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Dryland Systems Soil Health

Long Term Agroecological Research and Extension Site

WaSHI's only non-irrigated site

WSU Wilke Research and Extension Farm

Photo credit: Tarah Sullivan



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.



4 Important Soil Health Issues

Water capture and storage

Herbicide resistant weeds

Soil acidification

Soil organic matter loss



WSU Wilke Research and Extension Farm

With deep, fertile, loess soils and Mediterranean climate, the dryland crop production area of Washington state produces high yields for cereal crops.

Main Objective:
Improve soil health and promote economically sustainable farms through increased implementation of soil health management practices across eastern Washington



Washington State Department of Agriculture

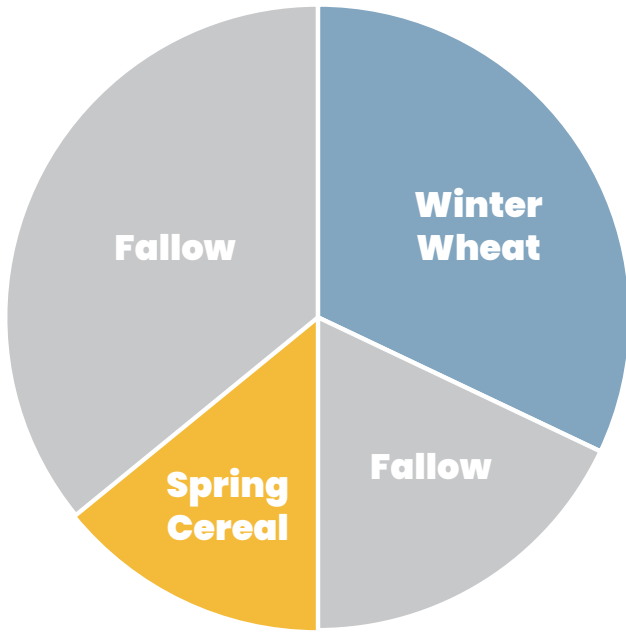


WASHINGTON STATE UNIVERSITY

Investigating livestock intensification in dryland cropping systems

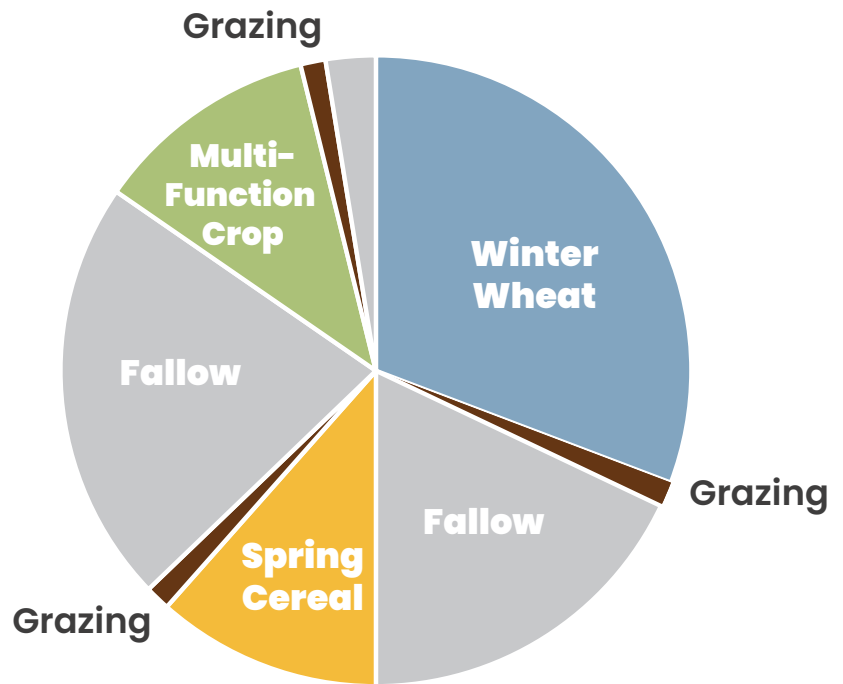
Three Year Cropping Rotation


Business as Usual




 No-till based crop rotation

Livestock Intensification



 Multifunction crop includes a mixture of grasses and broadleaves

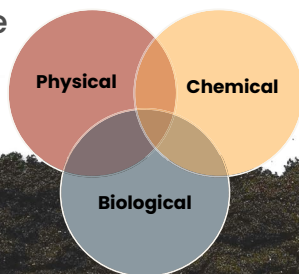
 Multifunction crop and wheat stubble grazed by cattle

What is being measured at this LTARE?

Soil Health

(Example metrics)

Aggregate stability



Soil pH

Microbial communities

Carbon Stocks

Economic Performance



Disease incidence and severity

Crop Performance

Grain yield and quality



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Learn more about soil health across Washington state in our roadmap



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2021