MFS Soil Carbon Project….first soil sampling completed…

Rob Smith, technical field officer with NSW DPI has recently visited all 20 sites with his hydraulic soil corer to collect the first round of soil carbon samples for the MFS project "*Monaro Farm Management Strategies and their effects on soil carbon"*.
Some of these have already been analysed by Susan Orgill, NSW DPI who is one of the leading researchers in this field, in Australia.

Rob Smith – NSW DPI preparing hydraulic corer

The different systems being compared include intensive cropping, old and new improved perennial pastures, native pastures fertilised and unfertilised, limed vs un-limed pastures, a pine plantation and an improved pasture on an east-west aspect site.
The properties being sampled are scattered between Cooma, Bungarby, Mila, Craigie, Bombala and Delegate giving a variety of soil types and pasture systems.

The results of the project will give a local, validated, baseline of soil carbon under these different regimes and ideally measure / quantify the impacts on soil carbon, if any, due to aspect, cropping practices, grazing strategies, pasture age, fertiliser applications and land-use etc.

Susan describes this project as being able to "provide valuable information on how land management influences soil carbon (soil C) stocks in the Monaro region and will enable a database of carbon accumulation values for different soil types and management practices that will be transferable to other properties in the region".

Susan believes "For land managers to decide whether or not to participate in a soil C trading scheme, it is important to have a good understanding of how soil C varies in their region, and what capacity land management has to increase soil C stocks. Therefore by collecting comprehensive land management and production data, we hope to demonstrate how carbon stocks are influenced by farmers actions."

The first presentation of results will be given on **the 8th of March 2013** and will combine the MFS results with Susans own carbon baseline testing work on the Monaro over the last 3 years, as well as the soil carbon trials being conducted by Sydney Universities, Lachy Ingram, at Coolringdon.

Cutting up Soil Core to measure bulk density of the soil

Soil cores to 50cm, collected for cutting into 10cm depths for analysis
Soil core taken on South aspect - Quinburra

Soil core taken on North aspect – Quinburra (same paddock)

Soil Cub 3rd Session – Dr Richard Simpson, CSIRO, 27th Nov. 2012, Nimmitabel

On the 27th of November Monaro Farming Systems hosted its third annual "Soil Club" session presented by CSIRO's Soil Scientist Dr. Richard Simpson for approx. 40 MFS producers.

This initiative was initiated three years ago in response to the growing concerns and challenges of managing fertilizer investments in the face of rising, global fertilizer costs and a bleak forecast that "peak phosphorus" may occur within 25 years.

MFS now have a data base of **over 650 soil tests**, representing 479 paddocks, collected over three years on the three main Monaro soil types basalt, granite and shale. These results have been analysed by Richard Simpson to show some strong emerging trends.

On the basalt soils, the soil results indicate 19% are below optimum for phosphorus (P), 82% are below optimum for sulphur (S) with 17% deficient for both P & S.

On the granite soils, 61% are below optimum for P, 78% below optimum for S and 26% are below optimum for potassium (K). On this soil type, 55% were deficient for both P and S and 24% deficient for P, K and S.

On the shale soil type, soil test results indicated 79% were below optimum for phosphorus, 83% below optimum for sulphur and 47% below optimum for K, resulting in 69% being P and S deficient and 36% of soils deficient for all S, P and K.

Results indicate that many producers may be dealing with multiple nutrient limitations which can make for some difficult decisions!

Richard presenting his analysis of Monaro soils..

Richards main messages include knowing your critical target nutrient levels for your soils and monitoring this over time by regular testing so you know if a buildup or maintenance phase is needed. Variable rate applications to paddocks instead of blanket spreading can save famers significant input costs as well.

Understand the "whole picture" of your soil nutrient status as one critical element deficiency may be limiting your response to all the other applied nutrients. Another key message to come out of the day included the importance of matching any fertilizer investment with an appropriate increase in stocking rate to be able to realize any financial gains.

Overall the day was very successful with feedback including "Richard Simpson's presentations both last year and this

year were so clear and to the point and have taught us a lot for the better management of our soils."

MFS would like to acknowledge Richard's tireless efforts and countless hours spent analyzing and presenting our data as well as continued support from NSW DPI Agronomist Luke Pope.

Up Coming events & current projects…

-2012 Agricultural Traineeship Program

The 2012 traineeship program has been very successful this year with Jake and Daniel enjoying their time working on the Monaro. Daniel has applied for positions interstate for 2013 continuing in the agricultural industry and Jake may be employed locally as a result of his work this year on properties in the Bombala area.

The two boys were presented with an engraved pocket knife and certificate of appreciation from MFS at the recent soils day in Nimmitabel. Thanks very much to Jake and Daniel for their commitment and hard work this year!

Thank you also to Craig and Susie Mitchell for all their hard work in coordinating this program as well as the host producer employers in 2012 who have given their time in helping to train Jake and Daniel.

Craig Mitchell presenting Jake and Daniel with a pocket knife

Interviews have been conducted to employ two more young people for 2013 after another large response of 65 to the advertisement. The two trainees, if they accept the positions, will commence in Jan / Feb 2013.

****please contact Nancy if interested in employing either of these two trainees in 2013.****

- Genetic Evaluation Wether trial.

The 1st year results have already started to demonstrate, under equivalent commercial conditions, the variation in the relative productivity of merino sheep flocks for economically important characteristics ie. fleece weight, fibre diameter and body weight and the resultant difference in gross margin per dry sheep equivalent (GM/DSE).

The averages across the 24 teams include;

-Greasy Wool Weight = 5.5kg
-Clean Wool Weight = 4.0kg
-Shorn Body Weight = 48.3kg
-Micron = 16.8
-Schlum. Yield = 74.2
-Clean Price = 1672 c/kg
-Average Wool Value = $64.09 (per head)
-Gross Margin / DSE = $59.60
-Fleece Rot Score (visually assessed) = 1.03

The top 5 teams ranked by average wool value included; Tallawong Pastoral (Tallawong S), Bellevue (Bobingah S), Greendale (Greendale S), Mayfield Partnership (Greendale) and Anunaka (Pastora).

In terms of wool value ranking, the difference between the top team (Av. $76.77 / hd) and the bottom team (Av. $50.28 / hd) was $26.49 against an average of $64.09.

The top 5 teams ranked by Gross Margin per DSE (dry sheep equivalent) included; Greendale (Greendale S), Bellevue (Bobingah S), Tallawong Pastoral (Tallawong S), Mayfield Partnership (Greendale) and Gaerloch (Gaerloch).

In terms of gross margin per DSE ranking, the difference between the top team ($68.12) and the bottom team ($32.97) was $35.15 against an average of $59.60.

The trial is entering its 2nd year and it will be interesting to see the second years results with the wethers closer to reaching maturity in several traits.

Doug Alcock is currently producing a grassgro analysis which will be distributed early in the New Year and show what a powerful tool modelling can be when comparing bloodlines and genetic differences.

-MLA Fertiliser trial / Producer Demonstration Site

This trial now has two years of results including soil and pasture assessments. The different sulphur fertiliser treatments are showing some interesting results in how quickly they leach through the soil and where they sit in the soil profile.
Three clover types were sown in May 2012 at each of the three sites and establishment counts were as follows;

Basalt

	Av plants / m	plants / sq m
Scimitar	3.9	22.29
Antas	0.6	3.43
Prima Gland	4.7	26.86

Granite

	Av plants / m	plants / sq m
Scimitar	0.9	5.14
Antas	0.3	1.71
Prima Gland	1.8	10.29

Shale

	Av plants / m	plants / sq m
Scimitar	4.9	28
Antas	4.6	26.29
Prima Gland	3.3	18.86

This trial's results will be analysed once a full data set has been collected and a final report distributed.

-we welcome **Denham Williams** as our new Board member, replacing Lisa Philips who has done a wonderful job over the previous three years.

On behalf of the Board of MFS I would like to wish everyone a relaxing Xmas and all the best for 2013.

Thank you to all our sponsors and partners and members who have continued to support us during the year, we do appreciate your on-going commitment. Your involvement continues to add strength and credibility to this organisation.


GORDON LITCHFIELD
WOOL
PTY LTD


Incitec Pivot


RB SELLARS


LAMBPRO
linking genes and markets


CommonwealthBank
Regional and Agribusiness Banking


agribusiness
nab


Southern Rivers
CMA
CATCHMENT MANAGEMENT AUTHORITY


BOYCE
CHARTERED ACCOUNTANTS
Knowledge. Insight. Experience.


ms&a
Advisors to Australian Agriculture


NSW
GOVERNMENT
Industry &
Investment


JEMALONG
WOOL


KYDRA
TRANSPORT


Virbac
ANIMAL HEALTH


The University of Sydney