

## MFS R, D & E Priorities Draft Plan

Comments.

- A comprehensive R&D plan was produced by MFS in May 2010. Six topics were considered priorities, which are listed as topics 1-4 and 6-7 in the table below.
- In potential projects, **projects that have been done or are currently underway are in blue**, suggested potential projects are in black, **and projects that were to be undertaken based on the 2010 plan, but have not been, are in red**.

AREA	Priority	Issues	Sub Topics	Potential Projects
AGRONOMY/SUSTAINABILITY	1. Legumes and soil nitrogen balance	Low pasture legume content and low soil nitrogen believed to be major limitations to productivity, particularly on heavier soil types	<ul style="list-style-type: none"> <li>• Limitations to sub clover production and persistence</li> <li>• Are there better alternative legumes? (especially drought persistent perennial legumes)</li> <li>• Are pests/diseases limitations?</li> <li>• To what extent is soil fertility constraining legume growth?</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Collation of current knowledge</b></li> <li>• Grassgro modelling (part done)</li> <li>• Alternate legumes project</li> <li>• Soils club (to address soil fertility)</li> <li>• Nodulation/rhizobia testing</li> <li>• Lucerne variety trials</li> </ul>
	2. Pasture Productivity	Scarcity of information about pasture growth (and quality) curves for different pasture types and locations on Monaro.	<ul style="list-style-type: none"> <li>• Pasture growth curves for different pasture types and locations on Monaro</li> <li>• Feed quality changes over the year</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Collation of current knowledge</b></li> <li>• Grassgro modelling</li> <li>• Soil Moisture Probes</li> <li>• Weather stations</li> <li>• Monaro Farming Environment Map</li> <li>• Measure feed quality over seasons for different pasture types (esp winter)</li> </ul>
	3. Soil Nutrition	Soil fertility believed to be a major impediment to agricultural production on the Monaro	<ul style="list-style-type: none"> <li>• Soil phosphorus relatively well understood</li> <li>• Sulphur situation has many more unanswered questions, and testing has shown S to be a limitation on many sites at all soil types eg most cost effective products, are we testing deep enough, frequency of application</li> <li>• Nitrogen – see priority 1.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Collation of current knowledge</b></li> <li>• Soils club for soil testing and decision support</li> <li>• MLA PDS comparison Sulphur fert products</li> <li>• Grassgro modelling paper – fertilising Monaro pastures (GP)</li> <li>• S testing gypsum sources</li> <li>• Test strips for different Sulphur fertilisers and for potassium on different soils</li> <li>• Understanding Ca:Mg ratio on different soils and implications/potential to modify</li> <li>• Test paddocks with previous soil testing</li> </ul>

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				history at deeper depths (0-20cm) to better understand nutrient movement and/or limitations of 0-10cm testing
	4. Winter Feed gap	Low winter feed production is likely to limit stocking rates/production on most farms	<ul style="list-style-type: none"> <li>Understanding pasture growth curves (see priority 2).</li> <li>Role of dual purpose crops</li> <li>Perennial pastures with higher winter growth rates</li> </ul>	<ul style="list-style-type: none"> <li>Collation of current knowledge</li> <li>Grassgro modelling</li> <li>Dual purpose crop initiatives</li> <li>Modelling of steer finishing options (will be focused on winter/spring feed production)</li> <li>Utilising dry feed and supplementary feeding</li> <li>Gibberellic Acid trials</li> <li>Strategic Nitrogen applications in pasture</li> </ul>
	5. Weeds	Invasive species reducing production potential and value of agricultural land. Current control measures (often spot spraying) are very labour intensive.	<ul style="list-style-type: none"> <li>Reduction and eradication techniques</li> <li>Utilising heavily infested areas (I.e. can productions systems be adapted to utilise African lovegrass)</li> </ul>	<ul style="list-style-type: none"> <li>Resistance to fluoproponate</li> <li>Effectiveness of different management strategies</li> <li>Role of boom spraying, residual impact, and impact on non-target species</li> </ul>
BUSINESS MANAGEMENT	6. Output KPI's	Little understanding of achievable/target levels of production. Production on Monaro believed to be low for rainfall		<ul style="list-style-type: none"> <li>Collation of Boyce &amp; Co comparative analysis data</li> <li>Comparative Analysis Group</li> </ul>
	7. Enterprise Mix	Area of land allocated to meat enterprises has increased from 25% to 50% of the last five years. Member survey indicated interest in finishing systems	<ul style="list-style-type: none"> <li>Relative enterprise profitability</li> <li>Variation in seasonal feed requirements and feed quality between enterprises</li> </ul>	<ul style="list-style-type: none"> <li>Collation of Boyce &amp; Co comparative analysis data</li> <li>Comparative analysis group</li> <li>Grassgro modelling (Phil Graham)</li> <li>Finishing systems projects</li> <li>Grassgro modelling (GP, June 2013)</li> </ul>
	8. IT, record keeping, and decision support software	Record keeping (animal and paddock treatments, paddock performance), financial software, and decision support software.	<ul style="list-style-type: none"> <li>Compliance requirements for chemicals, stock movements treatments etc</li> <li>Farm assurance programs</li> <li>EU certification</li> </ul>	<ul style="list-style-type: none"> <li>Animal electronic identification systems</li> <li>Assessment of different software programs available</li> <li>Assessment/involvement with crop and pasture remote monitoring systems</li> <li>Assessment of telecommunications solutions</li> </ul>

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	9. Business management	Financial skills and risk management	<ul style="list-style-type: none"> <li>• OH&amp;S Compliance &amp; Best Practice</li> <li>• Risk management as a tool for business management</li> <li>• Risk Registers</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Farm Transition workshops</a></li> <li>• OH&amp;S Requirement Workshops</li> <li>• Farm risk management</li> </ul>
	10. Labour efficiency			<ul style="list-style-type: none"> <li>• <a href="#">Field day Bellevue, H&amp;S Industry benchmarks</a></li> <li>• Field day demonstrations of labour saving devices eg sheep handlers</li> </ul>
	11. Beyond the farm gate			<ul style="list-style-type: none"> <li>• Supply chain interactions – understanding carcass feedback (beef/lamb) – MSA Grading</li> <li>• Animal welfare – mulesing, lamb survival</li> <li>• Marketing - PCAS, Lamb Branding, co-op producer branding</li> <li>• MFS Collective selling groups????</li> </ul>
LIVESTOCK	12. Animal Health	Biosecurity Increasing issues with barbers pole Chemical resistance	<ul style="list-style-type: none"> <li>• Biosecurity</li> <li>• Worms</li> <li>• Drench resistance</li> <li>• Footrot</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Worms club to collate monitoring and resistance data, provide information, and promote testing</a></li> <li>• Triclabendazole Resistance</li> <li>• Cattle drench resistance</li> <li>• Pasture larval measurements under different systems</li> </ul>
	13. Genetics	Most of these will be national	<ul style="list-style-type: none"> <li>• What is genetic improvement worth to an enterprise? What should you invest in genetics vs nutrition?</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Wether Trial (grassgro modelling, GP)</a></li> <li>• <a href="#">Sire evaluation</a></li> <li>• <a href="#">MLA RBV's proof concept site (Cobana)</a></li> <li>• Ewe trial (lifetime productivity project)?</li> <li>• Genomic and SNP testing in cattle (as selection tool)</li> <li>• SNP testing in sheep</li> </ul>
	14. Weaning rates & Lamb survival	Lamb survival seen as a potential welfare issue	<ul style="list-style-type: none"> <li>• Optimum Lambing time on Monaro?</li> <li>• Geography/Shelter &amp; Lamb survivability – value of Poa Tussock, Tree lines ETC.</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Grassgro modelling (Oli Cay, 2010)</a></li> <li>• Lamb Survival Workshops – Tie-in with Sheep Connect</li> </ul>

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	15. eID integration into lamb and wool enterprises	Partner with other organisations and expertise?	<ul style="list-style-type: none"> <li>• Data management</li> <li>• System integration</li> <li>• Cost / benefit</li> </ul>	<ul style="list-style-type: none"> <li>• Partner with interested organisations to apply for PDS funding or the like?</li> <li>• Tie in with lamb finishing project?</li> </ul>
Natural Resource Management	16. Integrating conservation with productivity	Federal and State legislation compliance Impacts of compliance on future commercial viability	<ul style="list-style-type: none"> <li>• Native pasture assessments and classifications</li> </ul>	<ul style="list-style-type: none"> <li>• Ecologist study</li> </ul>
TRAINING & EDUCATION	17. MFS traineeships	Is this an RD&E project?		<ul style="list-style-type: none"> <li>• <a href="#">MFS traineeship program</a></li> <li>• Partner with CSU and ANU to offer placements for agricultural students during their tertiary studies?</li> <li>• Use interns if and when opportunities arise to help develop MFS projects?</li> <li>• Offer field placements for ANU students for modelling work (Martin Amidy)</li> </ul>