MONARO FARMING SYSTEMS

Monaro Farming Systems
2021 Annual General Meeting
9th September 2021

Reports and Meeting Papers

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CHAIRMAN'S REPORT 2021: JOHN MURDOCH

It is supremely interesting to reflect on this position 12 months ago, when last writing this report we were exiting the first wave of lockdowns, the wool market was operating at around 1000 cents EMI, and we were all crossing our fingers for a strong spring to form a base for drought recovery. Fast forward 12 months and we are again battling the social ramifications of COVID, with a strain of the virus now offering a greater challenge to day-to-day life than the original variant some 18 months ago. Agriculturally we have seen one of the more rewarding seasons I have been able to experience in my some-what short farming career. A resurgent wool market with fine wool pricing comparable to the all-time highs of 2016-17, record highs in both cattle and sheep markets with the culmination of favourable spring, summer and autumn seasons have rewarded us for hanging in during the three years prior.

MFS has had a strong year operationally. The Board, with the ongoing support of Zoe Rolfe and Bec Kading, have worked hard to deliver field days and projects that deliver value to the full spectrum of members. Within the challenges of COVID, the MFS team have worked hard to shift field days onto farm, with the hope that this adds an extra dimension of interest to the events. This has enabled us to both deliver seasonal outlooks and project updates, with practical demonstrations in a unique setting. A big thankyou to the host farms this year, Stephen, Jo, Andrew and Zoe Rolfe at Kenilworth, and Stephen, Sharon, Hugh and Madi at Dungaree.

Excitingly, MFS have been able to welcome two familiar faces to the Board in 2020/21. We were very grateful that Dr. Richard Simpson from the CSIRO accepted the position of an Industry Director, and we were equally grateful that Nancy Spoljaric nominated as a Producer Director and is again contributing to MFS in a governance role. Both Directors have been integral to MFS's success in the years prior to becoming Directors, and on behalf of the other Directors and members thank them for their continued commitment and contributions to the group. The group also had the fortune to secure Andrew Rolfe as a producer member. Andrew's enthusiasm and work ethic is unrivalled, and we can personally thank Andrew solely for initiatives such as the Monaro Crop Tour and the Winter Forage Trials this year.

This year sees both Bea Litchfield and Owen Smith complete their terms as Producer Directors. Both have been hard working members on the Board; Bea being our dedicated HR Board representative and the go-to for all things beef and wool related, and Owen notably spearheading the soils club and benchmarking projects. Owen has indicated he would stand for another term at this year's AGM, and we hope we can secure another 3 years of his analytical, technical and no-nonsense mind. MFS extends sincere gratitude to Bea for her contributions to the group and look forward to meeting the next generation at a field day soon.

This year also sees the terms of three Industry Directors finish, with Warwick Badgery, Jono Forrest, and Phil Graham serving their maximum allowable tenure. All three represent a big loss to the MFS Board and group as a whole. Warwick has been integral to both the industry and MFS with his expertise and commitment to evidenced based approaches to whole of farm emissions and carbon capture. Jono has been involved with MFS since I commenced on the Board and his wisdom in financial management and governance will be greatly missed, we thank him and the entire Boyce Cooma office for their support of MFS. Lastly, we sadly farewell Phil Graham who has been a Director, first through Meridian then as an Industry Director, for a cumulative period of 11years. Phil's contributions to MFS are too great to do justice here, however Phil has had an unwavering commitment to MFS and Monaro farmers and has been a lynch pin to all of MFS's success to date.

In losing three Industry Directors and such a large swath of intellectual capital from the group, the MFS Board have proposed to amend the groups constitution to allow Producer Directors to appoint Industry Directors for an uncapped number of 2-year terms (currently limited to 2 terms). This would allow the Board to not be restricted by the tenure of Industry Director positions and leave Producer Directors the discretion to appoint and retain high value industry contributors to the group.

As alluded to previously, MFS is currently in an unsustainable financial position for the longevity of the group. Currently MFS is forecast to run annually at a deficit of approximately $70,000 per annum. The group has worked hard in recent years to minimise deficits through short term funding opportunities, and spending cuts, however a more permanent solution is required to enable MFS to continue to deliver high value outcomes for the Monaro farming communities.

The Board is planning to conduct a strategic planning day to be facilitated by Mike Stephens, however COVID has played havoc with these plans. It is envisaged that the Board will present a series of strategic possibilities to MFS members within the next 12 months to seek feedback and approval for how MFS is to adapt to a changing and more challenging funding environment. As always, the Board and I would welcome any insights or involvement from members in this space. I encourage all MFS members to reflect on what they get from MFS currently, and how this could be enhanced or adapted into a more financially sustainable model for the group in the future.

Again, I want to thank the entire MFS Board for their significant contributions during the last twelve months. The 2020-21 Board was made up of myself, Mandy Horton, Bea Litchfield, Owen Smith, Nancy Spoljaric, Andrew Rolfe, Phil Graham, Jono Forrest, Warwick Badgery and Richard Simpson. Bea, Jono, Phil and Warwick will be sorely missed by the group, and I again thank them for their unwavering efforts. I also extend our gratitude to the stella efforts of Zoe Rolfe and Bec Kading that make MFS operate from one day to the next.

MFS STATEMENT OF PROFIT & LOSS - FOR THE YEAR ENDED 30 JUNE 2021

Profit and Loss

Monaro Farming Systems CMC Incorporated

1 July 2020 to 30 June 2021

Cash Basis

2020		2021	Notes
	Income		
1,121	Interest received	302	1
-	SE LLS Support	20,000	2
25,492	Membership	23,900	
85,279	Project grants income	42,461	3
16,380	Sponsorship	15,320	4
16,000	COVID stimulus payments	30,500	5
-	Paid parental leave subsidy	13,570	6
144,272	**Total Income**	**146,053**	
	Less Operating Expenses		
-	Accounting	1,690	7
636	Advertising	-	
127	Bank charges	54	
-	Board meetings	375	
4,482	Catering	3,454	8
424	Depreciation	339	
-	Field day and workshop expenses	3,071	
4,788	Insurance	2,503	
2,733	Materials / capital items	-	
181	MFS employee training	-	
2,939	Office operating costs	1,922	
-	Paid parental leave wages	13,570	
87,578	Project grant expenses	68,426	9
3,828	Subscriptions	2,614	10
349	Sundry	168	11
52,450	Wages	46,832	12
6,391	Wages - allowances	4,194	13
-	Wages - Jobkeeper topup	3,491	14
4,829	Superannuation	4,428	15
(22,538)	Reimbursed expenses	(11,453)	16
149,197	**Total Operating Expenses**	**145,678**	
(4,925)	**Net Profit**	**375**	

PROFIT AND LOSS REPORT NOTES

1 Mainly from Term Deposit

2 SE LLS for project coordination and management

3	430 - Project Grants Income:08.01 Seasonal Outlooks	$2,455		
	431 - Project Grants Income:10.01 Soils Club	$10,000		
	432 - Project Grants Income:10.06 Worms Club	$295		
	433 - Project Grants Income:14.01 Benchmarking Reimbursements	$1,180		
	434 - Project Grants Income:16.01 Soil Moisture Probes	$2,000		
	441 - Project Grants Income:18.09 NGF MFS Only	$3,714	Wages reimbursements & seasonal outlooks	
	442 - Project Grants Income:18.11 MLA PDS Steer Finish	$12,350		
	444 - Project Grants Income:19.05 MLA PDS Supplementation	$9,376		
	446 - Project Grants Income:20.05 Coordinaire Recovery	$1,091		**$42,461**

4 Incitec Pivot $4370, Agriwest Rural Cooma $1000, Lambpro $1000, Zoetis $2000, Upper Murray Seeds $750, Achmea $1000, Elders $1000, Nutrien Ag Solutions $1000, Rabobank $2000, Monaro Livestock & Property $1200.

5 $20,000 Cashflow boost and $10,500 Jobkeeper

6 Bec maternity leave

7 Boyce assistance transfer Reckon to Xero and other professional services support

8 Field Day Catering

9	630 - Project Grants Expense:08.01 Seasonal Outlooks	$6,835		
	631 - Project Grants Expense:10.01 Soils club	$23,409		
	632 - Project Grants Expense:10.06 Worms club	$1,150		
	633 - Project Grants Expense:14.01 Benchmarking	$11,400		
	634 - Project Grants Expense:16.01 Soil Moisture Probes	$3,100		
	641 - Project Grants Expense:18.09 NGF MFS Only	$1,072	Website edits	
	644 - Project Grants Expense:19.05 MLA PDS Supplementation	$6,009		
	645 - Project Grants Expense:20.01 MLA PDS Winter Feed Gap	$240		
	646 - Project Grants Expense:20.05 Coordinaire Recovery	$15,211		**$68,426**

10 Xero $537.28, Survey Monkey $283.64, Dropbox $60.71, Text Magic $90.90, Microsoft Office $562.91, Vimeo $272.95, Zoom $769.90, Movavi $36.32

11 Richie Taylor Farewell gift, Bec baby gift

12 Zoe $41,670, Bec $5,161.55

13 Phone/internet and travel Zoe $3,069.80 Bec $1,124.48

14 Bec Jobkeeper topup

15 Zoe $3,958.63, Bec $469.08

16 Soil test costs above $300 credit

MFS BALANCE SHEET - AS AT 30 JUNE 2021

2020		2021	Note
	Assets		
	Bank		
78,375	NAB Trading account - MFS	77,545	
31,722	NAB Business cash maximiser account - MFS	81,730	
48,582	NAB Term deposits	48,874	
58,522	NAB NGF Project bank account	-	1
217,201	**Total Bank**	**208,150**	
	Fixed Assets		
2,846	Computers	2,846	
500	Other electronic equipment	500	
- 1,651	Accumulated depreciation	(1,990)	
1,695	**Total Fixed Assets**	**1,356**	
218,896	**Total Assets**	**209,506**	
	Liabilities		
	Current Liabilities		
48,381	Accumulated net income on NGF Project	-	
-	Grant clearing account (income received in advance)	50,308	2
4,958	GST payable	5,478	
3,713	PAYG withholding payable	1,416	
2,084	Superannuation payable	-	
59,136	**Total Current Liabilities**	**57,202**	
59,136	**Total Liabilities**	**57,202**	
159,760	**Net Assets**	**152,304**	
	Equity		
164,685	Opening Bal Equity	159,760	
(4,925)	Current Year Earnings	376	
-	Extraordinary item - reversal of NGF from Balance Sheet	(7,832)	
159,760	**Total Equity**	**152,304**	

Notes

1. The NGF Bank account balance has been removed from the Xero file and should not have been considered an asset of MFS in 2020.
2. The grant clearing account contains income from the below projects that was received in the 2021 financial year and will be expended in the 2022 financial year.

Grant Clearing Account

Project	Income	Deposited	Expense	Budgeted
20.10 Lovegrass	$ 7,100.00	Oct-20	$ 3,000.00	Sep-21
			$ 4,000.00	Oct-21
21.05 Containment	$ 4,700.00	Jun-21	$ 4,700.00	Oct-21
21.06 Symposium	$ 11,590.00	Jun-21	$ 6,200.00	Sep-21
			$ 13,000.00	Jan-22
21.07 Communications	$ 26,918.00	Jun-21	$ 26,918.00	Jan-22
	$ 50,308.00			

PROJECT REPORTS

MFS Project 08.01 **Seasonal Outlooks**

Project Leader: Nancy Spoljaric

Project Manager: Zoe Rolfe

Project Collaborators: Doug Alcock (Graz Prophet Consulting)

Project Funder: MFS

2021 REPORT

MFS has continued its delivery of seasonal outlooks at critical times on the management calendar. Over the last year the Board has worked with Doug Alcock to evaluate the current delivery model and work towards integrating the outlooks with the roll-out of the Farming Forecaster tool.

As the real-time data is now readily available on the Farming Forecaster platform, Doug's role has shifted towards focusing on the "opportunities" presented by the information and how farmers can interpret the data to make informed, tactical, and fortuitous decisions on stocking rates, trading strategies, pasture sowing and supplementary feeding.

MFS has a small group of farmers working together with Doug prior to each outlook, to focus the outlooks on current challenges and opportunities depending on the seasonal pressures.

We are also looking to get farmers who have a probe on their farm to be more engaged in the presentations and offer insights into how they use the data in their day-to-day decision making.

Benefits of Seasonal Outlooks:

- Increased confidence and understanding of seasonal outlooks and trigger points.
- Pasture growth potentials, soil water holding capacities, different wilting points of certain pasture species.
- Translate this to the amount of feed availability for the next three months and the likely impacts on ground cover, stock performance and condition score, weight gains, lambing/calving and weaning success rates as well as the probability of needing supplementary feeding etc.
- Better understanding of the different water use efficiencies of crop and pasture systems.
- Better understanding of soil and water interactions at critical crop & pasture growth stages.

Image: Doug Alcock delivering the Winter Seasonal Outlook

MFS Project 10.01 **Soils Club**

Project Leader: Owen Smith

Project Manager: Zoe Rolfe

Project Collaborators: Dr Richard Simpson (CSIRO), South East LLS, TFS, HLN

Project Funder: South East LLS / MFS

2021 REPORT

The MFS Soils Club was initiated in 2010 and now involves 141 farm businesses, has tested a total of 2,226 paddocks and has a data set of >3,500 tests representing the three main soil types on the Monaro (basalt, granite, and shale). The work done by the Soils Club has improved the skill level, understanding and capacity of producers to manage their soil fertility and improve pasture productivity.

The data collated for individual paddocks over the previous ten years now provides solid evidence for producers to be confident in basing fertilizer investment decisions on the trend lines indicated.

We had a record number of tests done in the 2020 season. In total, 354 soil sample submissions were made by 66 properties.

In 20/21, the Soils Club received $10,000 from LLS for services and to help with associated testing costs and assist with updating the database and including GPS coordinates and $4,300 sponsorship from Incitec Pivot (whom we use for testing).

In 20/21 the Soils Club incurred approximately $28,000 of expenses (testing, freight, wages for processing and data input). Historically, the Soils Club has produced a deficit for MFS, with no permanent government funding and the rebate offered to members ($300 per year per membership).

As the number of tests in the database increase, and the time over which testing occurs increases, the database grows in value. The Board feels that the Soils Club project is valuable and will continue to promote it. Soil carbon is mandated in the tests offered to producers by MFS. It is hoped that the data base can be used in future projects that examine the relationship between soil carbon and extensive livestock production systems. As climate change and carbon emissions become part of the social consciousness, it is also hoped the data base can be leveraged to industry to help demonstrate the sustainability of the production systems currently operated on the Monaro.

Image: 2020 Soils Club Field Day at Undowah, Bibbenluke. Paddock walk with Dr Richard Simpson

MFS Project 10.06 **MFS Worms Club**

Project Leader: Phil Graham

Project Manager: Zoe Rolfe

Project Collaborators: Dawbuts, MFS Producers

Project Funder: MFS

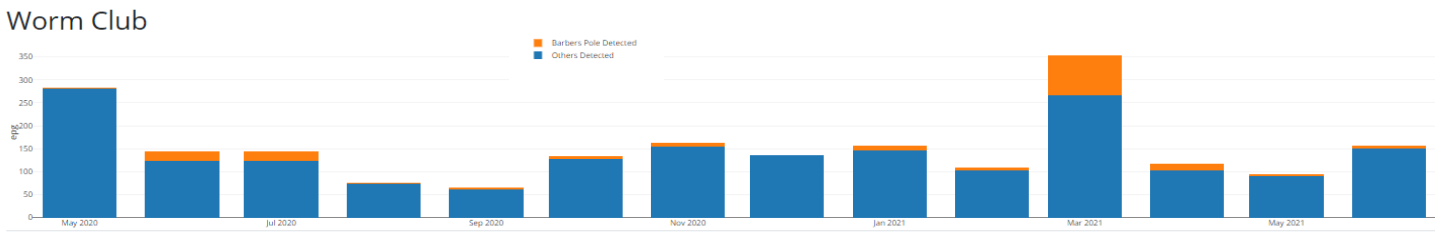
2021 REPORT

The Worm Club has had 171 samples reported in the 12 months to the end of June 2021. I would think this is a small percentage of the test members would have completed. Why are the numbers so low? Are there problems with the logistics? Is it a problem with the lab we use?

It is now time for members to let Zoe know what changes could be made to improve the number of tests reported on. The graph on the web site shows some trends which are of value to members.

Another question is: have you looked at the worm data on the web?

Like all activities that the organisation runs it costs money and members need to decide if the worm club is meeting their needs.



month-year	mean-eggs	number-of-tests
May 2020	283	1
Jun 2020	145	14
Jul 2020	144	5
Aug 2020	75	5
Sep 2020	64	13
Oct 2020	135	15
Nov 2020	163	15
Dec 2020	135	8
Jan 2021	156	11
Feb 2021	108	21
Mar 2021	354	30
Apr 2021	117	19
May 2021	94	14
Jun 2021	156	15
Jul 2021	223	6

Image: MFS Website Graphic

MFS Project 18.08:	**Farming Forecaster (Previously Next Generation Forecasting)**
Project Leader:	Nancy Spoljaric
Project Manager:	Andrea Mitchell
Project Collaborators:	Consortium includes MFS as the lead organisation with project partners TFS, LLS and Bookham Ag
Project Funder:	Dept. of Agriculture & Water Resources, National Landcare Program – Smart Farming Partnerships

2021 REPORT

The Farming Forecaster project continues to grow from strength to strength with the website having gone live for approximately one year. Analytics show the site is receiving up to 1000 hits per week and over 50,000 in the last year.

Farming Forecaster was developed by Tablelands Farming Systems, Monaro Farming Systems, Bookham Agriculture Bureau and South East Local Land Services in close conjunction with CSIRO research scientists.

The tool combines real time weather data, soil moisture and farm enterprise modelling to provide calculated projections of pasture growth, stock performance and feeding requirements over the next few months. Pasture and livestock conditions are updated daily based on actual and historic climatic conditions, so for the first time, producers can see how weather patterns impact soil moisture and therefore pasture productivity and livestock performance.

The project is receiving positive feedback with several LLS regions working towards joining the probe network. Currently Hunter LLS has officially come on-board and is currently working with the consortium to connect 20 new probes into the network with 2 other LLS regions with similar plans.

The NGF Steering Committee has developed guidelines, brochure, requirements, and a pricing schedule for other groups to come onboard the project. Square V and CSIRO are positioned to allow for the expansion.

Andrea Mitchell, the NGF Project Officer, was successful in securing $55k in funding this year to add another level of functionality to the platform to assist with early decision making de-stocking trigger points to maintain critical ground cover targets.

The project has been presented at several conferences around the State, including the NSW Grasslands Conference in the Southern Highlands in March-April 21, the Australian Agronomy Conference to be held in Toowoomba and the National Landcare Conference held at the Sydney Convention Centre.

Australian Government | National Landcare Program

MFS Project 18.11: **MLA PDS Weaner to Yearling Production Pays Off (Steer Finishing)**

Project Leader: John Murdoch

Project Manager: Zoe Rolfe

Project Collaborators: Doug Alcock (GrazProphet), MFS Producers

Project Funder: Meat and Livestock Australia

PDS Aim: *Can high quality forage crop and perennial pasture systems be utilised to meet target weights for finishing steers on the Monaro and increase overall farm profit relative to the traditional base selling enterprise system?*

The Monaro is traditionally a cattle breeding region with a typical beef enterprise operating on the premise that weaner steers and surplus heifers are sold at 6-9 months of age before their first winter. This practice is intended to reduce the total stock numbers over winter, which is a period of low pasture growth and feed quality on the Monaro.

Recent MFS member surveys indicated meat production enterprises have increased from 20% to 50% of farm enterprise over the preceding six years, with a trend to increasing beef and lamb production at the expense of wool enterprises. Recent prices have also increased interest in taking steers onto heavier feedlot or kill weights rather than the historical norm of producing calves for the Autumn weaner sales. Member surveys had also indicated a strong desire to explore better finishing systems for these meat enterprises.

MFS had previously invested in GrassGro® modelling work which had quantified the relative profitability ($/ha) of retaining steer weaners through a second spring, either on pasture or winter forage crop, compared to a baseline system of selling at weaning. Modelling results indicated retaining steers on pasture increased farm profit in all but the driest years, with an average increase in farm gross margin of 20%. Running these steers on an oats crop over winter at 2.5 steers/ha increased farm profit by an additional 38 percentage points. The benefit of the oats crop was a 32 kg/head increase in sale weight, but more importantly a decrease in area needed to run the steers, allowing greater cow numbers to be run.

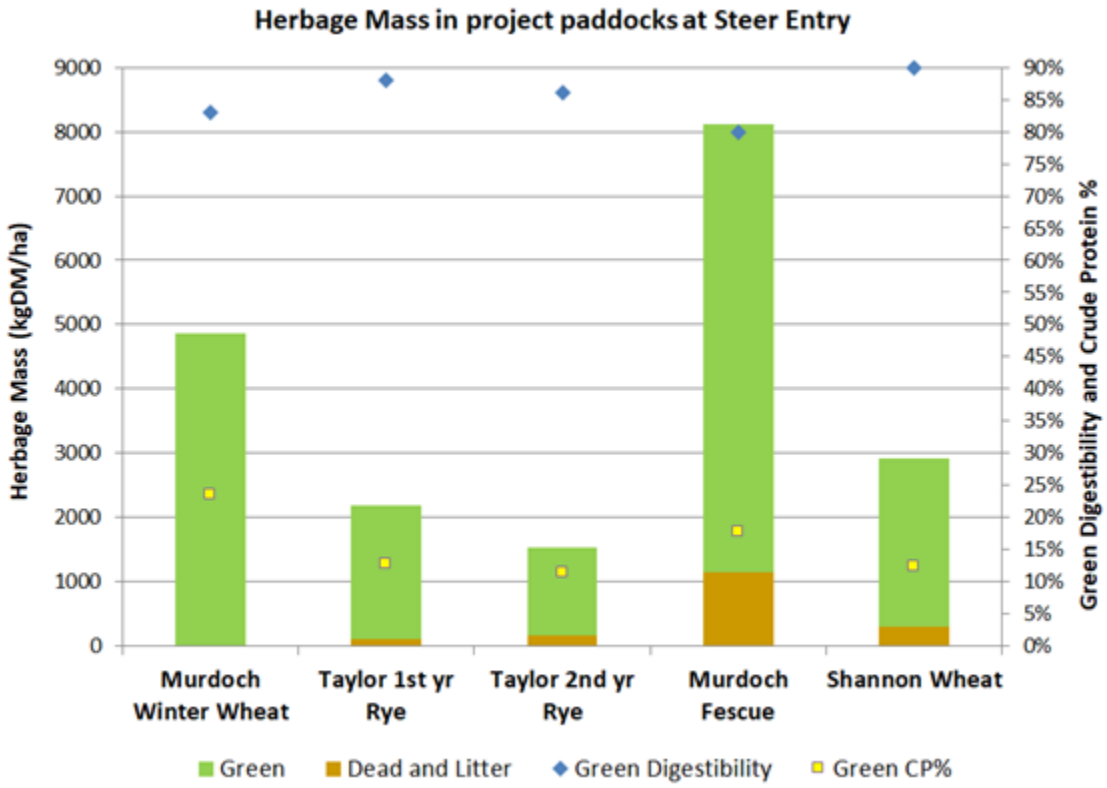
The modelling suggested considerable scope for improved farm profitability via these finishing systems, however, now pasture/animal trials are needed to validate the modelling results and to ground truth paddock situations across the variable climate and soil types of the Monaro.

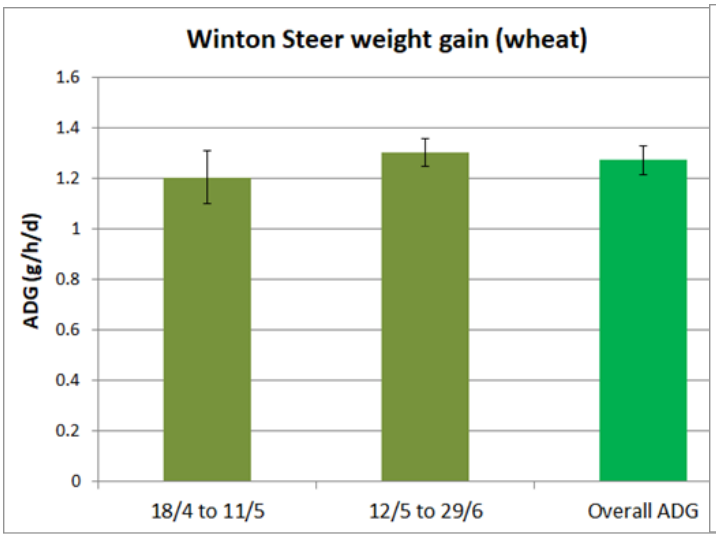
2021 Report

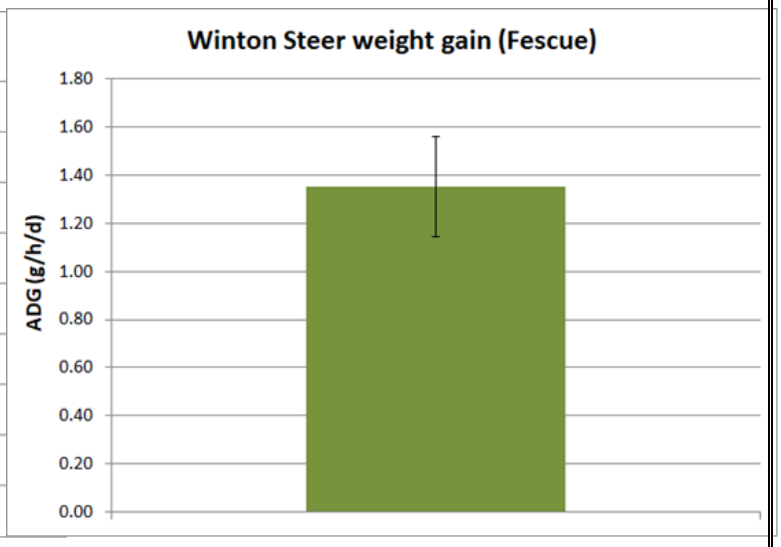
2021 has been a much more fruitful year than 2020 which saw the PDS postponed. This year, five sites were secured on three farms, with John Murdoch (Ando), Michael Shannon (Cathcart) and Richie Taylor (Kybeyan) volunteering both steers and pastures for this year's PDS. A big thankyou to these participants. The five sites were as follows:

1. Murdoch Ando – Manning wheat
2. Murdoch Ando – Fescue/Lucerne Pasture
3. Shannon Cathcart – Manning wheat
4. Taylor Kybeyan – 1st Year Perineal Rye
5. Taylor Kybeyan – 2nd Year Perineal Rye

At the time of writing fieldwork was still ongoing, with only two sites at the Murdoch property at Ando completing steer grazing. The interim pasture analysis and available weight gains are demonstrated below:







A full report will be developed in September when grazing's are complete.

MFS Project 19.05: **MLA PDS The Sense in Supplementation (Lambs)**

Project Leader: John Murdoch

Project Manager: Zoe Rolfe

Project Collaborators: Doug Alcock (GrazProphet), MFS Producers

Project Funder: Meat and Livestock Australia

PDS Aim: *Can supplementation of lambs on finishing crop and pasture systems significantly increase live weight gains and overall net profits and how sensitive is this practice to grain and lamb price fluctuations?*

During a previous PDS on lamb finishing systems it was identified that on one of the pasture finishing systems the use of supplements had enabled the host producer to utilise the available herbage more completely without compromising per head animal performance. Despite the extra cost of feeding, this strategy had enabled large profits per ha exceeding the profit achieved on most other forage systems which were tested in the absence of feed supplements.

It was decided to test the utility of using supplements in lamb finishing enterprises to utilise pasture biomass more fully and increase profits across a range of forage types, including grass-based pasture, Lucerne and forage brassicas. The work will be conducted over two summers and was to have started in the summer of 2019-20 but was postponed due to severe drought conditions.

2021 Results

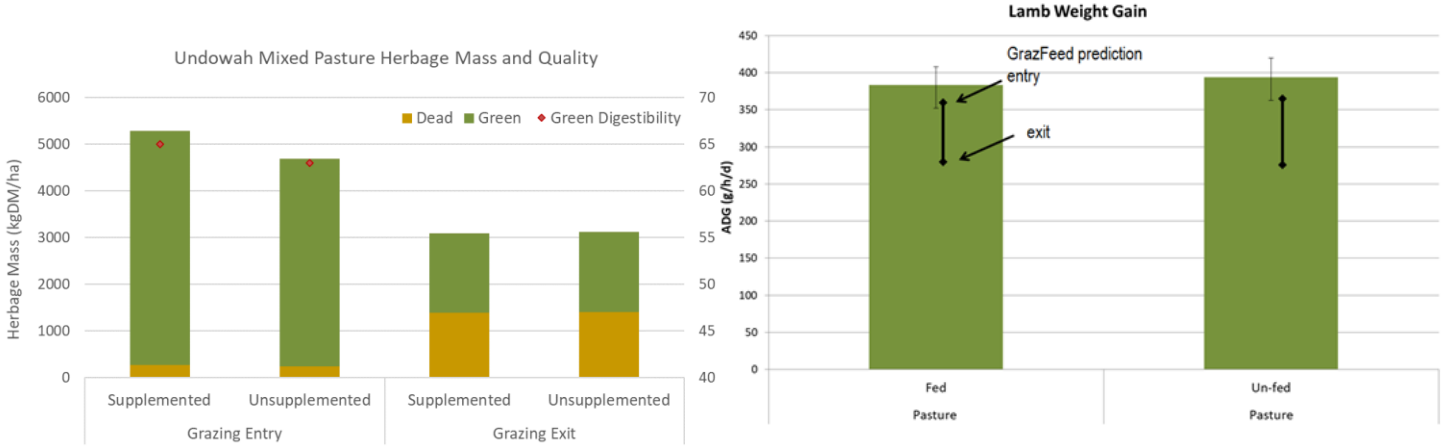
Field work was commenced in December 2020 with the first year's grazing now completed. MFS had four trial sites across the Monaro:

1) Murdoch (Undowah) – Lucerne/Rye/Phalaris Pasture – Supplemented by DDG Pellets – Located Bibbenluke – Grazed with 1st X Lambs
2) Murdoch (Undowah) – Lucerne Stand – Supplemented by DDG Pellets – Located Bibbenluke – Grazed with 1st X Lambs
3) Cottle (Shirley) – Brassica – Supplemented by Barley – Located Nimmitabel – Grazed with 1st X Lambs
4) Rolfe (Kenilworth) – Lucerne – Supplemented by Barley – Located Maffra – Grazed with Merino Lambs

On each demonstration, 50 lambs from each treatment were randomly selected from each group as monitor animals. These animals were weighed before entering the paddocks and, as grazing periods were relatively short, they were weighed again only upon exiting the trial paddocks. Herbage and livestock data were used as inputs to the GrazFeed decision support tool to evaluate how closely this tool would have predicted the actual lamb growth rates, both with and without supplements.

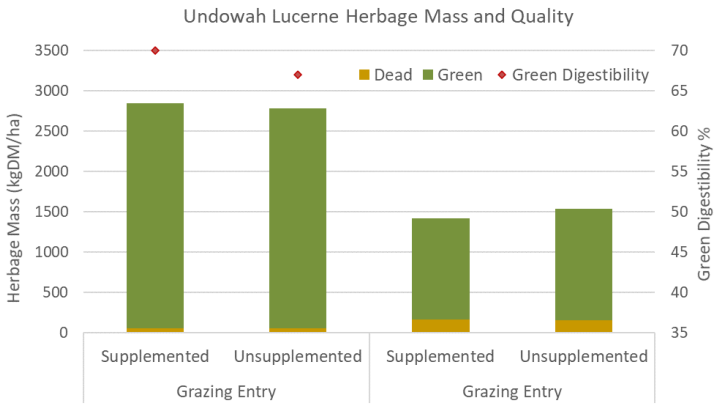
Herbage mass and quality results

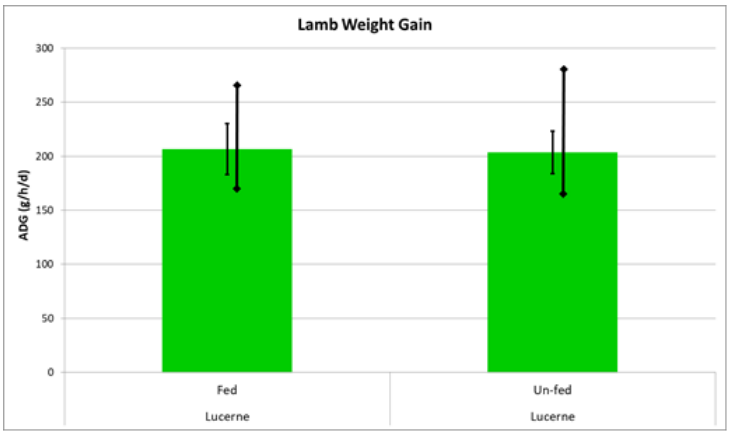
Demonstration 1:



The lambs performed at a very high level, achieving 380-390 g/h/d growth rates regardless of the treatment. This performance seems reasonable given the very high availability of green Lucerne in the paddock, meaning a very high degree of diet selection was possible. The very high residual herbage mass meant the lambs could achieve maximum intake while only grazing the very best of the forage available. Due to the very high diet quality and high ingestibility of the largely Lucerne diet selected, there was very low voluntary intake of supplements, which averaged only 157g/h/d which was almost directly substituted for the forage diet giving a negligible difference in weight gain. This low usage of supplements is quite logical as the likely average herbage digestibility selected by the lambs was higher that the digestibility of the supplement.

Demonstration 2:





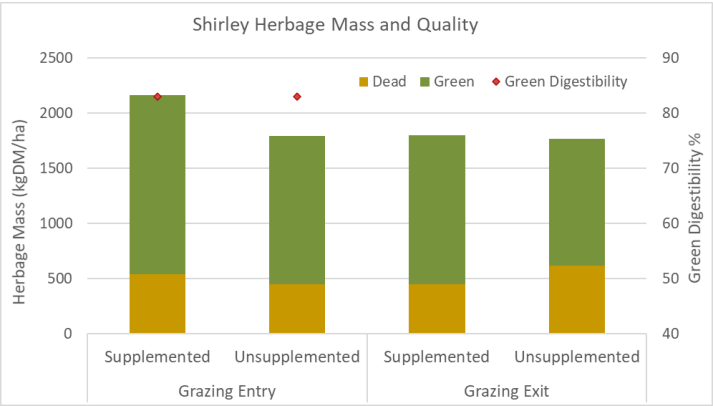
The GrazFeed modelling suggested that weight gains for lambs upon entry to the Lucerne was expected to be around 280g/h/d un-supplemented and 270g/h/d for the supplemented lambs while weight gain over the 20-day grazing was expected to average 210 - 220g/h/d. Actual weight gains were just over 200g/h/d. On this occasion the GrazFeed model gave a good account of what should have been expected. Again, due to the ability for the lambs to select a very high digestibility diet there was again no difference in performance due to the supplements.

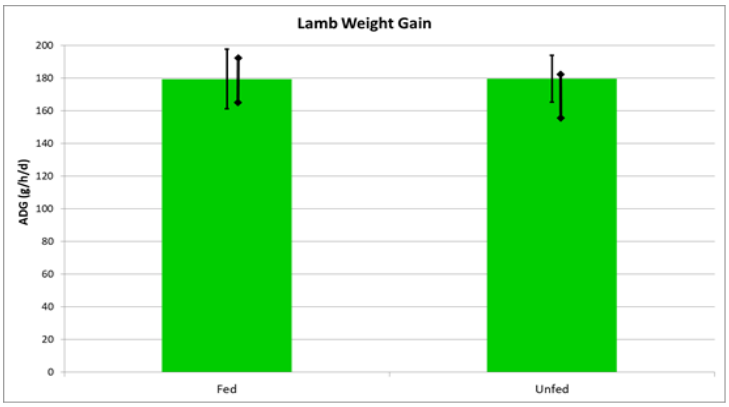
Undowah un-supplemented Lucerne paddock

Entry

Exit

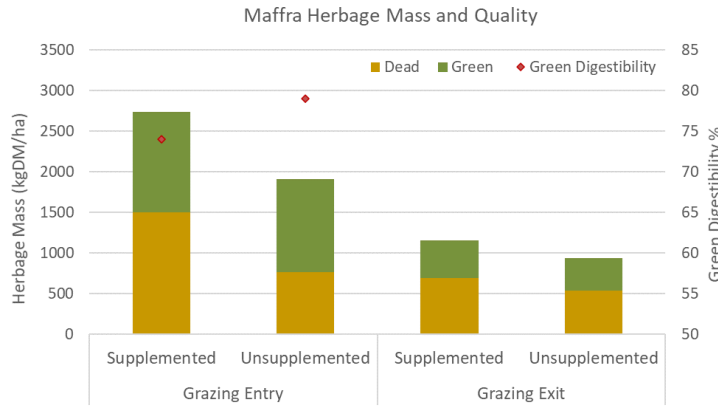
Demonstration 3:

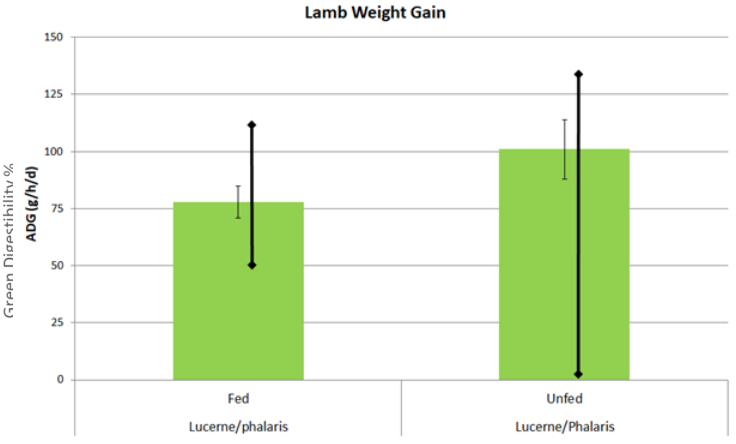




Lambs were grazed at just 5/ha on the Shirley brassica/ryegrass site and the quality of the herbage on offer was very high. Despite this, the availability was serving to limit intake of the lambs, but this limitation did not increase significantly across the grazing period as biomass was not significantly diminished. These animals were offered barley as a supplement and again, provided the GrazFeed was run with the actual amount of grain consumed, it gave an excellent prediction of the likely lamb growth rate. Due to the late start the lambs on this trial commenced grazing at over 40kg liveweight, so only modest weight gains could be expected due to a greater proportion of gain being fat rather than lean tissue.

Demonstration 4:





Due to the aborted start for this demonstration not until February and the subsequent late commencement, both the choice of paddocks and the choice of lambs was compromised to some extent. At this site, the two mobs were not allocated evenly to the paddocks and rather than just 50 lambs measured all animals were tagged and an entry and exit weight was collected for all lambs present. The average entry weight of the lambs on the supplement paddock was 44.9 kg while the average weight entering the un-supplemented paddock was just 36.6 kg. This automatically means that with equal volume and quality of nutrition the heavier lambs will not be able to gain weight at a similar rate to the lighter lambs.

The supplemented lambs ate an average of 346 g/h/d of wheat grain which tested an ME of 14.2 Mj/kgDM and 16.4% crude protein. It can be seen that these lambs gained an average of 78g/h/d and that allowing for their actual intake of grain GrazFeed predicted an average live weight gain of 117g/h/d at the time of entry to the paddock and just 50 g/h/d by the end of the grazing period.

Maffra supplemented Lucerne at entry

Maffra un-supplemented Lucerne on entry

Maffra unsupplemented Lucerne on exit

Conclusion

Since supplemented and un-supplemented lambs showed very little difference in the performance of the trial animals at any of the four demonstration sites, then clearly under the seasonal circumstances experienced lamb performance was never being excessively limited by pasture quantity or quality. It is clear that under these circumstances the voluntary intake of supplements was low for all but Demonstration 4 and that there was effectively a direct substitution between pasture and supplement. Logically, the lambs are satisfying the majority of their appetite with herbage, which is of better quality than the supplement, so when the supplement is eaten then it substitutes for herbage of a very similar quality in the diet.

It is impossible to predict how the supply of quality forage will pan out for the coming summer/autumn period, but all current indications are that the better-than-average seasonal conditions will persist. In those circumstance a different strategy will be required for the second year of measurements if we hope to generate any useful data about the threshold where supplements become profitable.

MFS Project 20.01: **MLA PDS Fodder Systems and Feed Gaps (Winter Feed Gap)**

Project Leader: John Murdoch

Project Manager: Zoe Rolfe

Project Collaborators: Doug Alcock (GrazProphet), MFS Producers

Project Funder: Meat and Livestock Australia

PDS Aim: *Can granular and foliar pasture applications such as Nitrogen and Gibberellic Acid significantly increase dry matter production on pastures on two soil types on the Monaro over the winter period to optimize stock production and performance relative to untreated winter pastures?*

Severe cold winter temperatures with a high frequency of frosts, lead to low soil temperatures and subsequently restrict pasture growth creating an inhibitive "winter feed gap" on the Monaro from May to September.

Many producers currently use supplementary feeding over the winter period at a major enterprise cost to maintain stocking rate rather than looking at ways to utilize / enhance the feed base by strategically applying pasture growth stimulants such as gibberellic acid (GA) and nitrogen (N). Winter stocking rates generally dictate enterprise production capacity over the spring and summer period therefore winter carrying capacities remains a major profit driver for the whole grazing system.

Anecdotal observations suggest GA and N products to optimize dry matter production (DMP) is significantly underutilized in the Monaro grazing Industry compared to other grazing regions.

There has been no scientific based, trial work on a paddock scale done for our local area or cost benefit analysis to determine if N & GA applications are actually translating into additional, measurable DMP and therefore improving animal performance and enterprise net profit. Some strip trials that have been done on improved pasture suggest increases of 200-600 kg/DM/ha are possible using GA however this data has not been integrated into livestock performance or gross margin comparisons.

2021 Report

After postponing the PDS in 2020 due to a dry Autumn and Winter, work recommenced in June 2021. Three sites were selected in similar areas to the previous year covering typical winter forage types.

The sites selected were:

- Bungarby (Keighley) – Phalaris Pasture
- Myalla (Litchfield) – Perirenal Rye Grass
- Ando (Platts) – Forage Oats

At each site there were 4 identical treatments:

1. Nil,
2. N only,
3. GA only and
4. N followed by GA.

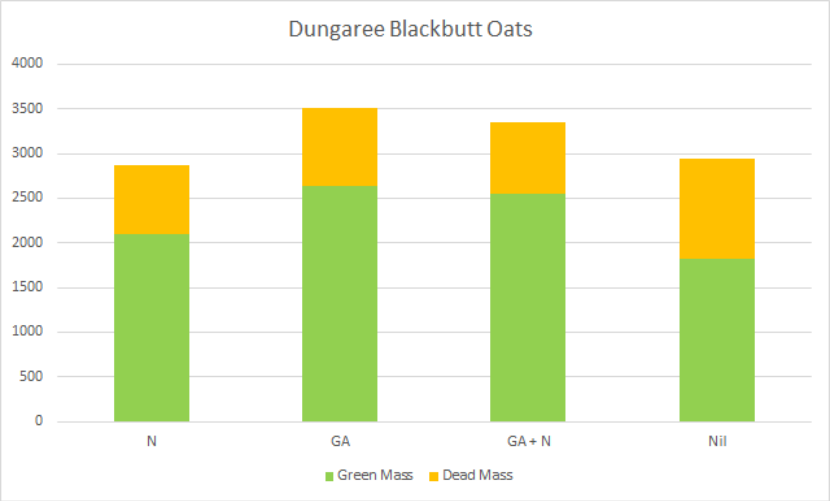
Applications were applied in two timings, with the N application on June 28 using EasyN at 100l/ha and the GA using ProGibb SG at 20g/ha on July 9. The Phalaris and Ryegrass pastures had been grazed down prior to the first application. The Forage oats required slashing down before application to allow the liquid N to reach the soil.

The biomass was assessed by Doug Alcock on the 17th of August to determine any treatment related biomass differences.

2021 Results

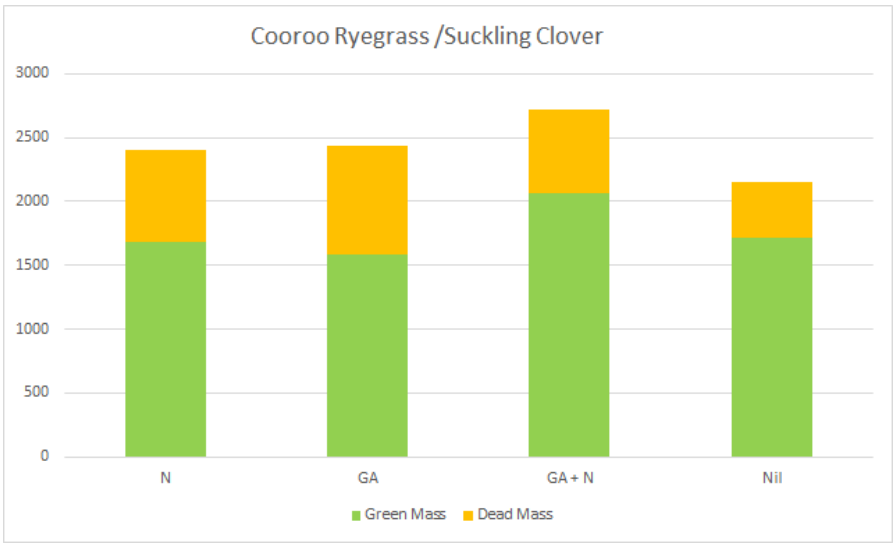
Initial results are presented below. Each site will now receive a follow up grazing to give each site uniformity and a second biomass assessment will be conducted.

Dungaree forage oats



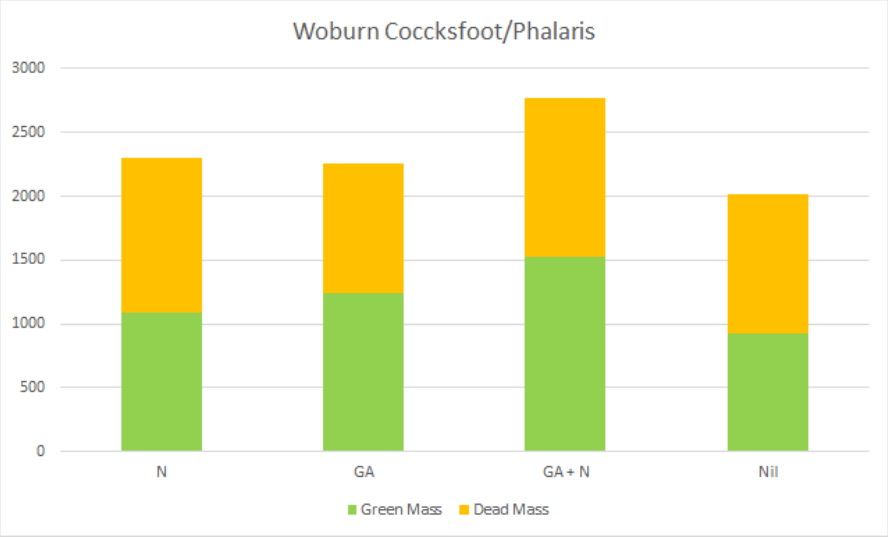
The site at Dungaree was sown to blackbutt oats following a long term stand of lucerne. Whilst we are waiting on the soil test results to determine background Nitrogen levels, the paddock was still responsive to additional N. The GA treatment produced the highest DMP without any additional N.

Cooroo Ryegrass pasture



The ryegrass pasture showed a good response to the N + GA treatment. There was overall more DMP in the N + GA and both solo treatments compared to the Nill treatment.

Woburn Phalaris



The Phalaris site showed a good response to the N + GA treatment also. The N + GA and both the N and GA solo treatments all produced more dry matter than the Nil treatment.

The preliminary results so far have shown that N and GA applications to each pasture type can produce more biomass compared to the Nil treatments. Feed tests on the green mass have been sent for testing to determine if there are treatment related nutritional differences across each treatment. A second assessment after some spring growth will continue to give a better understanding to the effect of GA applications across the Monaro pasture systems. At this stage of the trial no conclusions can be made.

MFS Project 20.05: **Coordinaire Recovery Grant: Crop Tour and Dinner Event**

Project Leader: Zoe Rolfe

Project Manager: Zoe Rolfe

Project Collaborators: MFS Producers, Gotcha4Life

Project Funder: Coordinaire SouthEast PHN

2021 REPORT

In May 2020 we were fortunate to receive two community grants from COORDINAIRE – South Eastern NSW PHN, through the Australia Government's PHN Program.

The first grant was for Bushfire Recovery - Supporting Communities in Recovery. Our application to host a "Crop Tour of The Monaro" was successful and the event was held at the end of October 2020 (initially it was planned to host a crop tour AND a luncheon event, however COVID restrictions saw us combine the events into one).

The justification behind this event was as follows:

A large portion of our members had fire impact their property directly (Cathcart, Kybeyan, Adaminaby, Numerella and Craigie). We were surrounded by fires during the New Year / January period on all four sides of the Monaro - Kosciousko to the West Mt Darragh to the East, The Border Fires to the South, and the Bredbo Fires to the North.

A large proportion of our farming family members spent considerable time volunteering during the peak fire period, either fighting fires with the RFS or defending or preparing their own properties or those of neighbour's or friends.

The bushfires also strongly impacted farming families, including adults, children and extended family. Adults were away in a dangerous situation for long periods, creating worry and concern in the family home, often managed by another partner or family members of friends in their absence. The smoke haze that was present over our area for weeks created an unpleasant and eerie atmosphere, not to mention breathing difficulties and decreased ability to work and spend time outside.

The proposed activity will give the chance for our farming community to come together after what has been a long, stressful, and unrelaxing start to the year. Despite many families being on school holidays throughout the bushfire period, no one really got a holiday due to the constant threat of the fires and the unpleasant/dangerous weather conditions accompanying them. No one has really had the chance to regroup and talk about or share their experiences (which is a large part of reducing the mental load of the events).

The Crop Tour was a huge success with over 70 attendees, both MFS members and other rural community members. We had two buses on the day to ferry participants around with the first stop being at “Burandoo” (Jeffreys) in Palarang.

The second stop was at “Old Springfield” (Haylock’) for lunch (and a stickybeak) at the shearing sheds before visiting some crops and pastures at Maffra (Haylock) and Kenilworth (Rolfe). The final stop for the day was at “Jimembuen” (Glasson) to inspect some crops, pastures, fencing and shearing facilities.

The second grant was for Drought Support - Empowering our Communities. Our application to host a “Wellbeing Dinner Event for The Monaro Farming Community” was successful and the event was held in November 2020.

The justification behind this event was as follows:

The proposed activity is a formal sit-down Dinner Event to be held in a central location on the Monaro. The dinner is a chance to bring people together in our local area. It is rare, and has been rarer still lately, given the impact of the drought (and increased workloads feeding, moving stock etc), for rural and farming families to ALL have the opportunity to socialize, connect and take time out for their own wellbeing. The opportunity to have a professionally cooked meal provided for you with time for people to talk and build connections, will assist promoting wellbeing and improving the mental health of our local farmers.

The dinner event will feature a guest speaker for the evening, to not only provide entertainment but also to speak about the stigma of mental health, the building of resilience and how we can work to support one another.

The cost of the dinner will be covered by the grant, as will bus transport to and from the venues from central pick-up points. In rural areas, especially when people must drive up to an hour on country roads at nights, this plays a factor in attendance which we would like to overcome.

The Dinner Event was also a huge success with 65 attendees, both MFS members and other rural community members. Our guest speaker was Gus Worland from “Gotcha4Life”, and past MFS Chairs Dave Mitchell and Richie Taylor.

COORDINARE

phn
SOUTH EASTERN NSW
An Australian Government Initiative

MFS Project 20.10: **Boco Rock Grant: Lovegrass (ALG) Resistance Testing**

Project Leader: Andrew Rolfe

Project Manager: Zoe Rolfe

Project Collaborators: LLS South East**,** MFS Producers

Project Funder: Boco Rock Community Grants Hub

2021 Report

This project aims to provide science-based evidence of the status of resistance in ALG populations on the Monaro to chemical (flupropanate) control methods. This will enable land holders and Councils to tailor their chemical control strategies more effectively and efficiently.

Project Description:

- target 12 ALG sites, some in the Bredbo region (as the core infestation with long history of herbicide use), Cooma and around Maffra (as an area upwind of Nimmitabel)
- test 3 rates of flupropanate (Taskforce) - 1, 2 and 3 L/ha

Testing is currently underway and preliminary results will be available early December.

There was a 2020 pilot funded by LLS which found:

- 5 of the 12 sites were found to have strong resistance to flupropanate.
- 3 sites showed low to mid-level resistance.
- 4 sites were identified as still being susceptible to the herbicide (at the 3L/ha rate).
- 1st recording of herbicide resistance in ALG in Australia.

Boco Rock Wind Farm

CURRENT SUCCESSFUL FUNDING SUBMISSIONS - YET TO COMMENCE

MFS Project 21.05: SMRC Bushfire Grant: Monaro Containment Lot Tour for Disaster Preparedness

Funding Received: $4,700

Project Funder: Snowy Monaro Regional Council - Community Bushfire Recovery Grant

Project Outline

Our aim is to host a bus tour for local farmers and graziers to view "best practice" ideas for on-farm disaster preparedness should we encounter fire and drought situations as experienced in the last two years (and most recently, flood situations).

This will be a practical day, led by a professional agronomist, and will also give local landowners the chance to connect socially, another key facet in building resilience when dealing with adversity.

MFS Project 21.06: AgriFutures Australia Grant: Ag Tech Workshop and Symposium

Funding Received: $19,318

Project Funder: AgriFutures Australia (Rural Industries Research and Development Corporation)

Project Outline

Monaro Farming Systems proposes to coordinate a Regional Agricultural Technology Symposium, which will run over a full day. The symposium would involve practical demonstrations and technical presentations of the relevant technologies for the Southern NSW grazing Industry, tailored specifically to the Monaro production systems.

It is proposed that the day be held on farm, which will enable some actual demonstrations of the targeted technologies. The day would be open to not only MFS members, but also any other interested Monaro farmers, to reach the maximum number of participants. Local caterers and bus transport companies will be engaged.

MFS Project 21.07: FRRR Grant: Communications Workshops

Funding Received: $29,610

Project Funder: Foundation for Regional and Rural Renewal (Tackling Tough Times Together Grant) - The Snow Foundation and Australian Government

Project Outline

The aim of the project is to host workshops for local rural families to regroup after recent tough times. The focus will be on deepening trust, increasing self-awareness & improving general communication effectiveness within, and between, farming families, as well as learning and building habits for a healthy mind.

The funds will pay for a local training organisation (People Mastery) to specifically develop a workshop targeted to our rural community. The workshops will be held at central venues across the community (Nimmitabel, Cooma, and Bombala) and will be fully catered for participants.

CURRENT PROJECT SUBMISSIONS

Boco Rock Community Grant - Soil and Carbon Testing on The Monaro

The Monaro has contrasting soil types which differ substantially in their intrinsic fertility and fertiliser requirements. The "Soil Club" (initiated in Oct 2010) has provided support for producers to start to critically analyse their soil fertility profiles and build whole farm soil fertility management plans. It has enabled mapping of key nutrients over time for individual paddocks giving producers a sound basis to make strategic and more targeted fertiliser applications. In many cases this has meant a decrease in the amount of fertiliser inputs and a significant cost benefit to farm businesses.

The continuation of the Soil Club activities will ensure:

- A greater number of producers are "managing land to capability" and can adjust productivity accordingly leading to increased production on some soil and pasture types.
- Growing uptake of regular soil testing/monitoring to map paddock trends over time to guide fertiliser decisions.
- Greater understanding of soil variability, not just between soil types but within paddocks and between paddocks.
- Greater number of producers adopting a targeted approach to fertiliser inputs based on identified "soil fertility zones".

FRRR Drought Resilience Grant - Seasonal Outlooks to build Drought Preparedness

The aim of this project is to provide two targeted Seasonal Outlooks (prepared by an expert agricultural analyst) based on The Monaro region of NSW. This data will assist local farmers and graziers with decision making for the upcoming seasons (Summer 2021 and Autumn 2022) around stocking rates, stock sale versus stock retention, feed and supplementation, pasture utilisation and planning.

Through the Seasonal Outlook, to be delivered at a Field Day open to all local farmers and graziers on The Monaro, we will also provide opportunities for people to come together, increase social connections and networks, increase community engagement and belonging, as well as building a positive community culture.

The funds will pay for a local expert, Doug Alcock from GrazProphet, to specifically design and develop a Seasonal Outlook based on real-time and relevant data provided by local moisture probe sites, weather analysis data, and real on-farm examples which participants will be able to adapt to their own personal settings and locations. The funds will also pay for lunch which is a key driver in both facilitating discussion amongst peers, as well as encouraging attendance.

MLA PDS - Managing Merino Flystrike

Can flystrike management practices be optimized on the Monaro to achieve production objectives and best practice animal welfare and chemical resistance management guidelines?

By July 2023, MFS will:

1. Document and analyse the current flystrike management practices in:
    a. Six farm management systems
    b. Fly resistance to all known chemical controls using NSW DPI kits, tested on another 14 properties amongst members (20 total tests)
2. Hold one farm field day to be attended by 70 Core and observer producers demonstrating differing fly management technologies to assist in controlling fly strike risk, including crutching machines and jetting plants.
3. Hold two producer skill and training development days where annual results are presented and best practice and farm system improvement opportunities are communicated, each to be attended by 70 core and observer producers.
4. Produce a final report to be provided to producer network and wider organisations (DPI, LLS etc.) highlighting results, lessons learned, and further issues identified.

COLLABORATING PROJECTS

Perennial pasture & forage combinations to extend summer feed for southern NSW (CSIRO)

Report: Richard Culvenor

Project Term: Jan 2018 to 30 June 2022 (extended 6 months due to unavailability of key staff)

Allocation: Compare the performance and persistence of potentially summer-active grass and legume species to look at best options for lamb finishing.

- Project asks whether a re-evaluation of the feedbase would be useful to support trend to more meat production, in particular lamb finishing. Idea is to target limited areas in high production paddocks.
- Focus of the project is summer - autumn performance of potentially summer-active perennial pasture species. However year-round production is being measured to obtain complete picture of species performance.
- Project has a Monaro core site with legume and non-legume trials located on "Burando", NW of Bombala (John Jeffreys), and a smaller supplementary site on "Glenfinnan" at Dry Plain (Owen Smith). Both were sown in March 2019, a year later than planned. A Tablelands core site south of Goulburn and a supplementary site north of Gunning were sown in autumn 2018. Drought has affected all sites during the project.
- Project also has a grazing experiment conducted at Canberra in which lamb finishing on four "best bet" pasture mixes was compared with pure lucerne and brassica
- Legume trial at core sites contained red clover, white clover, lucerne, talish clover, strawberry clover, Caucasian clover and Caucasian x white clover with lucerne and sub clover as standard species. There are multiple cultivars of some species.
- Non-legume trial at core sites contained summer-active cocksfoot and tall fescue, perennial ryegrass, prairie grass, grazing brome, pasture brome, coloured brome, perennial veldt grass, digit grass, chicory, plantain with phalaris and lucerne as standard species. Multiple cultivars of some species. Digit grass did not establish at "Burando" but was successful at Goulburn.
- Experimental phase is now finished with three years of production and persistence data obtained at the Tablelands sites but only two years at Monaro sites due to the late start.
- Data analysis is currently in progress and feed quality analyses are still to be finished.
- Chicory has been a stand-out species for summer-autumn production at both core sites. Summer-active cocksfoot has also been very productive from late spring-summer when rainfall was adequate. Lamb growth was highest on a chicory-plantain-legume mix in both years of the Canberra grazing experiment. Prairie grass has consistently given high autumn yields.
- Lucerne and phalaris performed very well at "Burando" through dry periods and remain species of choice for the general pasture base on Monaro. Despite drought, perennial ryegrass has survived and produced well at both Monaro sites but particularly the high altitude Dry Plain site. It could be given more consideration for specific uses such as lamb growth.
- Bombala site was left in good condition at end of autumn 2021 and we have asked John Jeffreys to keep it grazed periodically.

Monaro Grasslands

Local Land Services have tested the interim Grassland and of the Groundcover Assessment Method (iGGAM) tool. This tool has been amended to match the biodiversity thresholds established by the Commonwealth Natural Temperate Grassland CEEC, providing consistency across both Australian and New South Wales jurisdictions.

The iGGAM tool will allow landholders to determine if grasslands are:

- Low conservation – allowing it to be treated as Category 1 Exempt Land
- Moderate conservation – Category 2 Regulated land
- High conservation – potentially Category 2 Sensitive regulated land if landholder chooses to refer it to Environment, Energy & Science

Once finalised, legislative changes will occur to allow landholders to use this pathway.

Local Land Services will host another Monaro Grassland Reference Group meeting in the next quarter to update the community on outcomes achieved and solutions for grassland regulation issues and interactions with African Lovegrass management.

Robotic Weed Sprayer "Kelpie" - Agent Orientated Software (AOS) Group

This project is currently in development stages with trials being done on The Monaro. The team are working on weed detection - specifically serrated tussock and horehound.

The project will build and test an autonomous mobile robot, "Kelpie", to identify individual weeds and selectively spray or remove them. Five Kelpie systems will be trialled on Monaro farms and Treasury Wine Estates vineyards - autonomously navigating pasture or vineyard to economically control weeds where it is currently not possible. Kelpie will record the position and size of the weeds, to produce a Weeds Map for planning and audit purposes, and a Feed Quality Map with the current farm stock carrying capacity.

Project Partners include Agent Oriented Software Pty Ltd, The University of New England, Department of Industry, Queensland University of Technology, Monaro Farming Systems CMC Incorporated, Autonomous Operational Software Pty Ltd, David Miron, and Treasury Wine Estates Vintners Limited.

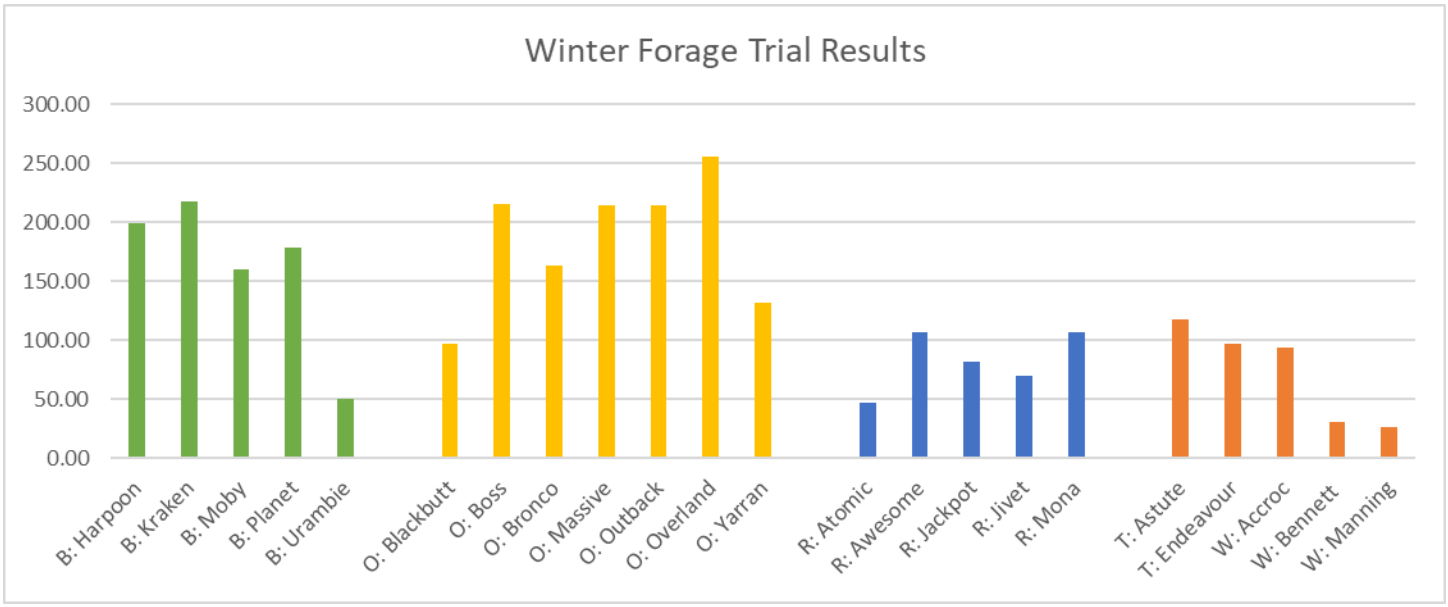
Winter Forage Trials - MFS and S&W Seeds with Upper Murray Seeds

This is a new project which commenced in January 2021 in collaboration with S&W Seeds and Upper Murray Seeds. The trial is looking at different winter forage varieties and time of sowing. The questions being asked are:

- What varieties would fit into a Monaro forage production system?
- What is the effect of time of sowing on the phenology of varieties sown?

Two plots have been sown by S&W Seeds at Maffra North and Dungaree. 23 different varieties were sown on 22nd January and 2nd March 2021. Varieties sown were Barley (Harpoon, Moby, Planet, Urambie, Kraken), Triticale (Endeavour, Astute), Oats (Yarran, Bronco, Overland, Boss, Blackbutt, Massive, Outback, Wheat, Manning, Accroc, Bennett, Severn), and Ryegrass (Jackpot, Jivet, Awesome, Atomic, Mona).

The first cut results were presented at the MFS Winter Field Day by Hugh Graham (S&W Seeds) and Andrew Rolfe (MFS Board). Second cut results are still pending. Special thanks to Josh Barron for his assistance with the sites and Lachlan Ingram for his assistance with the dry matter cuts.






Worm Drench Trials - MFS and Zoetis

MFS conducted worm drench trials in collaboration with Zoetis on 5 properties on The Monaro during the first half of 2021. Results were presented at our Winter Field Day by Jock Munro and his report is below.

Zoetis Australia has invested in a wide ranging study, investigating drench resistance in sheep production systems across Australia. This has resulted in the creation of SheepTRAX (www.sheeptrax.com.au), a free online platform constructed with Dr Matt Playford of Dawbuts.

- **SheepTRAX** is designed to assist Australian sheep producers by showing the prevalence and geographical distribution of drench resistance
- **SheepTRAX** data has been gathered from hundreds of on-farm drench resistance tests (FECRT), across all sheep producing areas in Australia

Several Monaro Farming Systems members have undertaken comprehensive drench resistance tests funded by the Zoetis SheepTRAX initiative for inclusion within this database resource. Further testing with MFS members is planned to be undertaken, however, initial investigation has resulted in the following themes:

- **To date – all farms tested on the Monaro have some level of resistance within Haemonchus (Barbers Pole) and Teladorsagia (Small Brown Stomach worm) populations**
- Overall efficacy only tells half the story – producers need to speciate worms within their parasite populations to create detailed insight into what worms are resistant to which drench actives
- Resistance is wide and varied – there are trends but it is important to determine your own status
- Single active drenching using short acting drenches is no longer a suitable option for Monaro producers. If using single active drenches in long acting formulation producers MUST take steps to preserve resistance status/minimise resistance pressure by using a primer and tail cutter drench
- Combination drenches are imperative for effective parasite management HOWEVER the components of combinations of old actives are under pressure
- Incorporate the combination drenches available with newer actives (derquantel & montepantel) into your program if you haven't already done so

Pregnancy Scanning - MFS and DPI (Gordon Refshauge)

MFS has worked with Dr Gordon Refshauge and the Department of Primary Industries (DPI) on an Australia wide Pregnancy Scanning PDS. The project has two main components: a farm system modelling component and live animal data collection. MFS members were involved in the live animal component, which involved a group of 400+ ewes being weighed and condition scored at joining and correlated to a Pregnancy Scanning result.

All the live animal data has been collected and is being analysed in preparation for a Milestone Report for MLA and AWI, due this week.

Jackie Chapman (DPI) RFID tagged, weighed and condition scored over 30,000 ewes from 59 flocks representing an excellent range in weight, condition and reproduction outcomes.

DPI are using AusFarm to perform the farm system modelling component and have a PhD student at CSU undertaking that work. They have modelled high, moderate, and low reproduction rates in 3 breeds, 3 seasons of mating (spring, summer, autumn) and for 8 regions across NSW, Vic, and SA. DPI will be taking the results from the live animal study and using them to re-set the assumptions used for the reproduction rates in Ausfarm.

Interim results are identifying several flocks that don't appear to show improved reproduction in higher body condition score ewes with DPI still working their way through that data. The last flock was pregnancy scanned 3 weeks ago.

The results of the modelling are due to be provided to MLA and AWI later this year.

African Love Grass - MFS and DPI (Hanwen Wu)

DPI researcher Hanwen Wu, with the assistance of MFS is spearheading a African Lovegrass control research project on the Monaro. The Project will look at various methods of control for ALG including; mechanical, grazing, competition and chemical. The project is currently being fully scoped, however a trial plot is already under way at Paul Eccleston's property East of Cooma, where sowing of wheat, canola and mix of lucerne and chicory are being trialled in combination with a variety of pre-emergent herbicides. A residual herbicide trial will be conducted this month, and DPI hope to have interim results early next year.

Drought Trigger Point Project - MFS and DPI (Yohannes Alemseged)

This project commenced in 2018 and the original workshop had producers sharing their experience in managing feed variability, particularly relating to the drought experienced over the previous 12 months. Producers and the project team identified key decisions in managing feed variability and the thinking behind these decisions. The information was then used to assess the profitability and sustainability of different management approaches for the region using whole-farm modelling.

The project used whole-farm simulation modelling, linking the biophysical modelling data, with simulated price data, to assess the economic and financial performance of the different management decisions we identified together with producers.

DPI are currently in the process of organising a follow up workshop with original participants (MFS members) to receive feedback on the usefulness of the decision-making tool.

Seredellas for the New Environments - MFS and CSIRO

Project Leader: Rebecca Haling (CSIRO)

Project Collaborators: NSW DPI (Richard Hayes), University of Tasmania (Rowan Smith) and TFS

Project Funder: MLA

2021 REPORT

The project commenced 1 July 2021 and will test the suitability of serradella cultivars for use in permanent pastures. These cultivars are predicted to have more appropriate flowering, hardseed and persistence characteristics than many varieties presently available.

Some key experiments were sown prior to the project start date to ensure results could be obtained during the current growing season. On the Monaro there currently two experiments underway:

(1) *A serradella flowering experiment* (at "Kyleston", Bombala) that is assessing flowering dates and flowering date stability of several the most promising cultivars and lines identified in previous work. This experiment is part of a wider experiment network with similar flowering experiments at Canberra, Glen Innes and Launceston.

(2) *A serradella persistence experiment* (at "Burando, Bombala) which tests the ability of most promising cultivars to maintain sufficient legumes biomass over time in a mixed sward.

Other experiments to test serradella persistence, cultivar suitability and vigour, and sowing strategies are expected to be located on Monaro sites alongside sulfur/nutrient research trials.

MFS will have an embedded Producer Demonstration Site (PDS) activity. The PDS planning phase with MFS will commence July 2022 with the objective of sowing the PDS experiment(s) in either autumn 2023 (or if desirable in spring/summer 2022).

Transition Pasture Systems to more Balanced S, K and P Fertiliser Nutrition - MFS and CSIRO

Project Leader: Rebecca Haling (CSIRO)

Project Collaborators: Charles Sturt University / Graminus Consulting: co-supervision of Master's Degree candidate.

Project Funder: CSIRO internal project

2021 REPORT

Sixteen nutrient management experiment sites are established across the Monaro region. Most are focussed on sulfur (S) management, but some have a multiple nutrient management objective (i.e., P, K, S & micronutrients).

The aims of the research are to develop better guidelines for soil S testing and S-fertiliser use, and to understand how to combine this with results of P and K testing to determine the correct rate, balance and type of S, K and P inputs for optimum soil fertility management.

The S experiments were commenced under an earlier MFS soils club project but drought in 2018/19 prevented full value being obtained from these experiments. Pasture response to soil test S levels were obtained from five sites in spring 2020. Pasture at the remaining sites had been damaged by the droughts. Pasture on most of the experiments has been "renovated" this year and good progress is anticipated in these experiments given the improvement in seasonal conditions. A Master's Degree student (Charles Sturt University) has joined the project recently.

MFS EVENTS SUMMARY 2020/2021

- **MFS Spring Field Day & AGM - 30th Sept 2020**
  - Location: Nimmitabel Memorial Hall
  - Attendees: 30
  - Comparative Analysis Report / Benchmarking - Sandy McEachern (Aggregate Consulting)
  - Carbon Testing - Phil Graham (Graham Advisory)
  - Commodities Outlook - Angus Gidleigh Baird (RaboBank Analyst)
  - Worms Club - Matt Playford (Dawbuts)

- **MFS Crop Tour - 30th October**
  - Grant provided by Coordinaire Southeast PHN
  - Attendees: 70
  - Crop Stops: Burandoo (Jeffrey's), Old Springfield (Haylock's), Maffra (Rolfe's), Jimembuen (Glasson's)

- **MFS Dinner Event - 27th November**
  - Grant provided by Coordinaire Southeast PHN
  - Attendees: 65
  - Guest Speakers: Gus Worland (Gotcha4Life), Dave Mitchell (ex MFS Chair), Richie Taylor (ex MFS Chair)

- **MFS Soils Club / Summer Field Day - 7th Dec 2020**
  - Location: On Farm at Bibbenluke Shearing Shed
  - Attendees: 35
  - Wool Market Analysis - Andrew Woods (Independent Commodity Services)
  - MFS Soils Club Results Analysis - Richard Simpson (CSIRO)
  - Paddock Walk and Soil Pit - Richard Simpson (CSIRO)

- **MFS Autumn Field Day - 24th March 2021**
  - Location: On Farm at Kenilworth Shearing Shed
  - Attendees: 90
  - Air Seeder Viewing / Inspection
  - Farming Forecaster - Phil Graham (Graham Advisory)
  - Seasonal Outlook Summer - Doug Alcock (GrazProphet)
  - Lovegrass Resistance Testing - Jo Powells (LLS)
  - Winter Forage Trial Inspection - Hugh Graham (S&W Seeds) & Charlotte Sutherland (Upper Murray Seeds)

- **MFS Winter Field Day - 22nd June 2021**
  - Location: On Farm at Dungaree Shearing Shed
  - Attendees: 50
  - MLA PDS Lamb Supplementation Update - Doug Alcock (GrazProphet)
  - Worm Drench Trials - Jock Munro (Zoetis)
  - Worms Club - Matt Playford (Dawbuts)
  - Winter Forage Trial Inspection - Hugh Graham (S&W Seeds)

MFS SUPPORTERS - THANK YOU

MFS Partners

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Tablelands Farming Systems
Holbrook Landcare Network
Bookham Agricultural Bureau

Sponsorship Packages

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Project Funders

South East Local Land Services
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South East Rural - Cooma
Upper Murray Seeds
Virbac
Zoetis

SPECIAL MENTIONS…

MFS Board Members (John, Phil, Jono, Warwick, Richard, Mandy, Owen, Bea, Andrew and Nancy) who have contributed many volunteer hours towards MFS activities and direction, thank you for being such a cohesive and active Board who is a pleasure to work with.

South East LLS, thank you to **Jo Powells and Luke Pope.**

Boyce for consistently providing meeting rooms, H.R and financial management support over the last 13 years.

Lachy Ingram for continuing to provide technical support input into our projects.

Doug Alcock, who underpins the majority of MFS projects on the Monaro in terms of data collection and analysis and plays an integral role in delivering our seasonal outlooks.

MLA PDS Weaner to Yearling Production Pays Off Trial Hosts - Mick Shannon, John Murdoch, Richie Taylor

MLA PDS The Sense in Supplementation Trial Hosts - Andrew Rolfe, John Murdoch, Harrison Cottle

MLA PDS Winter Feed Gap Trial Hosts - Bea Litchfield, Charles Keighley, Stephen & Sharon Platts

MFS Winter Forage Trial Hosts - Andrew Rolfe @ Maffra, Hugh Platts @ Dungaree

On-Farm Field Day Hosts - Andy and John Murdoch @ Bibbenluke, Stephen and Andrew Rolfe @ Kenilworth, Stephen, Sharon and Hugh Platts @ Dungaree, Howard Charles @ Coolringdon

And last but not least…..

Zoe Rolfe and **Rebecca Kading** for their hard work behind the scenes to keep MFS operating as a successful farming organisation.


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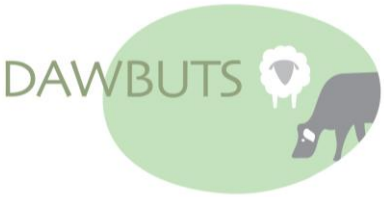

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