North Coast Local Land Services Project

Ground Covers and Cover Crops for Soil Health

David, Teresa and Josh Wilson Dairy

Project Objective: Demonstration of cover crops to improve soil health.

David Wilson

Wilson Family Farming Philosophy

This farm has been operated as a dairy in the Wilson family for close to a hundred years.

We have found our soil health has been suffering under the NPK approach to farming. We now believe a more natural approach that builds soil carbon and works with nature is a more sustainable and more productive and satisfying approach.

Note: David travelled to Wisconsin, USA twice to visit and learn from Gary Zimmer, author of 'The Biological Farmer'.

Groundcover/Cover Crop demonstration steps

The area for the trial has a history of maize for silage production. This has left us with low carbon levels and compacted soil with low moisture holding ability.

The area was direct drilled with a rigid tyne planter with a mixture of Lab/ Millet/Cowpeas/and Sorghum.

A pre-plant soil amendment (soft phosphorus, calcium and boron) was applied at the rate of 300kgs to the Ha plus 160Kgs of DAP fertilizer.

The area will be grazed once then held over for a green manure crop, which will be mulched then incorporated.

Cover crop gets light grazing before it is held for a green manure crop.

Proposed benefits:

- Increase soil organic matter
- Increase infiltration
- Improve soil structure
- Decrease runoff
- Decrease soil erosion
- Conserve soil moisture
- Increase nutrient availability
- Supply/maintain nitrogen
- Suppress weeds
- Suppress soil-born diseases/nematodes
- Attract beneficial insects
- Increase crop yields

Paddock planting

'After' view of demonstration paddock with Cowpea, Millet, Lab Lab and Sorghum.

Close-up 'after' view of demonstration paddock.

Monitoring

Soil monitoring on our farm is an ongoing activity. We regularly test for soil chemical properties to monitor soil health and prepare nutrient management plans.

The Northern Rivers Soil Health Card is regularly used to monitor the physical and biological soil health. The Soil Health card is a valuable tool to visually appraise critical indicators of soil health.

Budget

Direct drilling two hours $50 an hour… $100
DAP 70kg to the Ha ……$270
Amendment 600Kgs plus spreading ……$300
Seed:
75 kg Red Caloona Cowpea ……. $225
40 kg Siberian Millet …….. $176
40 kg Sorghum …… $ 50

For more information contact: info@soilcare.org Subject line: David Wilson

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