

MFS Soil Carbon Project underway.....

As was announced recently MFS has secured \$276,989 through the Dept. Agriculture, Fisheries & Forestry (DAFF) "Action on the Ground" Program for a three year Project to measure soil carbon under different farm management systems.

After consultation with NSW DPI, Sydney University, Southern Rivers CMA and MFS members and understanding what is achievable and what research has already been done, the following systems are going to be compared in terms of soil carbon, nutrient profiles, grazing practices and gross margins;

1. **Pine** plantation versus **improved pasture** versus **cropping** - Delegate Station
2. **Cropping** versus **native** pasture - Delegate Station & Corrowong
3. **High fertiliser** native pasture versus **low fertiliser** native pasture - Idaho, Bungarby
4. **Limed** improved pasture versus un-limed – Springvale, Mila
5. **Aspect**, west versus east facing slope – weather stations will be installed to measure differences in rainfall, temp, soil temp and moisture, wind speed at different aspects, and potential implications for pasture growth, nutrient status, soil carbon etc. – Quinburra, Craigie

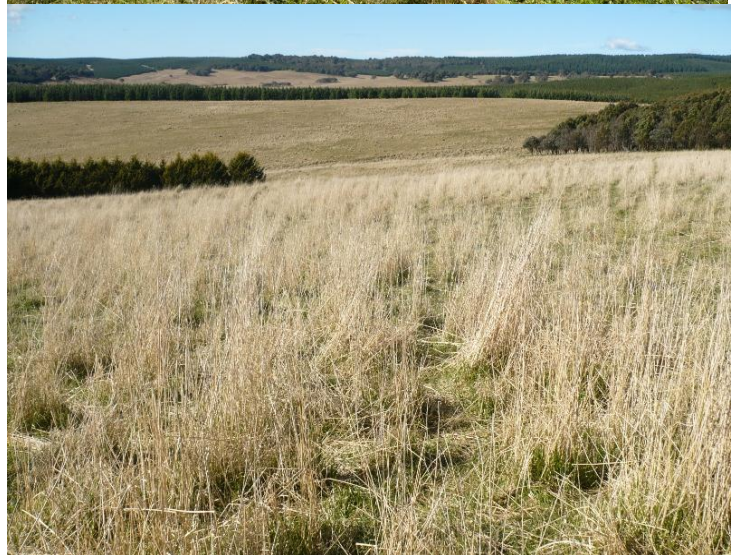
Site 1 Delegate Station



Site 2 Delegate Station, crop vs native



West versus East aspect site, Quinburra



Low Fert Input native site, Idaho, Bungarby**Up Coming events & projects...**

- ❖ **Wether Trial - A Wool Focus field day** will be held on **Tues 18th Sept** at “Knockalong”. This day will include the MFS AGM, mid-side sampling of the trial wethers, subjective ranking of teams by participants and presentations by NSW DPI and Rowan Woods of Jemalong Wool. Subjects to include wool trade/futures/forward pricing strategies and impact of bloodline on farm business profitability as well as linking objective measurement with sire evaluation.
- ❖ **Wether Trial shearing – Tues 16th Oct**, all welcome to attend, presentation by Gordon Litchfield Wool, barbeque lunch provided.
- ❖ Annual Bulk **Soil Testing Program** – collection samples early Oct 2012, 3rd Soil Club Session, **Richard Simpson, CSIRO end Nov 2012** addressing Monaro soil deficiencies, fertiliser efficiencies and nutrient targeting.
- ❖ Two applications submitted under Community Action Grants (CAG) have been unsuccessful. One project applied for **\$20,000** to further extend the “family farm resilience” work already started by the Rob Napier workshops in 2010/2011. This funding planned to allow MFS to continue working on the “people” side

of successful farming & give access to key speakers from New Zealand. The second project applied for \$19,000 for serrated tussock control which is an on-going challenge for many properties on the Monaro.

- ❖ A further project proposal was recently submitted under **Woolworths/Landcare for \$15,000 to continue the Soil Club activities**. If successful MFS can continue exploring fertiliser management to nutrient targets, variable rate applications and subsidised soil tests to build paddock histories.

Kangaroo Update (NSW Farmers)

The Bombala/Delegate Branch of NSW Farmers has been lobbying for the Bombala LHPA area to join the zone 16 Commercial Kangaroo Management Zone. The main barrier has been the cost of doing a survey of the local Kangaroo population in Sept 2012 to ensure the area meets Commonwealth legislation requirements (\$8,700).

A number of local NSW Farmers members have already contacted John Barilaro regarding this issue. However if you feel strongly about this, and feel able to contact him any time in the next couple of weeks, it would increase our chances of obtaining this small amount of money to make some meaningful progress on the Kangaroo issue.

John Barilaro's contact details are as follows:

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Final Results – Evergraze trial, “Bellevue”**Main production issues being explored...**

-Address in an economic sense the effectiveness of sowing a legume ie lucerne into traditional phalaris based pasture due to over-riding dominance of the phalaris.

(a) Treatments & Paddock preparation

Total ha = 59.27

Total cost establishment = \$230.1/ha

Treatment 1 – Nth Paddock - 56.2 acres

- sown with straight lucerne (rate 7kg/ha) into a phalaris based pasture (sown 1996). Paddock was sprayed May 2010 with 3L glyphosate (roundup) and left fallow over the winter, re-sprayed just prior to sowing with another 3L glyphosate
- Very good soil moisture due to fallow period, very good lucerne establishment observed visually.

Treatment 2 – Middle Paddock – 41.9 acres

- sown with same rate lucerne (7kg/ha) into same base pasture but only sprayed once with 500ml round-up and 200ml di-camba. Not fallowed over winter so soil moisture not as good. Lucerne establishment was much less and very obvious dominance of phalaris.
- The aim with this paddock was to set the phalaris back (not kill it) to try and allow lucerne to get going more successfully.
- Patches in paddock with bare ground where lucerne plants have established but in main sown area, lucerne is not as vigorous or as densely established as North Paddock.

Treatment 3 – South Paddock – 48.3 acres

- sown with same rate lucerne (7kg/ha) into same base, using chemical called “sprayseed” which “browned” out the phalaris very quickly ie 48hrs but it came back very quickly. Long term there has been no phalaris kill at all and very little, if any lucerne establishment.
- Sub-clovers and Kentucky blue grass appear visibly more evident than other two paddocks.

- **2011**; Spray followed 24th June 2011: 3l/ha 450 g/l glyphosate, 200 ml/ha dicamba, 100 ml/ha wetter, 100 ml/ha alphacypermethrin
- Pre sow sprayed 29th August 2011: 3L/ha 450 g/l glyphosate, 200 ml/ha dicamba, 100 ml/ha wetter, 100 ml/ha alphacypermethrin
- Sown 7th & 8th Sept 2011; 8 kg/ha L70 lucerne. Good establishment. First graze in Jan 2012. Lucerne establishment has been relatively successful.

Pasture growth

Paddock	1/12/11	29/5/12
Nth Paddock	5510.4kg DM/ha	5460 kg DM/ha
Middle Paddock	5160 kg DM/ha	4554 kg DM/ha

Feed Quality – October 2011

Paddock	Protein %	DMD %	Dry Matter %	Metab. Energy MJ/kg DM	Organic Matter %
Nth Paddock	24.3	65	17.8	9.6	91
Middle Paddock	11.0	50	23.1	7.0	90

(b) Production (grazing days)**Nth Paddock** (56.2 acres, 22.7 ha)

-Total Grazing Days = 118, Average SR= 30.4 DSE/ha

Middle Paddock (41.9 acres, 17ha)

-Total Grazing Days = 150, Average SR =30.2 DSE/ha

Sth Paddock (48.3 acres, 19.5ha)

-Total Grazing Days = 84, Average SR = 32 DSE/ha (note info from 2012 only)

**Not stocked in spring 2011 as pasture sowing/establishment taking place

Discussion and host comments (Richard Taylor)...

As the Lucerne is still pretty new, I think the value of the stock numbers is limited at this stage, but will become interesting over the next few years. It is hard to draw valid conclusions from stocking rates at this early stage, as they have only been measured for a short period, and in extremely good seasonal conditions.

However, the data suggests that having a higher Lucerne component in pasture does increase dry matter production via the increase in nutrient recycling, nitrogen fixation and subsequent plant growth. This assumption is demonstrated by the higher dry matter yields measured in North paddock (20% higher) versus the middle paddock which had little to no Lucerne establishment. It would be good to continue these cuts over a longer period.

Successful Lucerne establishment has only occurred where we have done two full sprays – the single low rate of roundup or sprayseed were unsuccessful, partly due to fact there was no fallowing to accumulated moisture, partly because of competition. Even where we have sprayed 3 litres of glyphosate twice, approximately 50% of phalaris has survived.

Conclusion from this suggests that Lucerne can be introduced into existing phalaris pastures, but only with this two full spray program. However the amount of phalaris surviving meant final result was a mixed phalaris/Lucerne pasture, rather than a straight lucerne pasture. It is likely that the amount of surviving phalaris will depend somewhat on the timing of spraying, and growth stage of phalaris at spraying, so it therefore can be manipulated. The good news here is that the Lucerne content in mixed phalaris/Lucerne pastures can be topped up by this means, while maintaining much of the phalaris base.

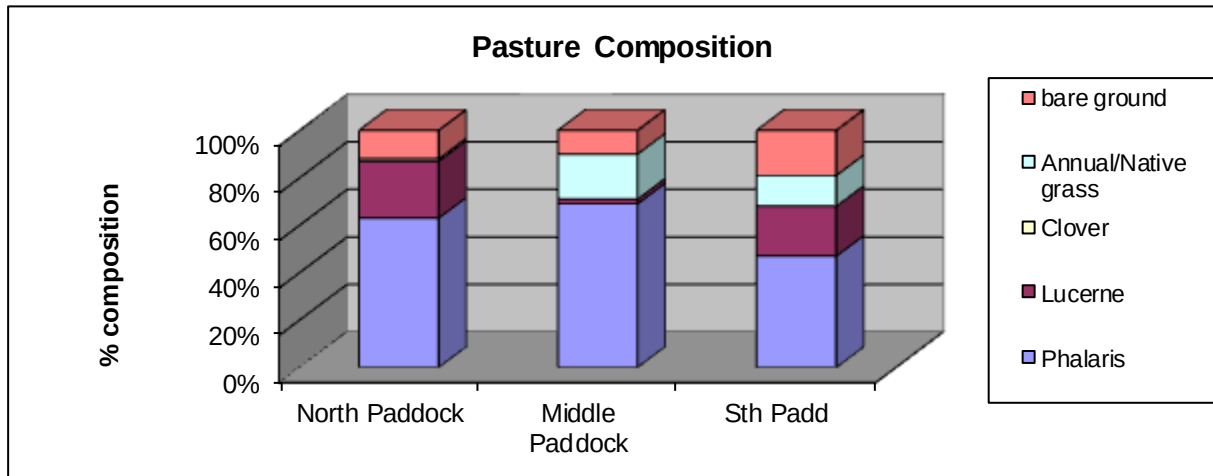
Given one of our major issues on the Monaro is having a competitive legume component in our pastures to provide nitrogen, Lucerne is potentially an attractive legume component in our improved pastures, at least on the basalt. However, the serious shortcoming of Lucerne is that it is likely to only persist for 7-10 years, so older pastures will lose their

lucerne component. This trial indicates a method whereby Lucerne can be reintroduced to a phalaris pasture while still maintaining a good stand of phalaris.

It will be useful to get good production and stocking rate information of the phalaris (middle) v phalaris/Lucerne (Sth & Nth) pastures over the next couple of years to see if these trends continue.

Sth Paddock – May 2012***Nth Paddock – May 2012***

Final Composition – estimates, 29th May 2012



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