**Citation:** Wade, J., M.A. Beetstra, M.L. Hamilton, S.W. Culman, and A.J. Margenot. 2021. Soil health conceptualization differs across key stakeholder groups in the Midwest. Journal of Soil and Water Conservation 76(6). https://doi.org/10.2489/jswc.2021.02158

**Supplementary Information**

Survey Instrument (Farmer version)

In the first section of the survey, we are interested in how you understand the relationships between soil health and different on-farm factors. There are no right or wrong answers. *Please select one response per row.*

1. To you, an increase in **soil health** causes what effect on each of the following factors?

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Increases* | *Decreases* | *They are not related* |
| *Soil physical functioning* | 🞎 | 🞎 | 🞎 |
| *Soil fertility/biological functioning* | 🞎 | 🞎 | 🞎 |
| *Agrochemical inputs* | 🞎 | 🞎 | 🞎 |
| *Crop productivity* | 🞎 | 🞎 | 🞎 |
| *Profitability* | 🞎 | 🞎 | 🞎 |
| *Environmental harm* | 🞎 | 🞎 | 🞎 |

1. To you, an increase in each factor in the left column has what effect on **soil health**?

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Increases soil health* | *Decreases soil health* | *Is not related to soil health* |
| *Soil physical functioning* | 🞎 | 🞎 | 🞎 |
| *Soil fertility/biological functioning* | 🞎 | 🞎 | 🞎 |
| *Agrochemical inputs* | 🞎 | 🞎 | 🞎 |
| *Crop productivity* | 🞎 | 🞎 | 🞎 |
| *Profitability* | 🞎 | 🞎 | 🞎 |
| *Environmental harm* | 🞎 | 🞎 | 🞎 |

1. The next question has two parts. On the left, please indicate if you have used any of the listed soil tests in the past three years by circling either yes or no. Then, *if you answered yes*, please indicate how helpful you found the information from that test on a scale from not at all helpful to extremely helpful on the right side by circling a number. If you did not use a particular type of soil test, then please leave the right portion of the question blank for that soil test type.

|  |  |  |
| --- | --- | --- |
| **In the past three years, which of the following soil tests have you performed on your soils?** | | **How helpful did you find the information from that test?** Not at all —— Somewhat —— Extremely |
| **Agronomic soil test** (e.g., soil nutrient levels, pH, organic matter, etc.) | Yes / No | 1 2 3 4 5 |
| **Soil health test** (e.g., Haney Test, Solvita, Cornell Soil Health) | Yes / No | 1 2 3 4 5 |
| **In-field analysis** (e.g., shovel, by feel, etc.) | Yes / No | 1 2 3 4 5 |

Next, we have a few questions about your farming operation.

1. When considering your farming operation, how high of a priority is soil health to you?

*Rate soil health’s priority level by circling a number from 0 to 10 using the scale given below:*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | | 5 | 6 | | 7 | 8 | | 9 | 10 | |
| Not a priority |  | |  | | Moderate priority | | |  | | |  | | | Highest priority | |

Finally, we have a few questions about you. Why do we ask these questions? We like to understand if certain types of farms or farmers take different approaches or have different views about soil health. All information will be anonymous and never reported other than as averages across many other respondents. Thank you for your candid responses.

1. What is your gender? 🞎 Male 🞎 Female
2. What is your age? \_\_\_\_\_\_\_\_ years
3. In which state(s) is your farm operation? *Please select all that apply.*

|  |  |
| --- | --- |
| 🞎 Minnesota | 🞎 Kansas |
| 🞎 Ohio | 🞎 Nebraska |
| 🞎 Missouri | 🞎 Wisconsin |
| 🞎 North Dakota | 🞎 Iowa |
| 🞎 South Dakota | 🞎 Michigan |
| 🞎 Illinois | 🞎 Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 🞎 Indiana |  |

1. How much formal education have you completed?

🞎 Some high school

🞎 High school degree or equivalent

🞎 Some college, no degree

🞎 Associate’s degree

🞎 Bachelor’s degree

🞎 Graduate or Professional degree

1. Which of the following best describes your primary role in the farm operation? *(Check all that apply)*

🞎 Sole manager/decision-maker

🞎 Co-manager (with my child)

🞎 Co-manager (with my parent)

🞎 Co-manager (with my spouse)

🞎 Co-manager (with another relative)

🞎 Co-manager (with a non-family business partner)

🞎 Owner (but not involved with daily decisions)

🞎 Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. This past year, what was your **total farm operation’s** annual net income?

🞎 Less than $50,000

🞎 $50,000 - $99,999

🞎 $100,000 - $249,999

🞎 $250,000 - $499,999

🞎 $500,000 or greater

🞎 Prefer not to say

1. Do you or your spouse earn or receive off-farm income?

🞎 Yes 🞎 No *(continue to end of survey)*

1. If you or your spouse receives off-farm income, what was your annual gross household income from off-farm sources this past year?

🞎 Less than $10,000

🞎 $10,000 - $49,999

🞎 $50,000 - $99,999

🞎 $100,000 or more

🞎 Prefer not to say

Do you have any other thoughts, comments, or questions related to this survey? If so, please share them with us here.

*Thank you for your responses!! We appreciate your time and thoughts.*

Survey Instrument (Non-Farmer)

In the first section of the survey, we are interested in how you understand the relationships between soil health and different on-farm factors. There are no right or wrong answers. *Please select one response per row.*

1. To you, an increase in **soil health** causes what effect on each of the following factors?

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Increases* | *Decreases* | *They are not related* |
| *Soil physical functioning* | 🞎 | 🞎 | 🞎 |
| *Soil fertility/biological functioning* | 🞎 | 🞎 | 🞎 |
| *Agrochemical inputs* | 🞎 | 🞎 | 🞎 |
| *Crop productivity* | 🞎 | 🞎 | 🞎 |
| *Profitability* | 🞎 | 🞎 | 🞎 |
| *Environmental harm* | 🞎 | 🞎 | 🞎 |

1. To you, an increase in each factor in the left column has what effect on **soil health**?

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Increases soil health* | *Decreases soil health* | *Is not related to soil health* |
| *Soil physical functioning* | 🞎 | 🞎 | 🞎 |
| *Soil fertility/biological functioning* | 🞎 | 🞎 | 🞎 |
| *Agrochemical inputs* | 🞎 | 🞎 | 🞎 |
| *Crop productivity* | 🞎 | 🞎 | 🞎 |
| *Profitability* | 🞎 | 🞎 | 🞎 |
| *Environmental harm* | 🞎 | 🞎 | 🞎 |

1. The next question has two parts. On the left, please indicate if you have used any of the listed soil tests in the past three years by circling either yes or no. Then, *if you answered yes*, please indicate how helpful you found the information from that test on a scale from not at all helpful to extremely helpful on the right side by circling a number. If you did not use a particular type of soil test, then please leave the right portion of the question blank for that soil test type.

|  |  |  |
| --- | --- | --- |
| **In the past three years, which of the following soil lab tests have you had performed on your soils?** | | **How helpful did you find the information from that test?** Not at all —— Somewhat —— Extremely |
| **Agronomic soil test** (e.g., soil nutrient levels, pH, organic matter, etc.) | Yes / No | 1 2 3 4 5 |
| **Soil health test** (e.g., Haney Test, Solvita, Cornell Soil Health) | Yes / No | 1 2 3 4 5 |
| **In-field analysis** (e.g., shovel, by feel, etc.) | Yes / No | 1 2 3 4 5 |

4. How high of a priority do you think soil health is to the average farmer?

*Rate soil health’s priority level by circling a number from 0 to 10 using the scale given below:*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | | 5 | 6 | | 7 | 8 | | 9 | 10 | |
| Not a priority |  | |  | | Moderate priority | | |  | | |  | | | Highest priority | |

Finally, we have a few questions about you. All information will be anonymous and never reported other than as averages across many other respondents. Thank you for your candid responses.

1. In which state(s) do you primarily work? *Please select all that apply.*

|  |  |
| --- | --- |
| 🞎 Minnesota | 🞎 Kansas |
| 🞎 Ohio | 🞎 Nebraska |
| 🞎 Missouri | 🞎 Wisconsin |
| 🞎 North Dakota | 🞎 Iowa |
| 🞎 South Dakota | 🞎 Michigan |
| 🞎 Illinois | 🞎 Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 🞎 Indiana |  |

1. How often do you personally interact with farmers in your professional capacity?

🞎 More than once a week

🞎 Weekly

🞎 Monthly

🞎 Quarterly

🞎 A few times a year

🞎 About once a year

🞎 Never

1. What is your gender? 🞎 Male 🞎 Female
2. What is your age? \_\_\_\_\_\_\_\_ years

Do you have any other thoughts, comments, or questions related to this survey? If so, please share them with us here.

*Thank you for your responses!! We appreciate your time and thoughts.*