

Final Report - 2022

Loam Bio conducted, three Soil Carbon Inoculum Package (CarbonBuilder) 2021 pilot programs for Canola crops. The total project land area comprised 1,154 ha, spread over three sites across New South Wales and Northern Victoria in Australia.

“A total of 7,518t CO₂e were sequestered over the duration of the 2021 Loam pilot program within the top 30cm of soil over the three pilot sites comprising 1,154ha.”

The project set out to achieve the following:

- Catalyse the growth of new carbon removal technologies by demonstrating the potential of Loam’s microbial inoculum products to drive meaningful soil carbon sequestration in a scalable manner
- Validate the performance of Loam’s inoculum over a range of soil types and farming practices
- Show the potential of Loam’s products to provide a meaningful additional revenue stream to growers, to help drive adoption of sustainable management practices at the grower level

In addition to the measured increase in carbon stocks, the co-benefits derived from the application of Loam’s CarbonBuilder product will help growers lay the foundation for improving:

-  Soil health & structure
-  Soil water holding capacity
-  Nutrient cycling
-  Landscape resiliency



| 2021 Loam Pilot Sites | Crop Type | Project Area | SOC Stocks Results | CO ₂ e Sequestered/ha | Total CO ₂ e Sequestered |
|---|-----------|--------------|--------------------|----------------------------------|-------------------------------------|
| LOCKINGTON | Canola | 397.60 ha | 2.10t C/ha | 7.70t CO ₂ e | 3,061.52t CO ₂ e |
| WIRRINYA | Canola | 483.08 ha | 1.56t C/ha | 5.72t CO ₂ e | 2,763.22t CO ₂ e |
| MANILDRA | Canola | 273.34 ha | 1.69t C/ha | 6.20t CO ₂ e | 1,693.80t CO ₂ e |
| Total or Weighted Average* Over Project | | 273.34 ha | 1.78t C/ha* | 6.52t CO ₂ e* | 7,518.53t CO ₂ e |

Table 1) Summary of Carbon Laboratory Results and Interpretations of Results for Soil Core Samples Captured from 0-30cm below surface level

Project Methodology

The project was conducted to closely replicate an Emissions Reduction Fund (ERF) style methodology, although for the purpose of this pilot study, projects were not registered formally with the Clean Energy Regulator (CER). This approach is intended to provide Loam with an indicative representation of the Australian Carbon Credit Unit (ACCU) generating capabilities of our inoculum product over three different project sites varying in geography, management practices and soil types.

The major methodological activities conducted by Loam and the landowners throughout the 2021 pilot program lifecycle. included:

Mapping and Sampling Design

Soil Coring

Inoculation of Seed at Crop Sowing

Laboratory Testing



Grower Profiles

Three growers were selected to provide diversity in terms of geography, soil type, management styles and farming practices to capture a broad spectrum of conditions. Loam looks to partner with both regenerative progressive farms and conventional broadacre farmers, as our aim is to maximise adoption of our technologies to achieve the greatest impact possible.

Lockington:

This grower practices in the regenerative agriculture space. The property encompassed 8,500 acres of country in the flat Murry basin plains. The grower participated in the 2021 Loam pilot program to leverage the work they are doing in plant health and the stimulation of root function in crops with Loam's inoculum to promote carbon sequestration and soil function. The grower is focused on building the most resilient, healthy, and productive cropping system possible, without synthetic and artificial inputs, to produce nutrient dense food.

Wirrinya:

Loam partnered with a grower located at Wirrinya New South Wales. The grower runs over 4,000 acres of country which backs onto Lake Cowal and is positioned on thick alluvial flood plains. This growers incorporation into the pilot program shines a lens into the carbon building potential of broadacre farming systems and the adoptability of Loams biological technology by conventional growers who are looking to diversify revenue streams and reap the associated soil health benefits.

Manildra:

The farm is approximately 4,500 acres in size, in the undulating slopes and plains of Manildra. The growers run a mixed farming enterprise. They are continually exploring ways to minimise synthetic fertiliser inputs, through the adoption of nitrogen fixing cover crops and companion crops, growing some organic wheat and utilising grazing animals in their crop rotations. The growers are eager to reduce their synthetic fertiliser reliance and subsequent GHG emissions footprint and are interested in the role that Loam's CarbonBuilder can play in improving their soil in the long term through nutrient cycling, increased fertility and water holding capacity.

