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Northwestern Washington Annual Cropping System Long Term Agroecological Research and Extension Site

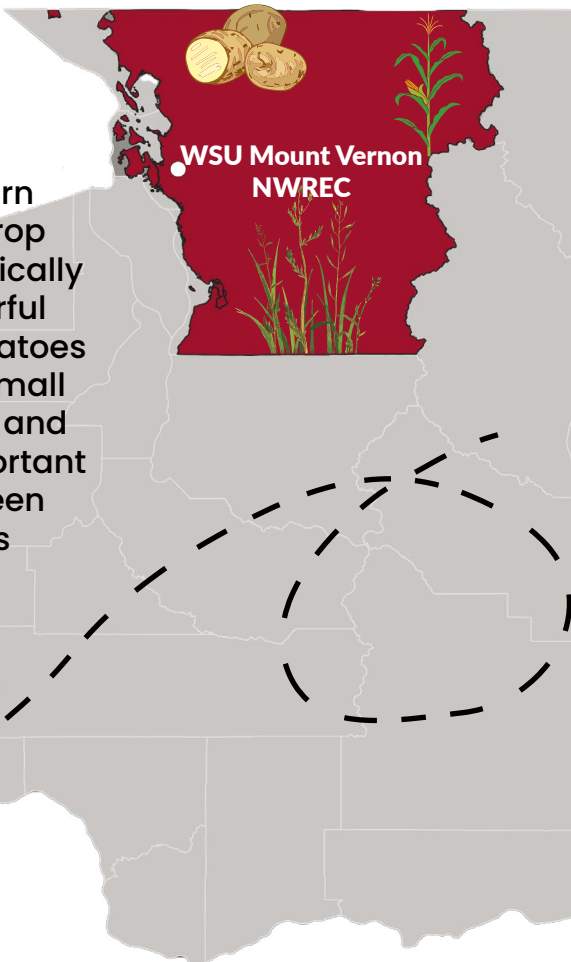
WaSHI's
1st
LTARE site

WSU Mount Vernon Northwestern Washington Research and Extension Center







The Washington State Soil Health Initiative (WaSHI) is an ambitious plan that funds research, extension, and demonstration of soil health best management practices through a network of long-term agroecological research and extension (LTARE) sites across Washington state's diverse agricultural systems.

In Northwestern Washington crop rotations are typically driven by colorful fresh market potatoes incorporating small grains, forages, and many other important crops in between potato crops



Four Soil Health Issues in the Region

-  Increasing soil compaction and crusting
-  Poor water infiltration & water holding capacity
-  Low soil pH
-  High pathogen pressure



Main Objective:
Identify and promote management practices that enhance soil health, carbon sequestration, and the environmental and economic sustainability of agricultural systems in western Washington



Investigating reduced disturbance and increased organic matter additions

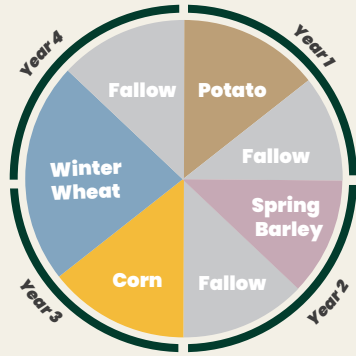
Treatment 1



Full tillage between crops



Bale and remove crop residue



Treatment 2



Full tillage between crops



Leave residue after grain crop



Treatment 3



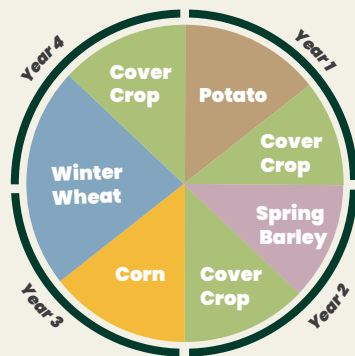
Reduced tillage



Leave residue after grain crop



External soil amendments added



Treatment 4



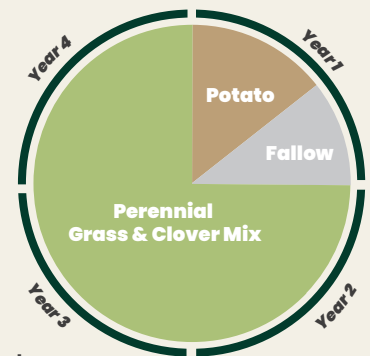
Reduced tillage



Leave residue after grain crop



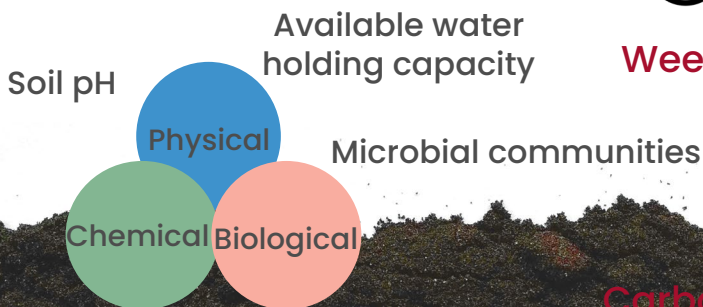
External soil amendments added



What is being measured at this LTARE?

Soil Health

(Example metrics)



Economic Performance



Weed Populations



Crop Performance

Disease incidence and severity

Nutritional quality



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