random because they have heard that they are really good, but they haven't identified the problems or limitations of their current management system. Identifying the problems should always come first and then choose the appropriate soil health practices needed to solve them.

In general, growers are always talking about the "bottom line" and for various, understandable reasons, their "mindset" is rather short term...i.e. how's the farm going to cash flow, etc. In contrast, soil health, regenerative ag. - in part - requires a commitment to something more than record-busting yields and ROI/ acre in any given year. Said another way, adoption of soil health practices is HIGHLY constrained by the economics of the 'conventional' ag-industrial system. Widespread adoption of robust soil health practices is going to require something more (systemic change) than we are currently throwing at the problem. Also, if you start throwing in "climate smart" language into the conversation, the average grower is really not that concerned with climate change. This also may be a systemic issue that needs addressed.

The most important way to promote soil health practices is to prove they work in our specific region. Research from the Midwest isn't relevant and most clients know this.

I am a licensed pesticide applicator, with the Idaho Statewide Consultants category. I only work in the area of pesticides and pest management

How cost effective are soil health practices in both the near and long term?

Most government and extension don't consider pricing, season length, water resources when talking about soil health. Also most university data is suspect. After being a crop consultant for more than 30 years there are few university extension that I trust there data. Corporate America buyers of crops are pushing woke agenda to be able to sell to consumers but there requirements are not soil health or grower based mostly. Its consumer woke based. The farmer is the ultimate caregiver for his soil. For the most part farmers do whats best for their soil because they know they can trust how the soil treats them.

I am a farmer. I answered the first question yes because a lot of people ask me a lot of questions. I don't get paid for any advice. Just general knowledge sharing and good karma.