

Soil carbon under native pastures

A paddock assessment of soil carbon content was conducted in 2009 comparing land in “Good” versus “Poor” condition on five important grazing land soil types in the northern Gulf and northern Burdekin regions.

Data across the five sites indicated no significant difference in soil carbon (0–5 cm, 0–10 cm and 0–30 cm) between Good and Poor condition, with the Good condition containing 24.8 t C/ha and the Poor containing 23.9 t C/ha (0–30 cm).

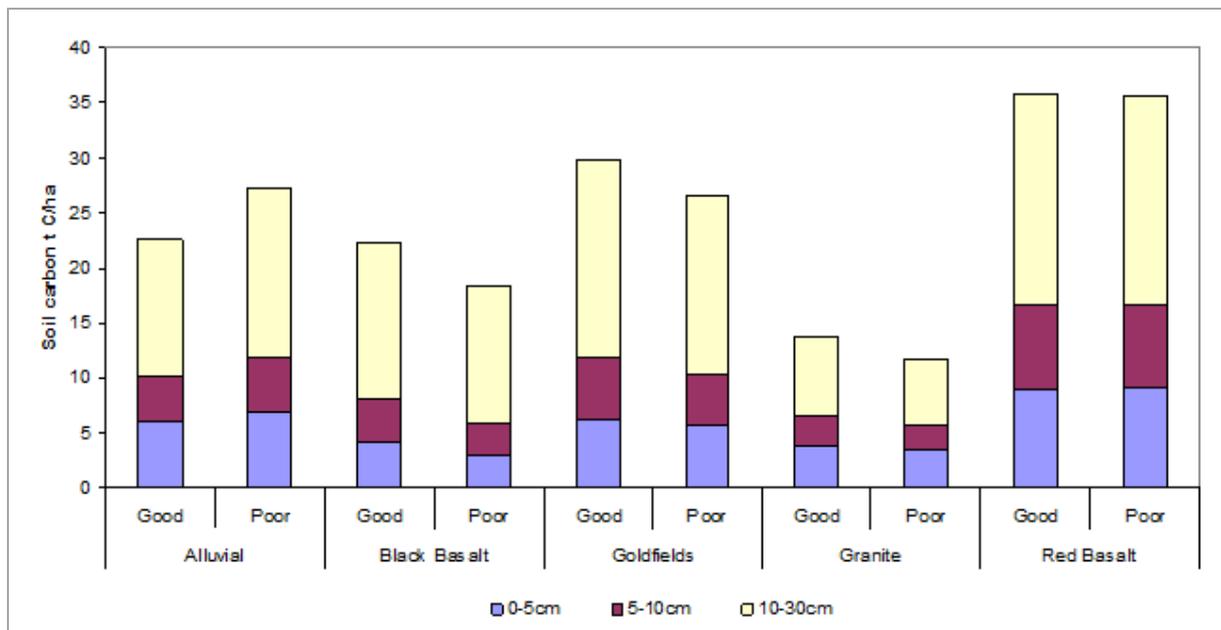


Image 1. Soil carbon assessment from five paddocks in the northern Gulf and northern Burdekin regions, 2009.

These results highlight the difficulty in influencing soil carbon accumulation rates across the savannahs by improving land condition.

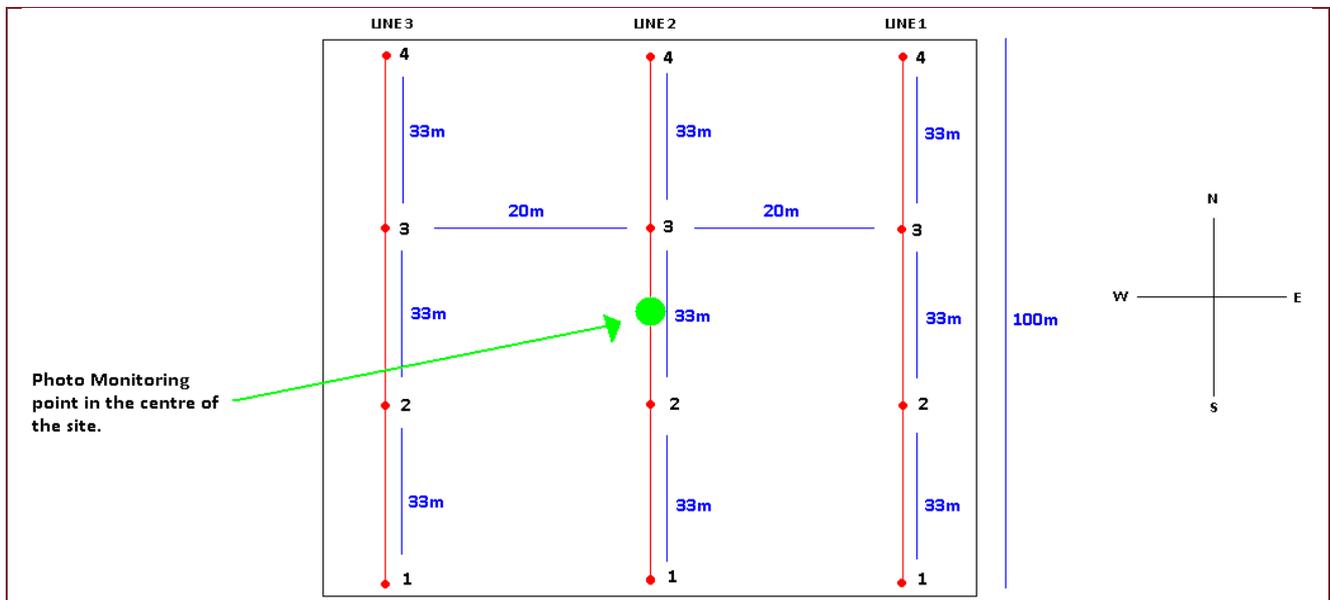
The Stylo comparison

In June 2013 two 1 ha sites were selected for a soil carbon study. The aim was to compare soil carbon accumulation under native pastures with Stylos (Site 1) with the soil carbon stocks under native pastures (Site 2). The native pasture–Stylo paddock received a spell every second year and was in A- condition while the native pasture paddock was continuously grazed and in poorer condition (B–C). Soil carbon was examined at depths of 0–10 cm and 10–30 cm. There was no significant difference in stored carbon (tonnes per hectare) between the two sites at either depth.

Site 1—Stylo present



Site 2—No Stylo



Stored carbon

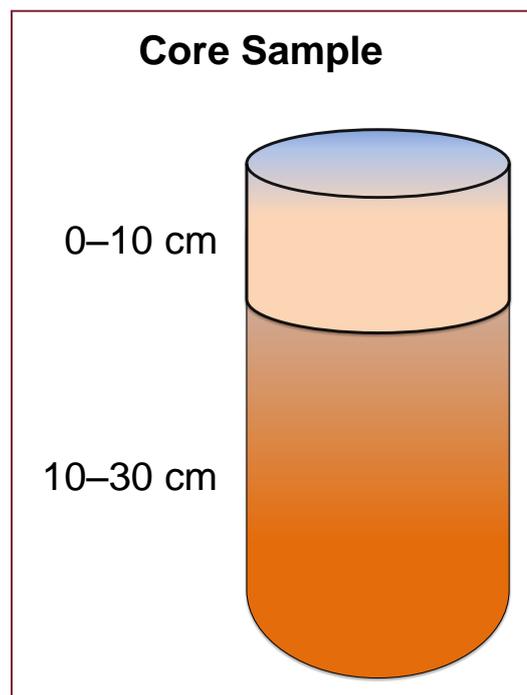
Depth	Stylo (C t/ha)	No Stylo (C t/ha)
0–10 cm	18.71	16.63
10–30 cm	6.38	6.91

- No difference in stored carbon between the two sites at either depth.

Stored nitrogen

Depth	Stylo (N t/ha)	No Stylo (N t/ha)
0–10 cm	1.69	1.64
10–30 cm	1.21	0.92

- No difference between the two sites for nitrogen at 0–10 cm.
- There was a difference between the two sites for nitrogen at 10–30 cm, with the site with no Stylos considerably lower.



Claiming soil carbon sequestration and subsequent income is subject to a detailed “integrity” test and must:

- Go beyond normal practice
- Be measurable
- Be conservative
- Be based on peer review
- Be internationally consistent
- Avoid carbon leakage

Further information

For more information contact:

Joe Rolfe

DAF Beef Team, Mareeba

joe.rolfe@daf.qld.gov.au

0427 378 412