



Tillage Radish Field Day Rock Creek, Haynes' Ranch, June 28, 2019

Summary

Jamie Haynes has been dryland farming in the Rock Creek region for decades. He plants a range of dryland crops including grain and forage for silage. Dryland farming is increasingly challenging with variable weather and drought. Jamie and his farm partner John Lindquist have transitioned to no-till farming to increase organic matter, protect soil from compaction and improve soil function.

Incorporating tillage radish with annual forage mixes is one way to potentially increase water infiltration into the soil when it rains. Half a 60-acre field was planted with rye, oats, peas and tillage radish (7 lb/acre) while radish was excluded from the other half of the field. Measurements will be taken this fall to assess if the radish has improved the rate that water can infiltrate into the soil.

Next steps: A field day at the same location will be held in the fall 2019 to take measurements and review the trial results. Optional visit to the Fossen Ranch to view a corn field that was broadcast seeded with a clover cover crop for fall grazing.

Additional Research Questions

Tillage radish also draws nutrients from below the soil surface and makes available the nutrients to other crops when they decompose. This sparked ideas for additional research questions to build upon this trial such as:

- Fall cover crops: will there be a difference in fall cover crop yield where the tillage radish was planted (e.g. fall rye)?
- Weed suppression: does the tillage radish suppress weeds?
- Yield and biomass: which crop has a higher yield and biomass – radish or non-radish field (by weight and volume)?

Research Project Background

This trial is a project of the BC Agriculture and Food Farm Adaptation Innovator Program where the Haynes' Ranch receives support for research design, methodology, field measurements and final data analysis. This trial will be standardized into a template that can be replicated so that other producers can conduct their own on-farm research trials. Dr. Catherine Tarasoff of Thompson Rivers' University and AgroWest Consulting is providing support for research design and standardized measurements. Rachael Roussin of the Kootenay & Boundary Farm Advisor supports with extension and coordination support.



Field day participants walk the fields where the trial is taking place at Haynes' Ranch. This season began with a drought, but precipitation late June has encouraged crop growth.



Radish roots are developing that will break up soil compaction and increase water infiltration rates. Roots are 'kinked' where they hit a rock or a layer of soil compaction.



Dr. Catherine Tarasoff explains the benefits of on-farm research trials.