### Weelhamby Farm Project Perenjori, WA

A holistic carbon project in the WA Wheatbelt

### Context (catalysts/influences)

- Climate change
- 0.4% challenge
- IPCC near term GHG mitigation through C sequestration in soil
- CER Soil Carbon Methodology 2018 (revised 2021)
- Sustainability of conventional farming methods?



### Themes (growing ever louder)

- Carbon Neutral produce
- Net Zero 2030
- Soil Health and Regenerative/Ecological farming
- Natural Capital Accounting
- Biodiversity and environmental impacts
- Nutritional value of food





# Impact of previous practices







## Guiding Principles

- Build soil biodiversity to build SOC
- Multi-species pastures and crops with pulse grazing
- Active water management Keep water where it falls
- 100% ground cover, all the time
- Active plant growth ALARP
- Minimal tillage and chemicals



### Project benefits

- Improve soil health
- Increase water retention
- Increase soil biological activity
- Eliminate erosion ground cover and water flow management
- Increase biodiversity
- Increase productivity
- Diversify income streams



# Soil Project

- New LMS with focus on perennial pastures, pulse grazing, multi-species cropping, and strategic revegetation
- Increase SOC by >0.5% in the first
  30cm of soil over 3,200Ha <10 years</li>
- 0.5% SOC = ~ 50 ACCUs/Ha net of discounts, or 160,000 ACCUs
- 25-year project permanence
- Critical to maintain YOY profitability



#### Weelhamby North



#### Weelhamby South



## Project purpose

Show it is possible to **build soil** carbon in low rainfall areas, while operating a profitable mixedfarming operation.

Demonstrate that carbon credits can be "grown" without locking up productive farmland.



## **Reveg Project**

- Biodiverse plantings across
  233Ha, connecting adjacent
  nature reserves
- Shelter belts increase modelled carbon yield by 30-35%
- FullCAM modelled ~22,000 ACCUs, 60% in first 10 yrs
- Erosion prevention, stock shelter
- 25 year crediting period, 100year project permanence



### Reveg Project Economics

- \$900/Ha full service plan/planting
- Additional fencing, firebreaks, checks, audits
- FullCAM Yield Curve:
  - Years 1-3 = 10% of credits
  - Years 4-6 = 20%+ of credits
  - Years 7-10 = 30% of credits
- ~ \$660k in credits in first 10 yrs; covers tree establishment cost, fencing





So far in pilot stage:

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- 1.2 Million Hectares mapped for CO2 yield.
- 37,000 Hectares assessed for project viability.

#### **Carbon Scout**

Automates feasibility assessment. Acts as a learning tool. ACCU Reforestation, Soil Carbon and Plantation Forestry Methods. Launching Q2 2023

The goal is to rapidly increase the number of hectares being assessed for carbon projects across Australia.

- CO2 yield heatmaps (for FullCAM methods).
- Generates low-med-high profitability scenarios from simple questionnaire.
- Transparent: breaks down lifecycle costs, cashflow timing and explains risks.
- Step-by-step walkthrough / facilitated learning experience (tutorials, FAQ's, key terms etc.).
- Drastically reduces time and expertise needed to conduct feasibility assessments.
- Unbiased: Gives farmers pathway to compare all carbon service provider options (like "mortgage choice", but for carbon farming).
- Non-exclusive: Farmers not locked into an exclusivity period (common industry practice).
- *Existing Government tools like Looc-C, Agsteward etc do not provide in depth profitability assessment.*



## The Basics

- Be prepared to make the system changes, or don't start
- Masterplan: Soil v reveg project areas; LMS implementation; Timeline; Funding
- Get help with feasibility study, CER registration and admin, mapping
- Baseline everything possible
- Don't commit your credits too early



### **Practical Issues**

- Timing approvals, planning, mapping, infrastructure, baselining, implementing new LMS
- Choosing advisors
- Which credits? ACCUs/other?
- Contractor availability
- Finance options



### **Delivery Partners**



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