

Green Manure Farmer Trial



Mackillop Farm Management Group member, Nick Wight, has been farming on his property, Strathyre, for the past 6 years. Located in the Cadgee area just a few kilometres from Naracoorte, the land has been used predominantly for cropping however, one paddock in particular struggled to grow a consistent crop with issues ranging from extreme variations in plant heights to patchy growth and germination. Crop rotations used over the past few years have included clover, canola, and oats/rye grass for hay. Nick, with advice from Elders Naracoorte agronomist Jason McClure, decided to trial green manure crops over the summer months hoping that by putting nutrients into the soil before seeding, he would increase the yield of his winter crop.

The paddock now has 8 trial plots, each 10 metres wide (the width of the seeder), and 500 metres long making each trial .4 of a hectare. The trial plots were sown on January 29 2016. The next day they were irrigated at 50ml per hectare with Nick aiming to water them further in mid-March. He will continue growing the plots until mid-April and then plough them in prior to seeding in order for the plants to break down and form a nutrient rich layer for the main crop.



Trial plots shown at 6 weeks from sowing.

Sorghum	15kg hectare
Maize	20kg hectare
Summer Max	15kg hectare
Lunch Radish	5kg hectare
Tillage Radish	5kg hectare
Canola	2.5kg hectare
Millet	14kg hectare
Wheat (Mace)	150kg hectare

Table shows crops planted, and sowing ratio, in order from East to West

The radishes with their deep tap root are being trialled to evaluate their biomass production and ability to access nutrients at depth and break open compaction layers from farm traffic.

These will be terminated at first flower to prevent viable seed set and management issues in subsequent years. Agronomist Jason McClure acknowledges that in recent years' local farmers have upgraded to bigger and heavier machinery to increase efficiency of operations and inadvertently have increased sub soil compaction. He says that sub soil compaction on sandy soils is a real issue and unlike clay soils that shrink and swell, sandy soils are unable to repair compaction at depth without physical treatment of the soil. Tillage Radish may provide a less aggressive approach to ripping, delving or spading. Essentially aiming to increase moisture holding capacity, biological activity, organic matter and long term fertility of the soil to optimise productivity and sustainability of cropping long term.

Nick concedes that there are challenges involved and doubts he will see any real results until next growing season (2017) but he is hopeful that at least one of the green manure alternatives will provide him with healthier soils and a better yield. He hopes to continue his green manure trial next year but will plant it earlier (around late December) to allow it maximum growing time. In the long term, if it is cost effective, Nick will look at carrying out green manuring his crop paddocks on a larger scale.



Cadgee farmer Nick Wight who has trial plots of green manure crops on his property

For more information, please contact Nick Wight 0409 821 505

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