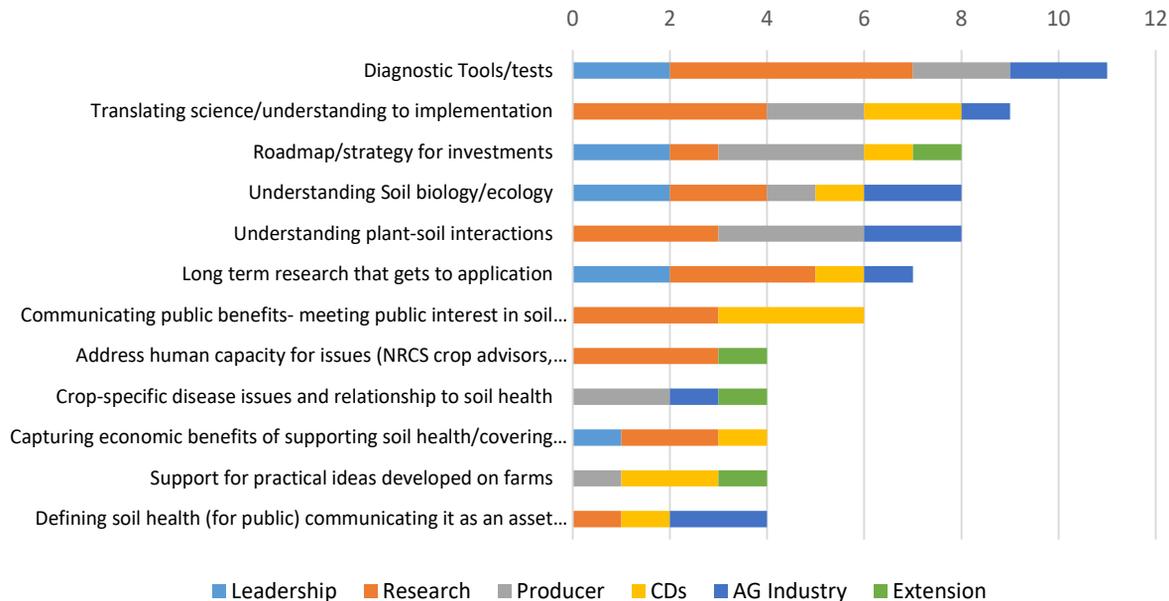


WA State Soil Health Summit: Summary Report

Top Soil Health Issues



Barriers to Progress on Soil Health:

- The most critical barrier is the inherently complex nature of soils – and how little we actually know.
- The lack of clarity and consistency of soil health metrics across the region and cropping systems, and measuring the benefit of improved soil management over time.
- Sociology/psychology of adoption: major barrier is the individual’s mindset – particularly as it relates to the difficulty of correlating management investments with measurable outcomes.
- The economic incentive at the farm level is often unclear. We need to better understand ROI (return on investment) of soil management practices.
- The disconnect between producers and consumers as it relates to management of soils. Producers don’t get paid to manage soils, they get paid for a crop.

Resources, Tools & Opportunities:

- “Sustainability audits” for various crops.
- Address the dwindling human capacity issue with good hires (i.e. research, extension, crop advisors, agency / CD staffing, etc.).
- Focus on utilizing current resources and create a clearinghouse for new innovation.
- Enhance the research and technical support connectivity between researchers and innovative producers.
- Explore opportunities for accessing data-bases on soils collected by the private sector.
- Further evaluation of various soil health indicators / tests across cropping systems and the region.
- Building a road map for soil health to drive all other soil health investments.

Ideas relating to formal (university) education:

- Add capacity to teach soil health-related courses
- Need a broad base of knowledge, encourage cross-disciplinary training for students (no silos).
- Encourage training in more effective technical communication, (e.g. or soil scientists)
- Re-introduce conservation ethics and add more training in social sciences part of soils courses and standard curriculum.

Develop statewide roadmap across sectors and stakeholders:

- Start with the goals, what is the purpose. What is the end goal and does it differ between systems
- What is SH/what are the factors
- Main impacts on peoples bottom lines
- Timeline (little overlap short-term but more long-term)
- Linking triage goals priorities
- Need buy in

Ideas relating to research:

- Taking data already collected on farm, and analyzing it in meaningful ways to develop regional best practices. (This should be seen as low hanging fruit, but needing some clarity about what the questions are first, think about a comparative score card approach?)
- Stable funding pool from state and industry (pooled cross-industry where possible for common issues) to invest in soil health research (drives hires, what people study, esp. given funding at public universities).
- Create soil industry directed faculty positions/Industry directed endowed chairs at WSU representing top five crops (cropping systems).
- Consider a multi-disciplinary cluster hire to build more scientific capacity and encourage cross/multi-disciplinary collaboration (Incentivize farmer-researcher collaborations).
- Support transformational work and long-term projects. Consider mini long term agroecosystem research on top five productive regions in WA.
- Basic biology needs to be looked at (plants & soils).
- Research repressive soil mechanisms – why some plants don't die when others do.
- Pool resources for more money and investment in soil health. Need money to support programs.
- Soil health committee funded by commission, support research.
- Address facility issues (especially outside of Pullman) - proximity location of university, university has strong attachment to wheat - cannot staff Othello or Prosser research center; Re-org ag research stations (Othello Prosser) to better be able to emulate commercial operations (so there's not as big a gap between research and implementation).

Ideas relating to extension/implementation:

- "Advances" type book for other 'cropping systems'.
- Create new partnerships in industry and cultivate better partnerships to reach more diverse group of producers to effect change (ones we have not thought of yet, like Cliff Bar).
- Central website for information.
- Collaboration, resource pooling, and training: farmer-researcher collaborations and interactions (foster two way influences), grower to grower mentoring, education for crop consultants and training.
- Communication plan reaching producers where they are with language they understand; Improvements in communications down the supply chain (potential tool example: potato sustainability project).
- Encourage 'out of box' work in extension and ag service
- Risk assessment tool (e.g. Farm Assist or Home Assist programs established in the 80's: guide a user through protecting water resources that can guide farms through sustainability decisions).
- Monitoring should always be part of the protocol to implementing new practices.
- How to let farmers know more about the practices that ARE making a difference.
- "Cultivating a pioneer culture" –identifying innovators;
- Long term demonstration of proven ideas critical for grower buy in.
- Finance on farm research with research, growers, industry.
- Matching extension with growers willing to do large scale plots/demos.
- We really need metrics that are this easy to identify, Develop of use existing studies to better understand SH metrics; Train dogs to identify healthy soil.

Capacity Investments

- "The goals of our consumers should be our goals"; Bring more stakeholders (i.e. those who eat) to the table= more \$\$\$ for research.
- Discussion of funding to support soil health over time e.g. Soil health checkoff? Fertilizer tax? Carbon tax? Soil erosion tax? Establishing public, private partnerships – successful in Midwest.
- Invest in recognizing (award program), validating (replicated studies) and sharing practices that innovative producers are implementing successfully.
- Invest in and fund long-term, on-farm, research and demonstration projects. Involve growers with operations of different scales, researchers, industry.
- Invest in dedicated, multi-disciplinary soil health science positions. Fund a dedicated soil ecology center, endowed chairs, with state government leadership and industry support.
- Invest in a research and outreach team to collect stories on and market the benefits of soil health to producers and the public.

Regional Strategy Considerations

- Invest in standard soil health metrics and methods to evaluate soil health improvements and success that also allow for the unique characteristics that differ across the region.
- Need for a shared strategy and leadership, with coordination across the region and across sectors— research, industry, agencies, growers—and with stakeholder buy in (strategic plan/roadmap); Make sure the right players are at the table.
- Need to overcome obstacles to forming research collaborations across universities in the region.
- Need to strengthen the links between soil health, resilience, and adaptation capacity in light of climate extremes.
- Cropping systems and what are associated baselines – quantify what is being removed; Build on the research strengths in each region (coordination to avoid duplication of efforts build teams with expertise at the local/regional/systems level).
- Where to get the money; How money does or does not cross borders (geographic, agency etc.).