

# Improved grazing production on non-wetting sands

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Project Update and Workshop  
Coomandook 28 September 2023  
Dr Mel Fraser – Soil Function Consulting





### Objective:

- *To test a series of soil treatments to improve our understanding of soil amelioration practices that increase feed and livestock production on sandy soils.*
- *Measure the impacts of mechanical and chemical soil amendments across three demonstration sites.*
- *Improve participating producer knowledge and practice and increase industry understanding of soil management practices that enhance groundcover, soil biology, soil pH, soil structure, water holding capacity and feed production.*



## Amelioration priorities

- Overcome water repellence
- Reduce soil strength
- Boost fertility
- Improve establishment
- Minimise risk
- Considerations: rock, drift, no clay for spreading, cost benefit

## What have we done?

- Tested a range of deep tillage equipment
- Tested a range of composts and manures and fertiliser packages
- Measuring second year responses
- Working with what we've got







What have we learnt so far?



# Booderoo - treatments

AGED MANURE



INVERSION



CHISEL PLOUGH



ACTIVE MIX



DEEP RIP







Control



Inversion



Plough + Mix



Deep Rip



Control



Inversion



Plough + Mix



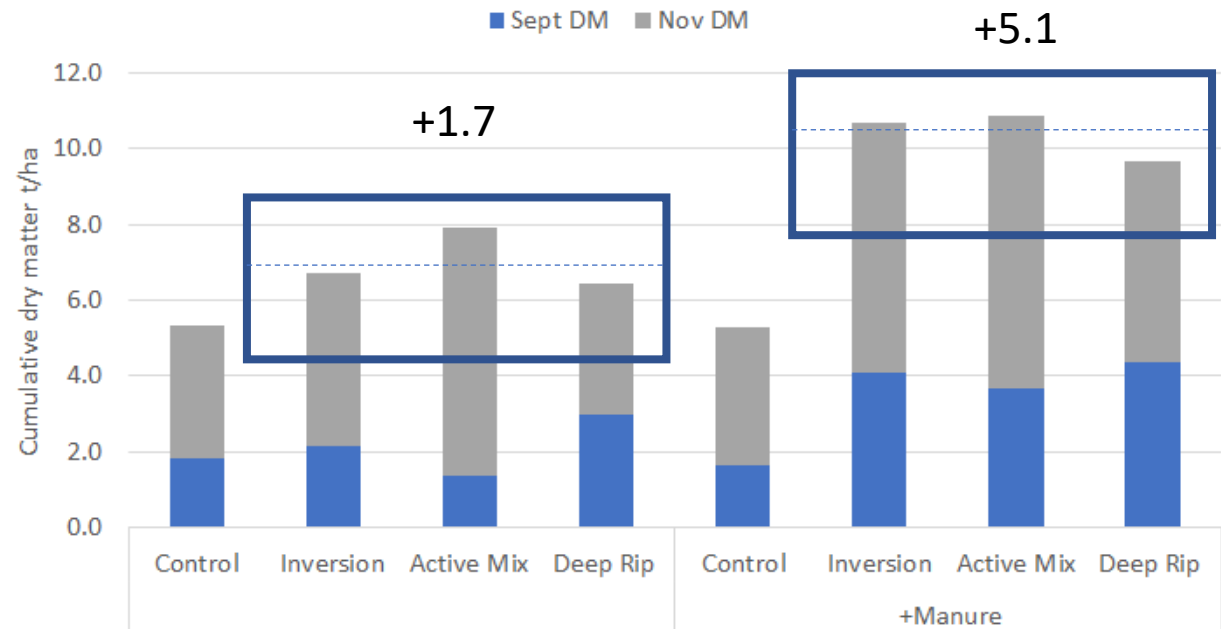
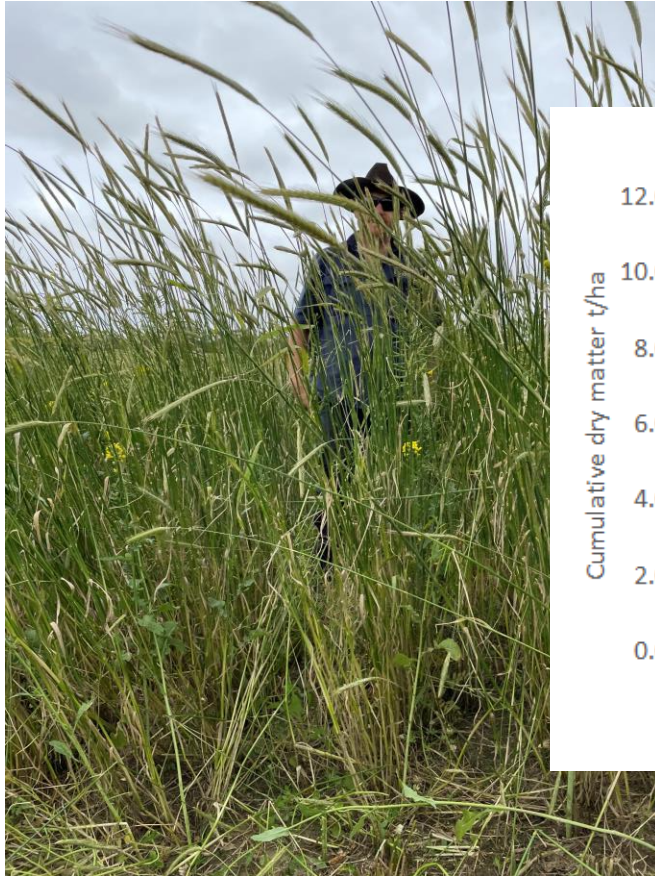
Deep Rip

+ Manure

+ 300 N, 82 P, 200 K, 50 S, 140 Ca



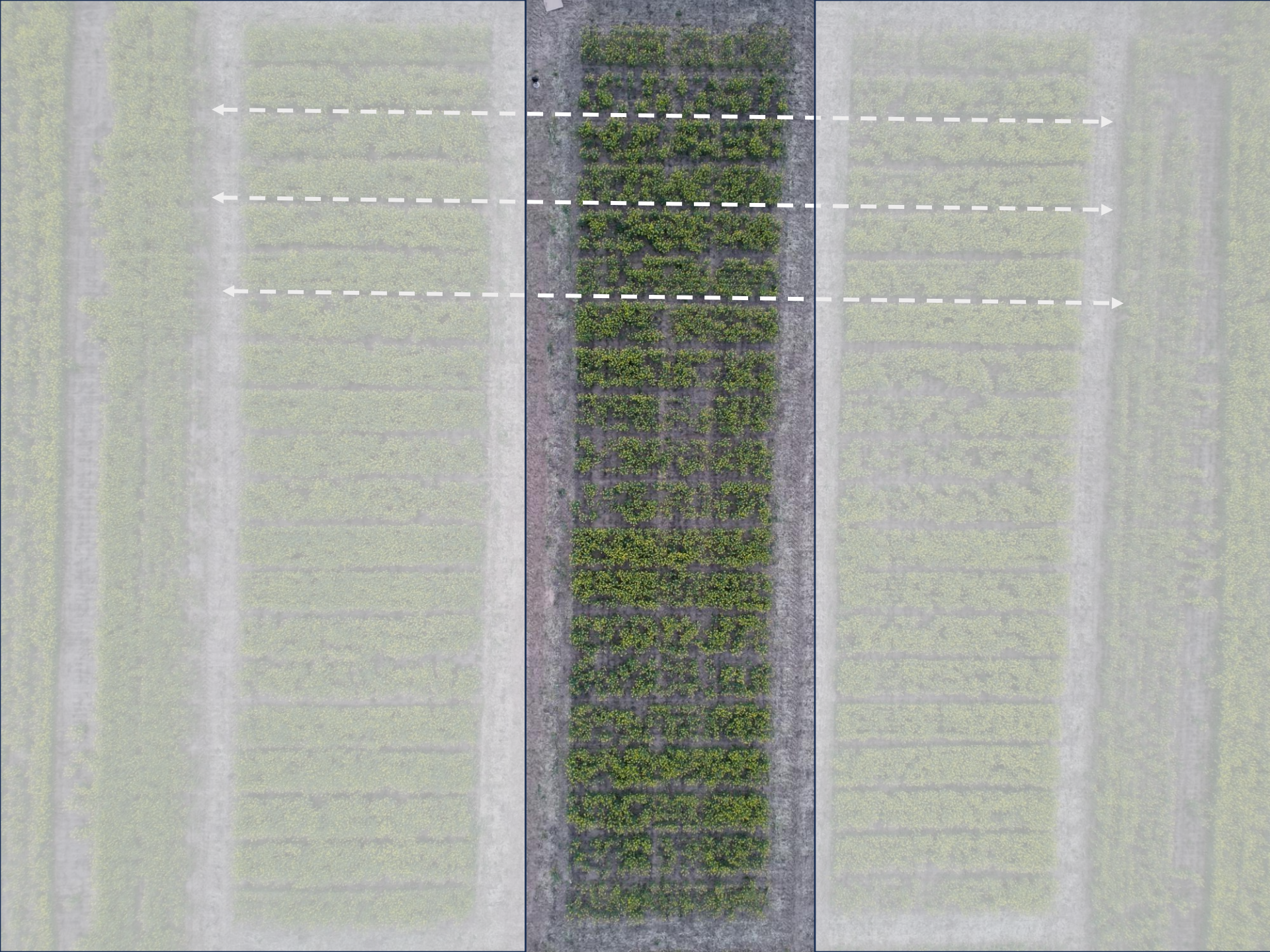
# Booderoo – Yr 1 Results















## Amelioration learnings

- Mostly diluting water repellence
- Reduce soil strength - yes
- Boost and/or dilute fertility
- Improve establishment - sometimes
- Minimise risk – broadcast helps
- Increase grain and fodder yields
- But...







The impact of amelioration on soil biology

The impact of amelioration on feed quality  
and implications for grazing livestock

Strategies to boost production of existing pastures

What haven't we explored yet?





**Dr Ashley Martin**

Microbiology  
Laboratories Australia



**Dr Michael Wilkes**

Michael Wilkes Livestock Co  
Pty Ltd



**Felicity Turner**

Turner Agribusiness

Today's presenters





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# Coorong Tatiara Soil Hub



Providing growers and advisors with information, resources, and tools to support improved agricultural and economic outcomes across the Coorong and Tatiara Districts.

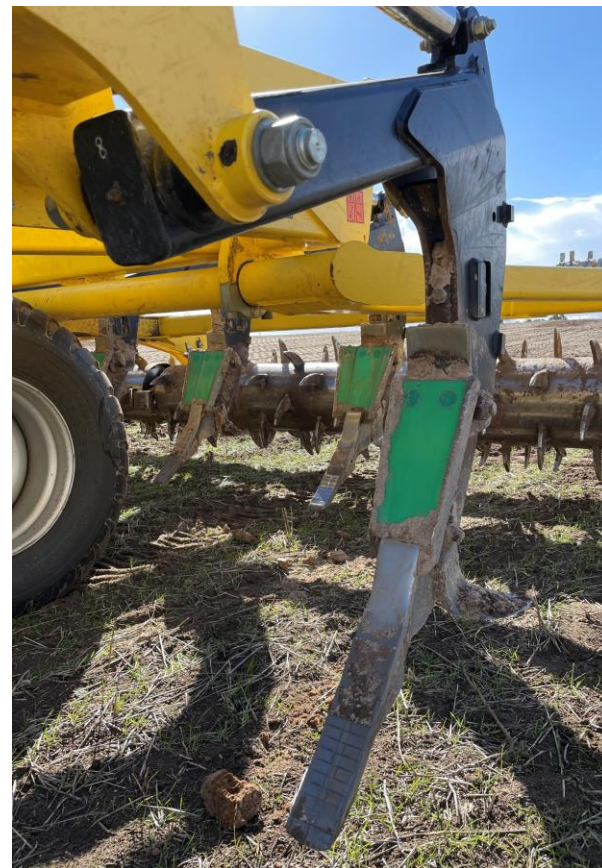
 [See projects](#)



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[www.ctsoilhub.au](http://www.ctsoilhub.au)





Hosts, MLA, Ehsan and Limestone Coast  
Landscape Board, NLP, Presenters and  
Tracey Strugnell and the CTLAP

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Thank you