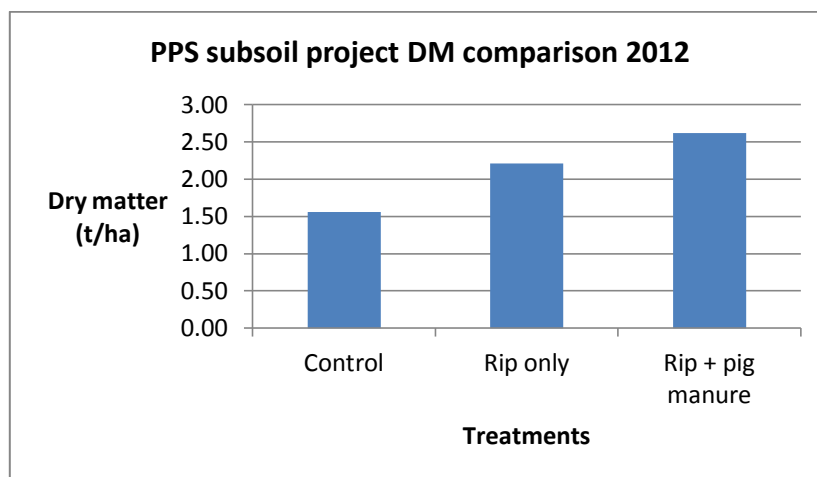


Jallukar Sub Soil Project - Interim Report 11/12/13

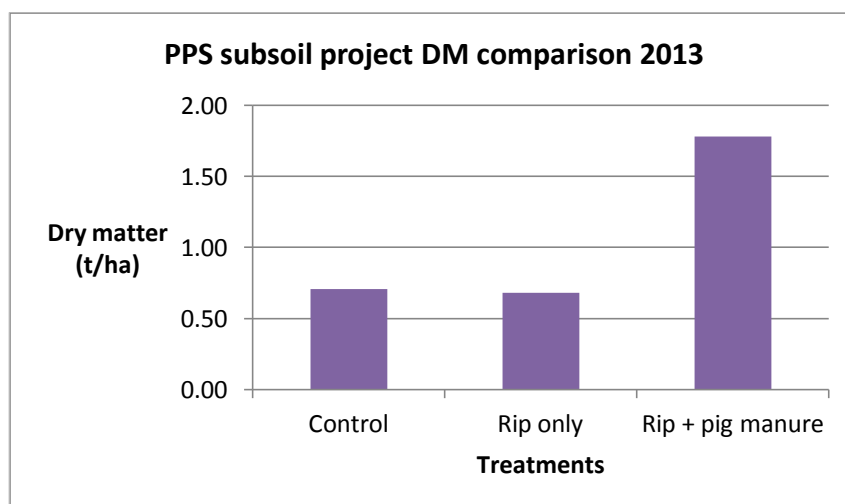
The Perennial Pasture Systems (PPS) subsoil amelioration project is located at Jallukar Park which is 25 km North West of Ararat Victoria. The project forms part of the wider PPS project which now has ninety one farm enterprise members. The subsoil amelioration project is based on work of Dr Peter Sale from LaTrobe University and trial work on cereal crops at Yallock Ballan Victoria.

The sub soil project at Jallukar was established in July 2011 prior to the area being sown with a Q75 winter active lucerne pasture. There were three treatments, a control, a deep ripped area and a deep ripped area ameliorated with approximately 10 tonnes/ha of pig manure, replicated eight times. The trial area covers approximately 0.5 ha.

The Spring 2012 and 2013 dry matter cuts are shown below.



The 2012 results showed a response to both the rip only and the rip + manure treatments.



The 2013 results show a continued response to the rip + manure treatment but the response to the rip only treatment has declined to be below the control.

Note Due to the small area of the trial, the nature of lucerne growth and the treatments being in a single rip line there is a margin for sample error, although the dm results reflect the visual assessment of the trial.

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Key Findings to Dec 2013

There has been a large growth response to the rip + manure treatment over the two years of the trial so far.

There was a one year growth response to the rip only treatment before it reverted to levels similar to the control section. This is consistent with previous rip only trials in the clay loam soils in the region.

Future Trial Analysis

PPS will continue to measure dry matter responses to the treatments until there is no response to the rip + manure treatment or until the lucerne pasture declines to a level where measurement is not practical.

PPS plan to do some simple economic analysis of the value of extra dry matter grown and compare it with the estimated cost of the treatment.

PPS plans to investigate lucerne plant root penetration during 2014 with the use of soil testing bore samples or soil pits.

Future Research

The host farmer plans some small scale soil amelioration trial work during 2014.

PPS has been approached to cooperate with a larger soil amelioration project but no further details have been proposed as at 11/12/13.

Trial Communication

Trial aims, progress and results have been included in PPS quarterly newsletters.

The site was inspected by PPS members at the end of year event in 2012 with Dr Peter Sale from LaTrobe University in attendance, who gave a talk on the process of soil amelioration.

The site has been visited as part of farm tours by the Ararat Bestwool/Bestlamb group and the Elmhurst Evergraze "whole farm grazing course" which was facilitated by PPS in 2013.

PPS members visited Yalloak Estate at Ballan to view some of the soil amelioration work carried out in cropping paddocks during 2013.

Thanks

To PPS members & host farmers Simon & Yvette Brady Jallukar Park and PPS members Kelly Johnson agronomist Gorst Rural & Wayne Burton for their assistance with the plant measurements.

The PPS sub soil project is funded by the A W Howard Trust

