SOIL HEALTH FROM THE GROUND UP

Promoting Locally-led Innovations in Soil Management

Tabitha Brown, PhD, American Farmland Trust | NW Drought Workshop July 30, 2020
LATAH SWCD SOIL HEALTH PROGRAM APPROACH

• Understand and solve on-farm soil health issues
• Advance the science and art of soil health
• Promote innovative grower-led solutions to soil health problems
SOIL HEALTH CONCERNS PRIORITIZED

- Soil acidification, soil compaction, and declining soil organic matter levels
- Sustainability of long-term no-tillage
- More regenerative process to rebuild agricultural soils
- Lack understanding and/or confidence in soil testing
Soil Health Indicator Testing

“Test the Tests”
Key Indicators
Directional Change

Agricultural Liming

Soil Health
Productivity
Economics

Cover Crops as Rotational Tool

Soil Health Benefits
Agronomic Feasibility
Ecosystem Services
SOIL & ECOSYSTEM SERVICES MONITORING CRITERA

- Monitoring tools/systems:
  - Relevant
  - Economical
  - Technically Accessible

- Soil Health Indicators:
  - Diagnostic
  - Balance/integrate biological, chemical, & physical

- Learning at Pace of Agricultural Decision Making
Adoption limited by lack of specialized decision support.
What are guiding concepts?
Are concepts hard to adopt?
What guides management?

Technical Indicators of Soil Quality (TISQ)

Local Indicators of Soil Quality (LISQ)
Northwest Climate Hub

- Evaluating Sustainable Management Practices and Soil Health Assessment Tools to Support Decision-Making by Palouse Producers

Idaho NRCS Conservation Innovation Grant

- Understanding Soil Health from a Management Perspective: From Concept to Field Operations