



The paddock was divided into three sections running east/west with the Northern section limed at 2.5 tonne per hectare, the southern section limed at 7.0 tonne per hectare and the middle section not limed.

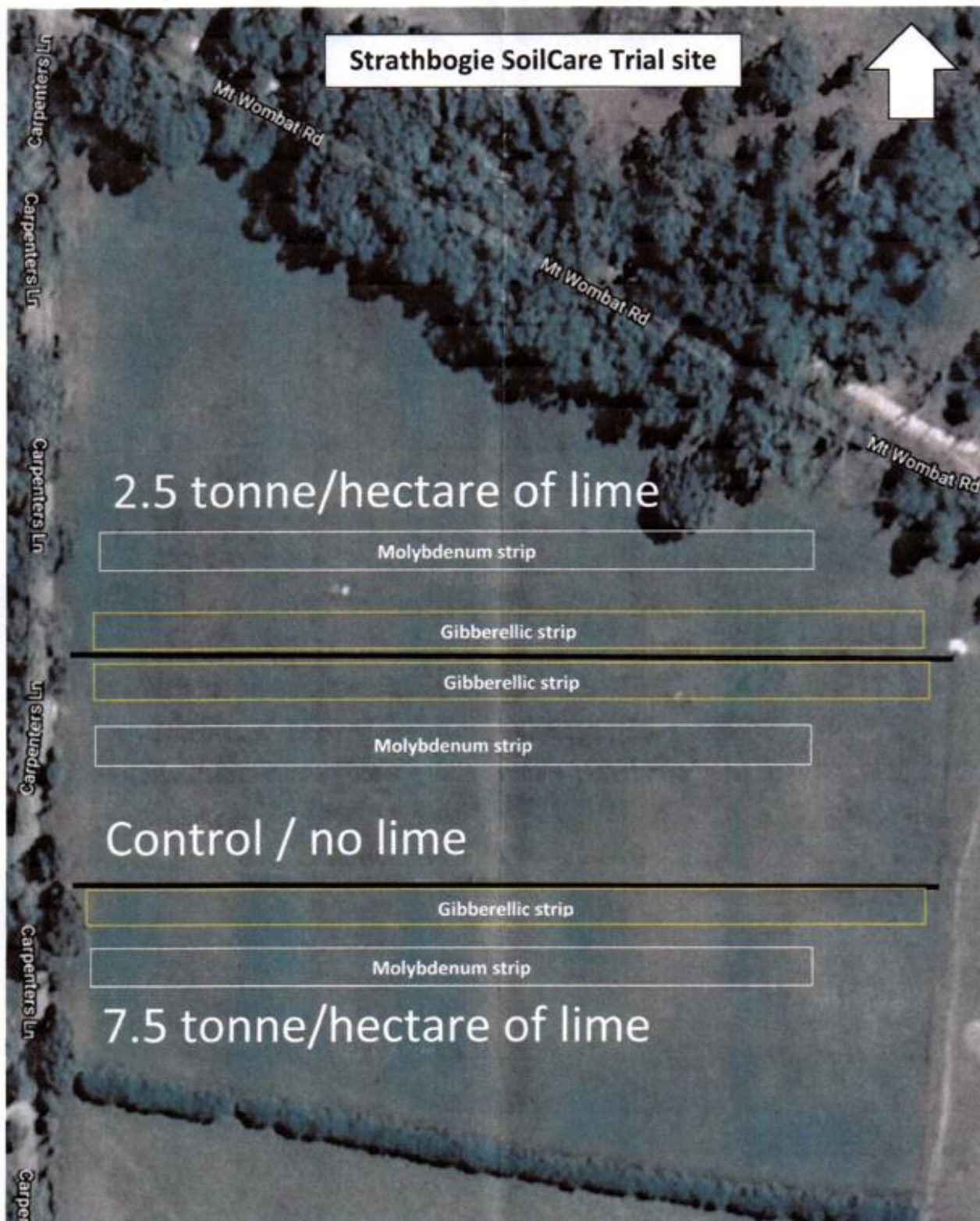
Carpenters Lane Soil Tests – Sept 2015 to Aug 2022

Date	Lime or Control	pH (CaCl2)	Organic Carbon %	Phosphorus (Olsen)	Ca:Mg ratio	Aluminium saturation %
Sep-15	Paddock start of project	4.2	3.3	9.0	3.3	Not measured
May-16	2.5 Tonne	4.4	3.0	8.0	5.5	28
	Control	4.2	3.2	8.0	3.3	27
	7 Tonne	5.0	2.6	6.0	12.0	22
Oct-16	Control	4.3	3.8	19.0	Not measured	3.6
Sep-17	2.5 Tonne	4.3	3.3	4.8	Not measured	Not measured
	Control	4.1	3.0	5.9	Not measured	Not measured
	7 Tonne	4.7	3.6	6.7	Not measured	Not measured
Aug-20	2.5 Tonne	4.7	not measured	10.3	6.1	4.7
	Control	4.3	not measured	9.9	8.9	10.9
	7 Tonne	5.6	not measured	11.2	12.9	2.3
Aug-22						
Depth 0 - 5cm	7 Tonne	5.9	5.5	8.1	13.0	0.14
Depth 5 - 10cm	7 Tonne	5.2	3.6	4.3	15.0	2.8
Depth 10 - 15cm	7 Tonne	4.7	2.6	3.9	11.0	30
Depth 15 - 20cm	7 Tonne	4.5	1.9	4.2	8.1	48

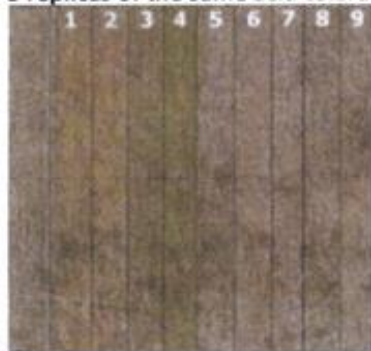
Pasture Grasses trialled:

Several varieties of Phalaris, Cocksfoot and Ryegrass (listed below) were sown in 5 metre rows running north/south across the limed and control bays - and repeated 5 times across the paddock (see plan attached)

	7.0 Tonne per Ha	Control - no lime	2.5 Tonne per Ha	
				Holdfast Phalaris
				Holdfast AT Phalaris
				Yarck Cocksfoot
				Savvy Cocksfoot
				Vision Cocksfoot
				Impact 2 Ryegrass
				Matilda Ryegrass
				Avalon Ryegrass
				Kings Gate Ryegrass
				Holdfast Phalaris
				Holdfast AT Phalaris
				Yarck Cocksfoot
				Savvy Cocksfoot
				Vision Cocksfoot
				Impact 2 Ryegrass
				Matilda Ryegrass
				Avalon Ryegrass
				Kings Gate Ryegrass
				Holdfast Phalaris
				Holdfast AT Phalaris
				Yarck Cocksfoot
				Savvy Cocksfoot
				Vision Cocksfoot
				Impact 2 Ryegrass
				Matilda Ryegrass
				Avalon Ryegrass
				Kings Gate Ryegrass
				Holdfast Phalaris
				Holdfast AT Phalaris
				Yarck Cocksfoot
				Savvy Cocksfoot
				Vision Cocksfoot
				Impact 2 Ryegrass
				Matilda Ryegrass
				Avalon Ryegrass
				Kings Gate Ryegrass
				Holdfast Phalaris
				Holdfast AT Phalaris
				Yarck Cocksfoot
				Savvy Cocksfoot
				Vision Cocksfoot
				Impact 2 Ryegrass
				Matilda Ryegrass
				Avalon Ryegrass
				Kings Gate Ryegrass



5 replicas of the same acid tolerant grass species from West to East in the paddock



1. Holdfast phalaris
2. Holdfast AT (Acid Tolerant) phalaris
3. Yarck Cocksfoot
4. Savvy Cocksfoot
5. Vision Cocksfoot
6. Impact 2 Ryegrass
7. Matilda Ryegrass
8. Avalon Ryegrass
9. Kings Gate Ryegrass

Species and varieties planted in 2015:

1. Holdfast Phalaris
2. Holdfast AT (acid tolerant) Phalaris
3. Yarck Cocksfoot
4. Savvy Cocksfoot
5. Vision Cocksfoot
6. Impact 2 Ryegrass
7. Matilda Ryegrass
8. Avalon Ryegrass
9. Kings Gate Ryegrass

Observations – May 2020

Holdfast Phalaris	- 60% ground cover and seed heads
Holdfast AT Phalaris	- 60% ground cover and seed heads
Yarck Cocksfoot	- 90% ground cover
Savvy Cocksfoot	- 90% ground cover
Vision Cocksfoot	- problem with seed germination so no result
Impact 2 Ryegrass	- very little ryegrass – mostly sorrel
Matilda Ryegrass	- very little ryegrass – mostly sorrel
Avalon Ryegrass	- very little ryegrass – mostly sorrel
Kings Gate Ryegrass	- very little ryegrass - mostly sorrel

Observations – September 2023

Phalaris and Cocksfoot are both visible in the pasture after 8 years whereas the Ryegrass has pretty much completely disappeared. The Ryegrass sections have recently been over-sown with Cocksfoot to provide a better pasture mix. The whole paddock in recent years has been fertilised and for one year pasture booster was added prior to the whole paddock being cut for hay.

No extra lime has been added since this trial commenced in 2015.

David Hamilton's view is that for his farm, Phalaris provides the better feed for livestock than Cocksfoot, but that Phalaris is harder to get established and, as a new pasture, it needs to be grazed more 'gently' and be allowed to go to seed at least in its first year and preferably every few years after that. David says Cocksfoot is easier to establish but considers it not as 'valuable' in his pasture mix as Phalaris.