**Citation:** Irvine, R., M. Houser, S.T. Marquart-Pyatt, G. Bogar, L.G. Bolin, E. Grennan Browning, S.E. Evans, M.M. Howard, J.A. Lau and J.T. Lennon. 2023. Soil health through farmers’ eyes: Toward a better understanding of how farmers view, value, and manage for healthier soils. Journal of Soil and Water Conservation 78(1):82-92. https://doi.org/10.2489/jswc.2023.00058.

Table S1. List of codes used to identify emergent topics across transcripts used in this analysis.

Emergent- Environmental conservation ethic

Emergent- Extended growing season

Emergent- System constraints or opportunities

Emergent- Timing of rains

Emergent- Used to have livestock, more diverse crops

Emergent- Uses manure or biologicals

Emergent- Works another job

Emergent--Farm v. urban

Emergent--Labor and time as barrier

Emergent--Soil health misperceptions

Table S2. Farmer-identified components of soil health.



Table S3. Farmers’ perceived benefits/ goals of healthy soil



Table S4. Farmer-identified management practices for SH promotion

|  |  |  |
| --- | --- | --- |
| **Target of management** | **Management practice** | **Description** |
| **Biological SH / Sustainability**  | Living root year-round | Cover crops; living root year-round |
| Diversified rotation | Diversified rotation beyond the corn/soybean two crop system |
| Residue management | Residue left on surface or incorporated into top layer of soil |
| Manure, biologicals, compost | Use manure, biologicals, or compost applications |
| Reduced chemical inputs | Less application of synthetic inputs |
| Limit harsh chemicals | Limit harsh chemicals (insecticides, pesticides, herbicides, anhydrous ammonia) |
| Grass waterways | Grass waterways to reduce erosion |
| **Physical soil characteristics** | Limit working wet soils | Avoid using heavy machinery/ working wet ground (reduce compaction) |
| Tile drainage | Installation of tile to improve water drainage and soil moisture |
| Gypsum | Gypsum amendments to build tilth/ soil structure |
| Tillage  | All tillage types (conventional, reduced, no-till) |
| **Chemical soil characteristics / Fertility**  | Soil testing | Periodic soil testing |
| Appropriate nutrient application | variable rate application, not overapplying fertilizers, "right place, time, product, location," "build and maintain" fertility program |
| Micronutrients | Application of micronutrients |