



2023

loam

Second Crop™

by loam

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There are a number of eligibility criteria which must be satisfied before Loam Carbon will proceed with a Loam Carbon Project with a grower. One of the eligibility criteria that must be met before Loam Carbon enters into a Carbon Project Contract with You is to confirm that You are a wholesale client as defined in the Corporations Act. Only wholesale clients as defined under the Corporations Act are eligible to participate in a Loam Carbon Project with Loam Carbon.

Neither Loam Carbon nor its related bodies corporate, and/or their respective directors, officers, employees or agents acts as the adviser of or owes any fiduciary or other duties to You in connection with a Carbon Project Contract, except as expressly provided for in the Carbon Project Contract if entered into between Loam Carbon and You.

Accordingly, if You are contemplating entering into a Carbon Project Contract, then You should conduct Your own independent investigation and due diligence enquiries into the terms of the proposed Carbon Project Contract and seek such independent advice as you deem appropriate.

About Loam

Building stable soil carbon

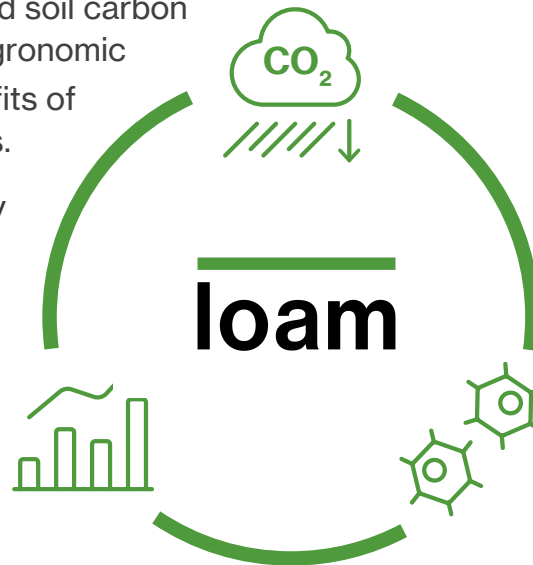
Loam is making it easier for farmers to capture carbon from the atmosphere and store it stably in their agricultural soils. Increasing the productivity and resilience of their farming systems, while playing a critical role to mitigate climate impacts.

Loam combines ground breaking microbial technology (CarbonBuilder) and soil carbon projects (SecondCrop), with agronomic support - maximising the benefits of building soil carbon for farmers.

Loam is an Australian company founded by farmers, for farmers.

High quality carbon removals

Loam's CarbonBuilder technology builds stable soil carbon in cropping soils, creating high quality carbon units - along with delivering co-benefits back to the farm.



Loam's farmer-focused carbon project options are designed to integrate into farming systems, provide agronomic support, and remove unnecessary risk from the farm business. Our SecondCrop soil carbon project options include no setup costs and no payback clauses.

CarbonBuilder™

World first microbial technologies that produce reliable and statistically significant increase of stable soil carbon in cropping systems.

CarbonBuilder Canola and CarbonBuilder Barley are currently available to Australian growers participating in our SecondCrop program.



**Built for
farmers,
backed by
science**

Loam's global team of scientists, researchers, and agronomists are relentlessly innovating to solve one single problem.

Building stable soil carbon in cropping systems.

No one said its easy to build significant soil carbon and store it stably in cropping soils - Loam has over 50 scientists, researchers, and agronomists working on it and reliable carbon building tools are now available for farmers to deploy. A rigorous product development process gives farmers confidence that our CarbonBuilder products can support the build of stable soil carbon in their systems.

We now have:

- Over 50 scientists, researchers, and agronomists, including 25 PhDs
- One of Australia's largest accredited soil analysis labs, with carbon fractionation capability
- Three global labs - in Australia & US - working around the clock
- Fungi libraries housing thousands of endophytes ready to be screened for potential into the research and deployment pipeline
- Field trial teams ensuring the science translates to full-noise cropping systems.



1

Technology to build soil carbon

Loam's CarbonBuilder seed inoculum offers growers a real opportunity to build significant, stable soil carbon in their cropping soils. Combined with Loam's agronomic support, Loam works with growers and their agronomists to maximise your farms carbon building potential.

2

Farmer-first carbon project options

Loam has endeavoured to deliver the most "farmer-friendly" carbon project options in Australia - SecondCrop. Partnering with farmers to take on the cost of delivering a carbon project, while ensuring the risk is shared between Loam and the landholder.

3

Support with "net-zero" and carbon markets

Using CarbonBuilder to build stable soil carbon, Loam supports farmers to produce premium carbon units - backed by science. Not only does CarbonBuilder support additional soil carbon build, but due to the stability of the carbon built, the carbon units produced through SecondCrop will be a premium commodity in the carbon market. Loam's carbon market team can support growers to obtain above-market prices for their carbon units.

SecondCrop combines
ground-breaking microbial
technology with farmer
focused project options



Adding carbon to your balance sheet



Delivering more value per hectare

A 'second crop' providing additional revenue at no opportunity cost of crop production, generating higher returns for every hectare.



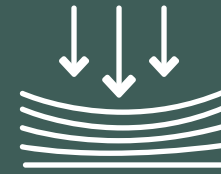
Income diversification

Carbon sequestration is providing an additional income stream for growers, complementing their current farming operation. It is a commodity unlike any other, in which it is produced and sold yet never leaves the farm gate, building a 'soil carbon silo' asset.



Building your carbon assets

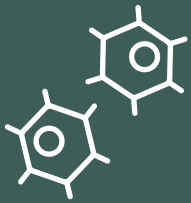
Requiring little maintenance and management, stored safely below ground - making a start on building and measuring soil carbon is the first step to building a new agricultural asset.



Increasing enterprise resilience

Soil carbon is a key indicator for soil productivity. Increasing soil carbon levels within a carbon project can also provide a buffer against late stage crop failure, by extracting potential economic benefit throughout the cropping growth phase.

What sets us apart



Access to new technologies

Growers participating in SecondCrop carbon projects have access to our ground-breaking microbial technology. Loam's CarbonBuilder products have achieved build rates of 3 - 6t CO₂e per hectare, per year, in replicated trials and pilots.



Not one size fits all

SecondCrop offers different carbon project options to align with broader farm management strategies, available support and integrated technologies. This allows farm businesses to manage their investment, risk, and resourcing.



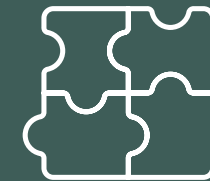
A true partnership

We are in this across the agricultural sector. Loam was built by farmers, for farmers - as a result our carbon projects are designed to deliver maximum benefits back to growers: through integration of new technologies, rethinking models, and providing the support of carbon experts.



Above market price

When landholders work with Loam they produce high-quality offsets which large-scale offtakers are willing to pay above market price. This program secures grower access to these prices for carbon units.



Integrates with farming systems

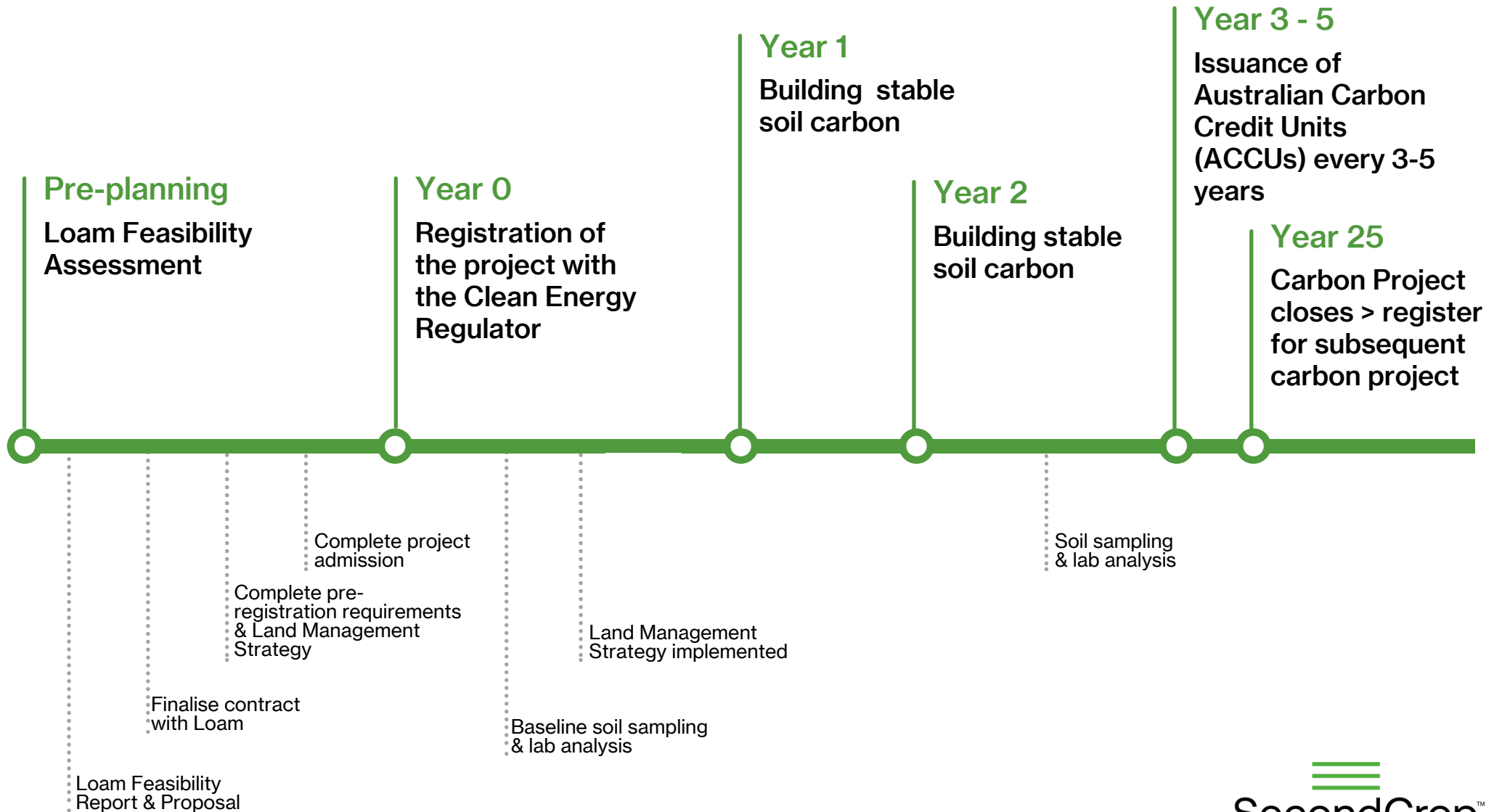
Loam's technology enables growers to participate in carbon projects without comprising their primary farming operations. The use of Loam's inoculum provides growers with a pathway that requires very little practice change to start building meaningful amounts of soil carbon in cropping systems.

The options



	Pro	Premium
Registration and project setup including baselining	Included	Included
Ongoing soil sampling and analysis (as per carbon project protocol)	Farmer to organise and pay for	Included
Auditing of carbon project	Farmer to organise and pay for	Included
Loam's CarbonBuilder seed inoculum	50% discount	50% discount
Carbon agronomy support	Access to Loam's carbon agronomy team, including supporting your own agronomist	
Agreement terms	Terminate without penalty up until first credits issuance (approximately years 3 - 5)	
Grower share of credits generated	82.5% grower / 17.5% Loam	70% grower/ 30% Loam
Trading support	Carbon units can be inset, banked, or traded - which Loam can support you with	

Timeline



Steps



Getting some basic information

We will need some initial information from you about your farm, rotations, and current land management practices. This let's us know if a carbon project is right for your operation and if SecondCrop is the right carbon project option for you.

You can complete the Grower Interest Survey [here](#).



Let's chat

Understanding your farming system is important when designing a high performing carbon project.

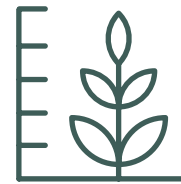
We also understand that your on-farm and off-farm advisors may also want to learn more about SecondCrop and how a farm business can get the most from the opportunity.



Contracting & Project Registration

If you decide that one of the SecondCrop project options look like the right decision for your farm, our team will:

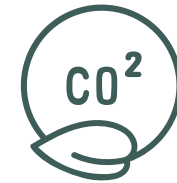
- draft a contract for review
- map your farm
- develop a Land Management Strategy
- assist you with collecting the information to register your carbon project.



Baselining & Delivery

Loam's Carbon Project Delivery team will then commence soil baseline measurements and support you to treat your next crop with Loam's CarbonBuilder seed inoculum.

Loam's Carbon Agronomists and Project Delivery team are here to support you through each year of your project.



Crediting

Loam's CarbonBuilder microbial technology builds stable soil carbon in agricultural soils, for the long-term. SecondCrop carbon projects deliver high-quality carbon removals and produce premium carbon units for farmers to trade on the global carbon market.

Crediting typically takes place every 3-5 years.



Components of a soil carbon project

Project Area Mapping



1 Understand carbon estimation areas

Carbon estimation areas (CEAs) are where you will carry out the project management activities and carbon will be stored, for which you may be issued ACCUs

2 Understand emission accounting areas

Emissions accounting areas (EAAs) are land within the project area that is not part of a CEA but is used for agricultural production

3 Understand exclusion area(s)

Exclusion areas are those parts of your project area that will not store carbon and where project activities will not be conducted

4 Review project area polygons

Discuss and draw out the CEA, EAA and exclusion area polygons with a Loam carbon project officer

Project Registration Data Collection

Area Information

Data of each address within the project area to be provided

- NRM organisation, plan, publication
- Lot number
- Plan type and number
- Volume and folio
- Local government area
- Project area mapping boundaries

Land Management Strategy

- Refer to Section 6 below

Demonstration of Legal Right

Depending if land is freehold, crown land, and/or includes Native Title land

- Signed grower agreement*
- Certified copy of land title
- Certified copy of lease agreement
- Agreement with Native Title body

**required for all land ownership types*

Eligible Interest Holder Consent Form

Interest holders include any of the following:

- Entity with registered legal estate or interest in land
- Entity with registered mortgage or charge over land
- Registered Native Title Body corporate

About the Land Management Strategy

A land management strategy (LMS) is a document which takes a holistic approach to considering the soil carbon sequestration potential of a project. The intention of the LMS is to understand what activities may influence soil carbon and the amount of carbon dioxide that can be stored in the soil over time.

Land management strategies are required to be submitted when projects register and/or when new areas are added to a project.

A LMS must identify at least one eligible management activity that will be undertaken or maintained by a project to build soil carbon throughout the permanence period of the project (either 25 or 100 years).

Components of a Land Management Strategy



New management activity

Clearly state the new eligible LM activity that will be carried out or maintained over the project period that is different from the 5 year baseline period



Project and CEA areas

Project and CEA location information including address, lot or deposited plan number, geographic coordinates and size



Rationale and mode of new land management activities

Information on Loam's CarbonBuilder, including how it increases stable stores of SOC in cropping soils and application method as a seed coating



Risks

Summarise factors (e.g. topography or soil chemical constraints) that pose risks to building SOC across project area and how they would be addressed, if any



Restricted and excluded activities

Declaration that the grower will not conduct excluded activities, such as not de-stocking land under pasture and conducting activities on hypersulfidic material



Record keeping of project period emissions

Data points that will be monitored and reported annually throughout the project period, including crop inputs, livestock numbers, burnoff events and harvest information

Components of Baseline Management Data

Baseline land management data is information on agricultural activities over a 5 year historic period. It is needed in order to estimate baseline project GHG emissions to calculate changes in SOC stock over the project period. This then determines the carbon credits earned during each crediting period.



Livestock

- Type
- No. of stocks by season
- Age and gender



Non-synthetic fertiliser

- Amount applied (tonnes)
- Types including organic carbon %



Synthetic fertiliser

- Amount applied (tonnes)
- Types including organic carbon %



Lime or gypsum application

- Amount applied (tonnes)
Type/brand including calcium content %



Irrigation practices

- Diesel fuel used (liters)



Residues and tillage behaviour

- Till depth
- Crop type
- Residue length
Residue burning

Eligible Interest Holder Overview

ERF projects require consent of persons or organisations holding an eligible interest in the land on which your project will be run. These interest holders must provide their consent to the project by signing the "Eligible Interest Holder Consent Form." Interest holders can include:

Entity with registered legal estate or interest, such as:

- Registered native title bodies corporate
- Crown land Minister

Entity with registered mortgage or charge, such as:

- Financial institutions that hold a mortgage over the land
- Trustee over the land

Information for Eligible Interest Holders

Sharing all the relevant carbon project details with eligible interest holders can take time. Loam will help you by preparing an information pack to share with these interest holders that will include the following:

Property Information

- Location of project
- Size of project
- Percentage of property that will be impacted by the project

Land Management Strategy Information

- ERF Soil Carbon methodology
- Practical changes required to implement the project

Obligations of the Project

- Project duration
- Execution of permanence obligation
- Management of potential risks

Loam - Grower Agreement Information

- Proposed ACCU generation potential
- ACCU contract type

Project Period Updates

Loam seeks to support your carbon farming journey throughout the project duration. This includes carrying out quarterly Loam check-ins and collating relevant project information through simple forms to support and streamline ACCU credit issuance, such as the following:

Property Information

- Location of project
- Size of project
- Percentage of property that will be impacted by the project

Eligible land management activity record-keeping

- CarbonBuilder application dates, rates, and areas

Emissions Data

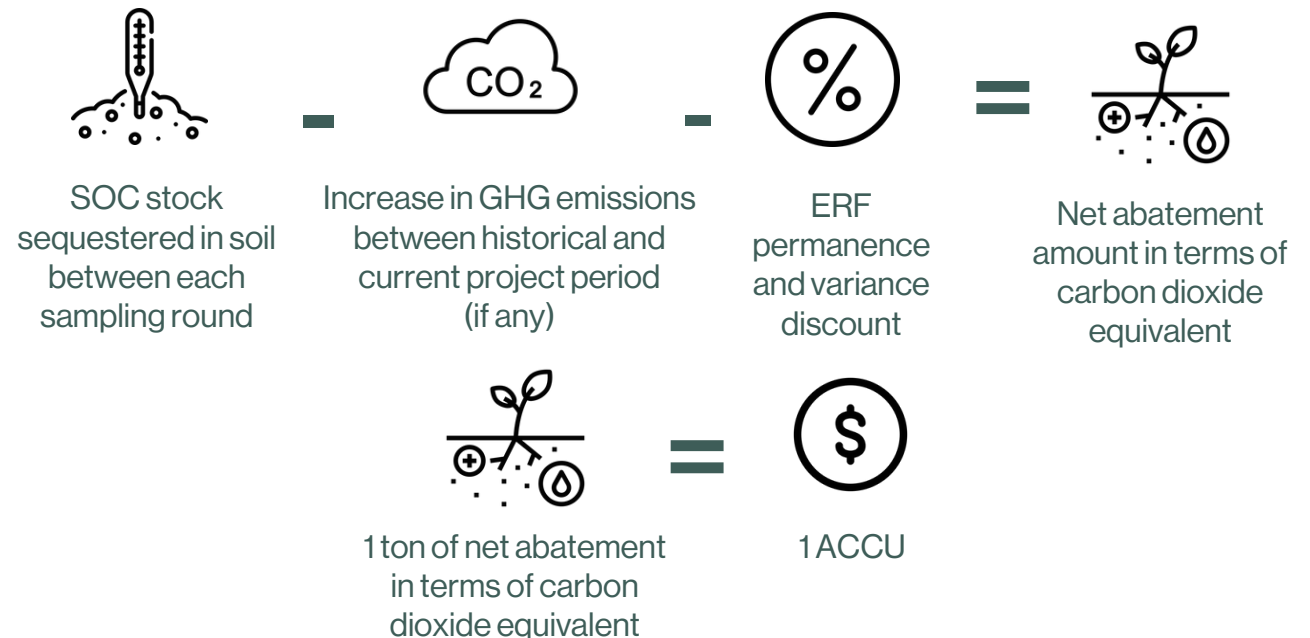
- Record of electricity bills
- Receipts for inputs purchased
- Burn off events - dates, hectares, type of burn
- Crop type(s), harvest dates and yields
- Tillage events
- Number of livestock

ACCU Issuance

Delivery of Units

To obtain credits, Loam will submit an offset report as required by the ERF. It will include information and calculations on the net abatement achieved, which will determine the number of ACCUs issued. The net abatement is calculated as follows:

Calculation of Units



Payment for Units

Once the offset report is processed and approved, the ACCUs will be issued into the Loam Australian National Registry of Emissions Units (ANREU) account. We will then issue the ACCUs directly into the landholders ANREU account. Prior to this, Loam will work with landholders to set up an ANREU account

ACCUs or carbon credit

An Australian Carbon Credit Unit (ACCU) is a financial unit awarded (by the Clean Energy Regulator -CER) when the equivalent of one tonne of carbon dioxide (C_{o2}-e) is removed from the atmosphere and stored in the land or prevented from being released into the atmosphere.

Additionality

Reductions by a genuine carbon offset must be additional to what would have been achieved had the project not been carried out; this refers to things that are required by federal, state, or local laws.

ANREU

Australian National Registry of Emissions Units. Regulated by the CER this is where your carbon credit account is held and successful credits are issued, held and traded. Think of this as your share account

Baseline soil sampling

Soil sampling done by manual core testing equipment and lab testing to set a baseline in the soil carbon levels of a farm at the start of a carbon project. The baseline is what future improvements will be measured against.

Clean Energy Regulator (CER)

The CER is an independent statutory authority which sets the strategic direction for the agency's administration of its regulatory schemes. The CER registers carbon projects and issues carbon credits.

Carbon dioxide equivalent (C_{o2}-e)

Carbon dioxide equivalent, the standard unit in carbon accounting. The yardstick measurement of carbon dioxide with a global warming potential of 1. Other gases like methane have a e of 28 times that of carbon dioxide equivalents.

Carbon versus Carbon dioxide

Plants and soil store carbon but carbon dioxide in the atmosphere contributes to climate change.

Glossary

Carbon sink

If the amount of carbon sequestered in the soil exceeds the amount emitted, the store of carbon is increasing and known as a carbon sink.

Offset report

All Australian Carbon Credit Unit (ACCU) Scheme (formerly known as the Emissions Reduction Fund) participants must report on their projects at regular intervals. Offset reports will include information and calculations on abatement achieved. Each method contains specific and detailed instructions that should be used to calculate abatement.

Project proponent

A project proponent is the person that is responsible for carrying out a project and has the legal right to do so.

Sequestration

The process of removing carbon dioxide from the atmosphere and stored in the soil

Stratification

A process that classifies the area of a carbon farming project into different categories.

Net zero

The target of negating the amount of greenhouse gases produced by human activity. Net zero is achieved by reducing emissions and implementing methods of drawing carbon dioxide from the atmosphere and storing in the soil.

Natural Resource Management organisation

Australia has 56 regional natural resource management (NRM) organisations. They are a mix of government agencies and non-government organisations (NGOs) that receive and act on national priorities for natural resource management delivered on the ground.

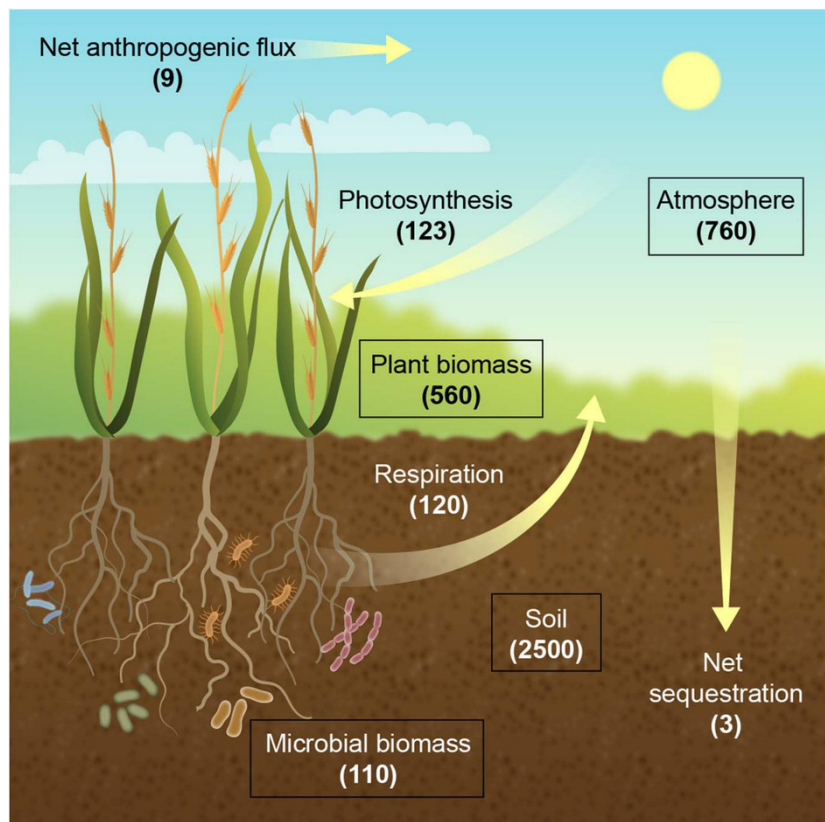
The logo consists of five horizontal green bars of varying lengths, stacked vertically, resembling a stylized 'C' or a set of steps.

Carbon Builder



loam

Creating soil carbon



Photosynthesis - Respiration = Net sequestration.

Two ways to increase soil carbon:

1. Increase photosynthesis
2. Reduce respiration

However, more biomass = more respiration.

So, our primary aim is to reduce respiration.
ie, to reduce oxidation and hydrolysis of soil carbon.

Figure 1. The terrestrial carbon (C) cycle. Carbon stocks (boxes) are shown as gigatons (GT), and fluxes (arrows) are shown in GT per year. Respiration refers to accumulated plant and microbial respiration. Jansson, C., et al. (2021). Crops for carbon farming. *Frontiers in Plant Science*, 12, 636709.

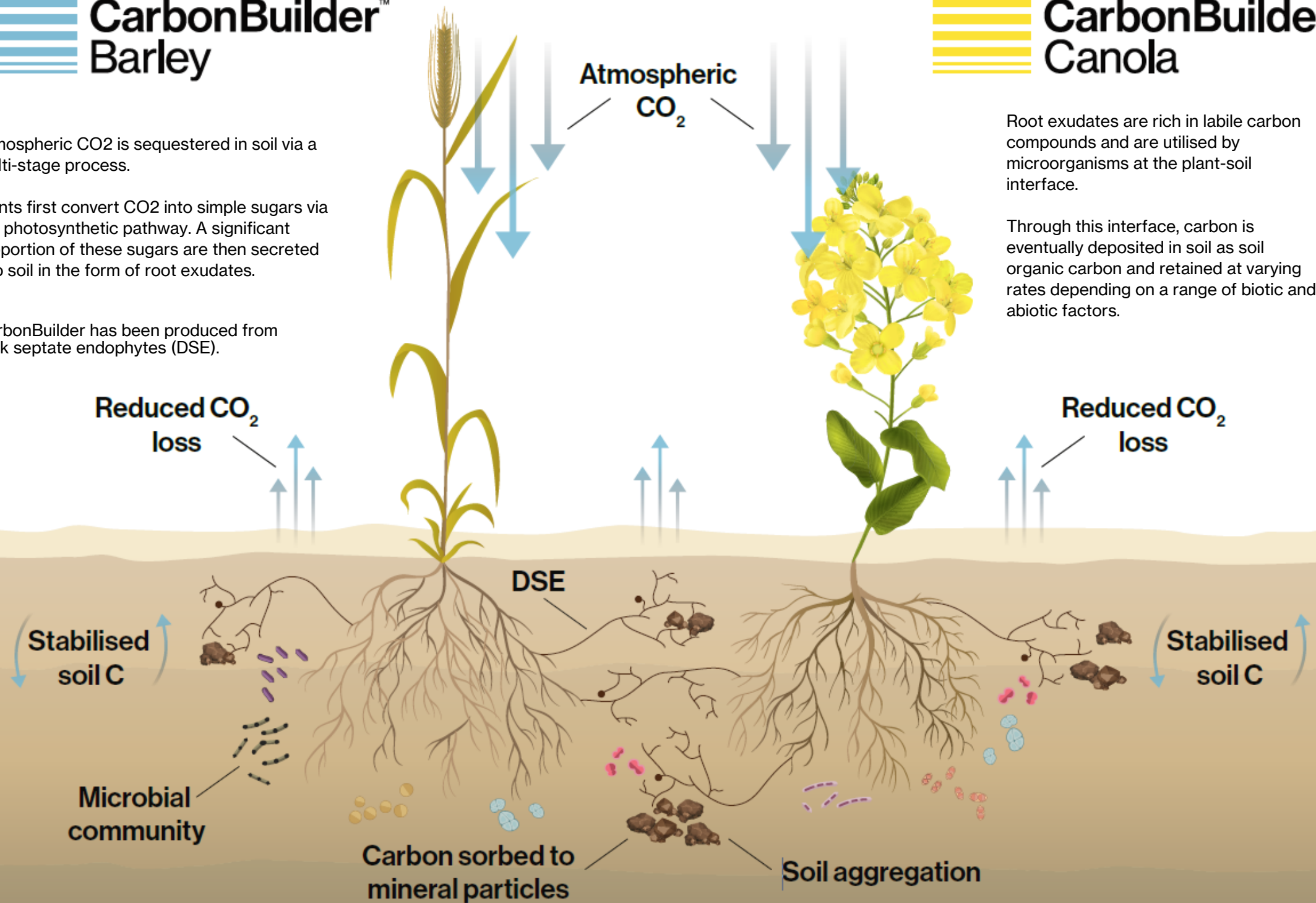
Atmospheric CO₂ is sequestered in soil via a multi-stage process.

Plants first convert CO₂ into simple sugars via the photosynthetic pathway. A significant proportion of these sugars are then secreted into soil in the form of root exudates.

CarbonBuilder has been produced from dark septate endophytes (DSE).

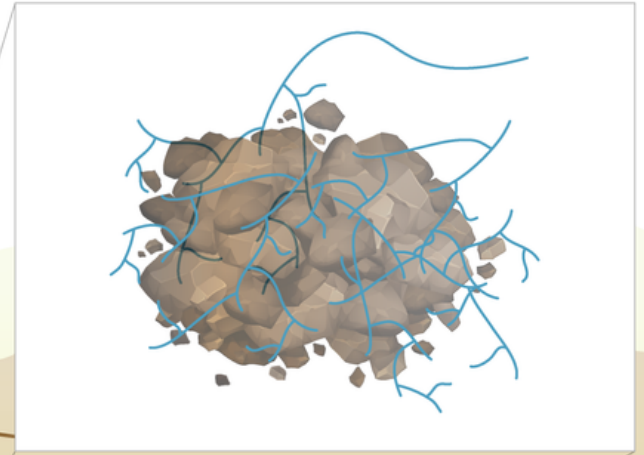
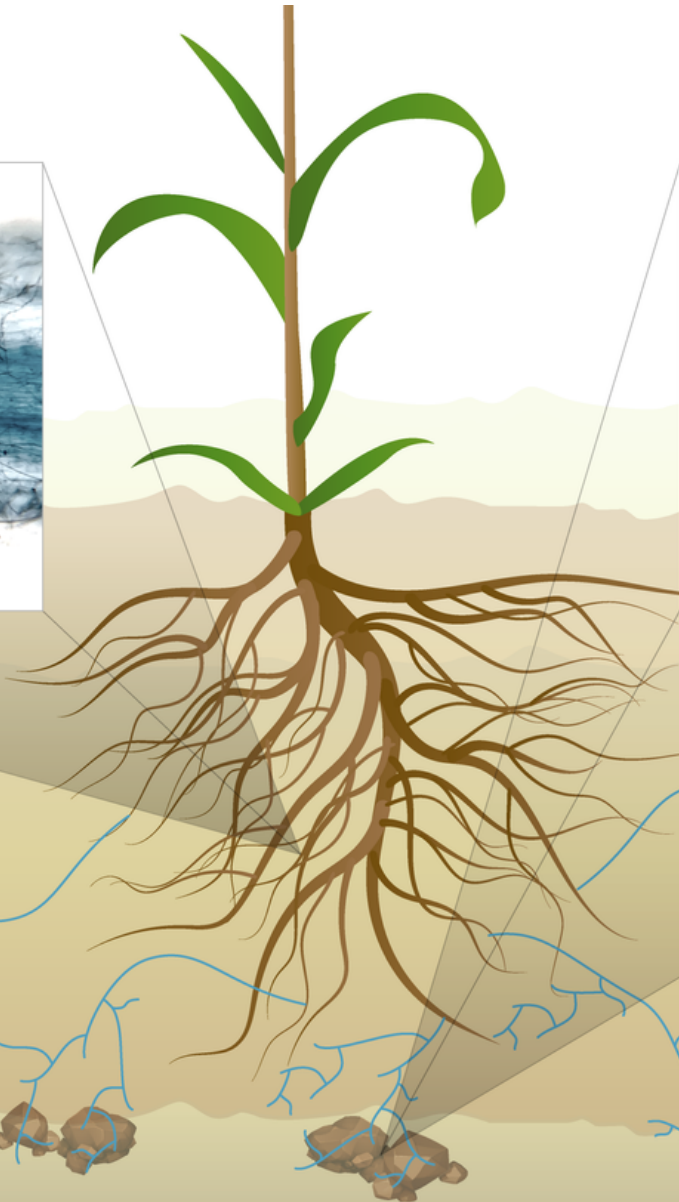
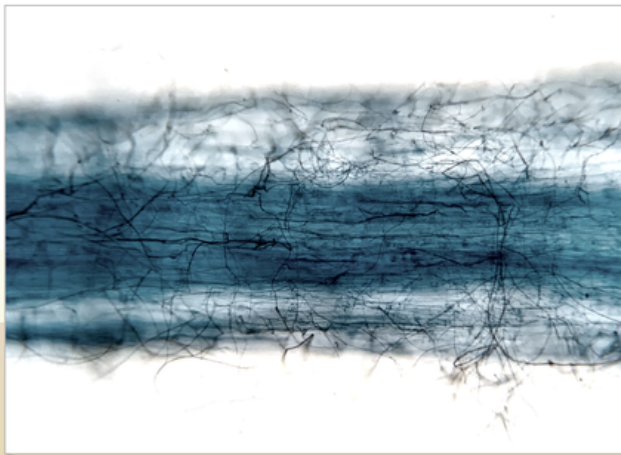
Root exudates are rich in labile carbon compounds and are utilised by microorganisms at the plant-soil interface.

Through this interface, carbon is eventually deposited in soil as soil organic carbon and retained at varying rates depending on a range of biotic and abiotic factors.





Carbon Builder

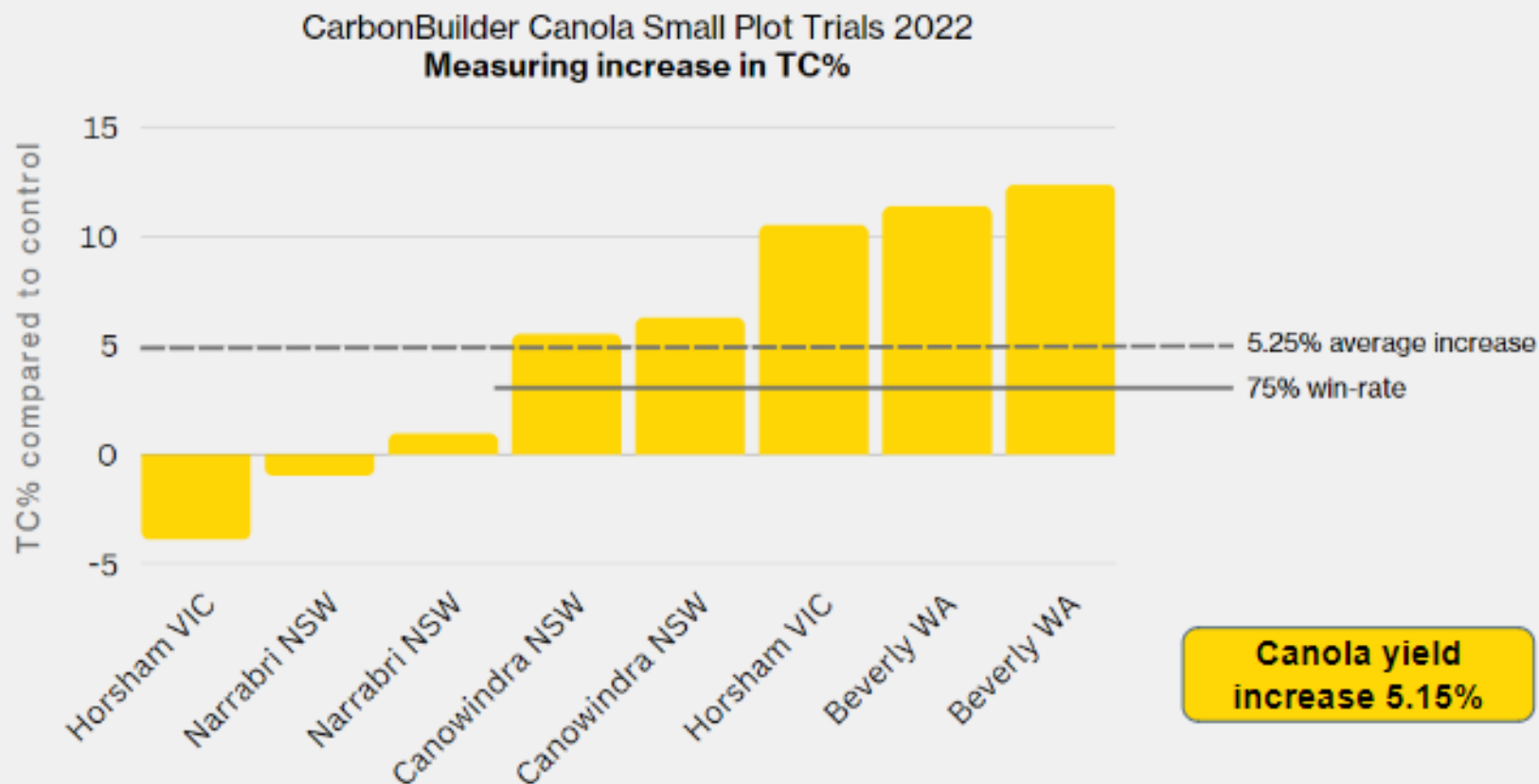


Loam fungal inoculum is treated on seed and forms symbiotic associations with the roots of host crops.

The fungi enhance soil aggregation and can contribute to the stability of soil carbon.



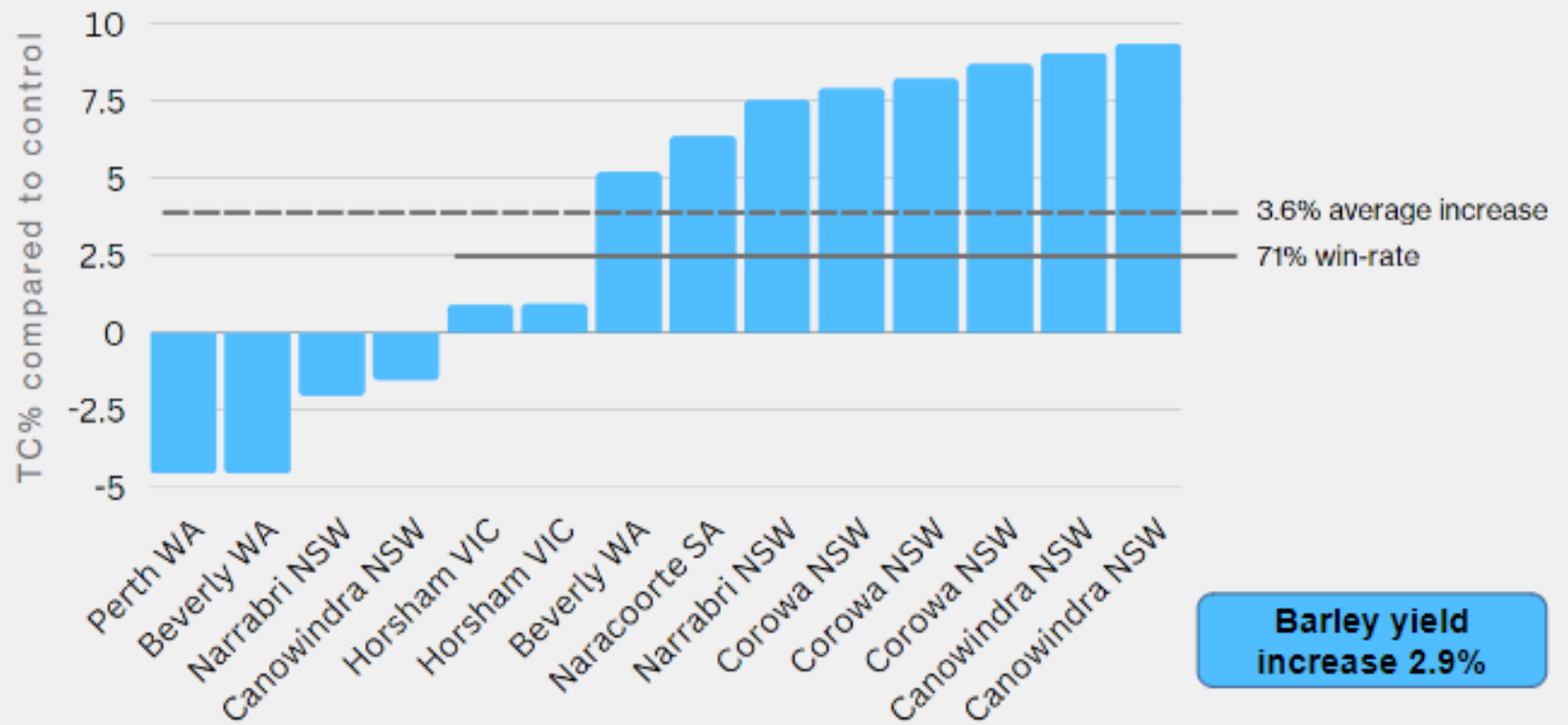
CarbonBuilder Canola





CarbonBuilder Barley

CarbonBuilder Barley Small Plot Trials 2021 & 2022
Measuring Increase in TC %





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