Find a carbon farming method that's right for your business

Carbon farming opportunities differ from region to region. Deciding on what method to use will depend on where you are and your business.

Land Sector Methods

Carbon farming methods fall into three broad groups:

AGRICULTURE & VEGETATION & FIRE

There are 16 different carbon farming methods to chose from. This document outlines what methods are likely to work for different business operations and regions, and can be used to guide your thinking on project design in discussion with professional advisers.











MA AGRICULTURE

Agriculture methods involve avoiding methane emissions from livestock or storing carbon in soils.

Carbon farming method	Potential opportunity and eligibility		Activities
BEEF HERD METHOD			
Crediting is based on emissions reductions achieved through efficiency gains, where emissions are reduced while beef production is maintained or increased.	 Suitable for: Grazier with a large herd Eligibility requirements: Herd feed is principally grazin Continuity of management ov Animals must be able to be id Positive liveweight gain for th preceding the project At least one practice that can to reduce emissions is undert the crediting period 	er time lentified ree years of the seven be reasonably expected	 Activities: Establishing higher quality pasture Providing a feed supplement all year round Improving weaning percentage by culling unproductive cows Installing fences to control herd movements and improve joining practices Expanding watering points to allow cattle to graze more
	Opportunities Ch	Challenges	widely and make better use
	Opportunity for graziers in western and northern regions	 Requires large herd size High monitoring requirements 	of available pasture





rbon farming method	Potential opportunity and eligibility		Activities	
IL CARBON - SEQUESTE	RING CARBON IN SOIL IN AGR	RICULTURAL SYSTEMS (MEAS	URED METHOD)	
nerating credits by	Suitable for:	the second states and	Activities:	
dertaking activities that rease the amount of bon in agricultural soil.	 A grazier Broadacre farmer Small crops and horticulture 		 Increasing the amount of biomass incorporated into the soil 	
year crediting period.	 Land previously farmed (but not forested) Location factors indicating potential for increasing soil carbon: High clay content, soil fertility, and porosity 		 Reducing the amount of organic matter released from soils eg by reducing soil disturbance 	
	 High annual average rainfall (Consistent rainfall with average 	th average conditions	• Applying lime to remediate acid soils	
	 Moderate temperatures Management history includes low inputs of biomass or large removals of biomass Tillage history with high amount of soil disturbance Factors that reduce likelihood of a successful project: Low clay content, soil fertility, and porosity Low rainfall (600 mm) High risk of flood, drought, frost or extremes of heat/cold Opportunities Challenges Increased opportunities for agricultural sector Costs of soil carbon measurement Uncertainty Long baseline period Limited areas of opportunity 		 Undertaking new irrigation Converting from intensive tillage practice to reduced or no tillage practices 	
			 Restrictions: Destocking Addition of coal or coal-based products 	

ESTIMATING SOIL CARBON USING DEFAULT VALUES (MODELLED METHOD)

Suitable for:

- Operating farms
- Farmers able to implement one or more of the project management activities outlined under 'Likely activities'
- Farmers with sufficient resources to prepare a strategy for each management activity

25 year crediting period.

Generating credits by

increasing the amount

of carbon added to soil or

decreasing the amount of

carbon biomass removed

from the soil.

Requirement:

• 25 or 100 year permanence period

Opportunities	Challenges
Potentially greater returns than other methods	 Potentially high cost Potentially long gap between project commencement and when credits can be issued

FERTILISER USE EFFICIENCY IN IRRIGATED COTTON

Suitable for:

Cotton farmers

Generating credits by reducing emissions due to improving efficiency of synthetic fertiliser use in irrigated cotton.

7 year crediting period.

Opportunities	Challenges
Economic co-benefits	Suitable only for cotton farmers

Projects must include at least one of three types of project management activities:

1. Sustainable intensification: New ways of productive land management are started with the aim of increasing soil carbon content

2. Stubble retention: Crop residue that was previously removed by baling or burning is retained in the field

3. Conversion to pasture: cropped land is changed to permanent pasture

Activities: • Changing the rate, timing or method of applying synthetic fertiliser

Carbon farming method	Potential opportunity and eligibility		Activities
REDUCING GREENHOUSE (GAS EMISSIONS IN MILKING	COWS THROUGH FEEDING	DIETARY ADDITIVES
Generating credits by reducing methane and nitrous oxide from milking cows by feeding them	Suitable for: • Dairy farmers		Activities: This project involves feeding eligible supplements to milking
a dietary supplement.	Opportunities	Challenges	cows. Eligible additives are:
7 year crediting period.	Relatively simple method	Only for dairy farmers	 Canola meal Cold-pressed canola meal Brewers grain Hominy meal Dried distillers grain
			The fat concentration in the additives must not exceed 70 grams per kilogram of dry matter intake in any season

REDUCING GREENHOUSE GAS EMISSIONS IN BEEF CATTLE THROUGH FEEDING NITRATE CONTAINING SUPPLEMENTS

Reducing methane emissions by replacing urea lick blocks with nitrate lick blocks for pasture-fed cattle.

Suitable for:

• Graziers

• Herd must have been fed urea at least once in the 5 years prior to application for registration

Cannot be used for feedlot operations.

Opportunities	Challenges	
Economic co-benefits	• Credit generation likely to be lower than other methods	
	Requires close management to avoid toxicity from overfeeding of nitrates and urea	

Activities:

- Changing lick block type
- Ensuring lick blocks meet the mineral and nitrogen composition outlined in the method

Specific monitoring requirements:

- Number of animals
- Average live weight
- Nitrate lick block consumption
- Consumption of non-protein nitrogen that is not nitrogen

7 year crediting period.



Vegetation projects store carbon by growing new forests or protecting existing vegetation.

Carbon farming method

Potential opportunity and eligibility

Activities

HUMAN-INDUCED REGENERATION OF A PERMANENT-EVEN-AGED NATIVE FOREST (THE HIR METHOD)

Generating credits by changing land management practices to facilitate native forest regeneration.

This is a widely use method in Queensland.

25 year crediting period.

Credits issued on submission of project reports.

Eligibility:

- Native forest growth and regrowth suppressed in the last 10 years
- No forest cover (20% crown cover of trees at least 2 metres in height) over the project area
- Project area has the potential to attain forest cover
- If project is on conservation land, weed or feral animal control is undertaken and management goes above and beyond what would occur under standard practice
- Cannot occur on land that was cleared unlawfully

Requirements:

- A permanence period (25 or 100 years)
- Needs to account for disturbances e.g. fire

Challenges
• Long term decision
• 2020 FullCAM update may limit opportunities
in western regions of Queensland while
increasing opportunities in eastern and coastal regions

Activities:

- Excluding livestock
- Promoting natural regrowth
- Managing weeds and feral animals
- Implementing a plan to permanently end mechanical or chemical destruction or suppression of regrowth

Restrictions:

- Cannot use direct seeding or tree planting
- Cannot harvest regrowth (except in limited circumstances e.g. hazard reduction)
- A permanence period of 25 years only on pastoral leasehold land





Carbon farming method

Potential opportunity and eligibility

AVOIDED CLEARING OF NATIVE REGROWTH

Generating credits by avoiding release of (loss of) emissions due to clearing.

25 year crediting period.

Credits issued on submission of project reports.

- **Eligibility:**
- Land has a history of at least two previous clearing events and was used for cropping or grazing afterwards
- Right to clear the land again without restriction
- Land has native forest cover (20% crown cover with trees at least 2 metres tall)
- Ability to provide evidence of intention to clear the land again

Requirements:

- 25 or 100 year permanence period
- Monitor for forest health and check for disturbances e.g. disease and fire
- Regular reporting (at least once every five years)

Opportunities	Challenges
 Compatible with Queensland's regulatory framework Low cost Up to 10% of fallen timber can be removed for personal use Some thinning permitted for the purposes of promoting biodiversity or enhancing carbon stock, provided felled biomass is not removed 	Applicants are required to provide evidence of two past clearing events and intention to clear land again

AVOIDED DEFORESTATION

Generating credits by avoiding release of (loss of) emissions through clearing native vegetation, where a government consent to do so has been issued prior to 2010.

Credits are issued annually in equal amounts over a 15 year crediting period.

Eligibility:

- Land manager with native forest with government consent to clear the land
- Consent to clear is issued before 1 July 2010 to clear forest for the purpose of converting land to crop or grassland in perpetuity
- Must provide evidence of clearing consent issued by a government authority
- The land has forest cover (minimum 20% crown cover of trees at least 2 metres tall)

Requirements:

 If carbon stocks are lost, e.g. through bushfire, land managers are to take reasonable actions to re-establish carbon stores. Crediting is suspended until carbon stocks have recovered

Opportunities

- 15 year crediting period
- Annualised crediting
- Low cost
- Up to 5% of wood can be removed from the project for personal use or fencing
- Some thinning permitted for the purposes of promoting biodiversity or enhancing carbon stock, provided felled biomass is not removed
- Very limited opportunities in Queensland

Challenges

 Applicants must provide evidence of consent to clear

Activities:

Activities

 Active management of the native forest i.e. managing for fire, weeds, and feral animals

Evidence of previous clearing:

- Must provide evidence from the calendar year when a clearing event occurred or at some point in a 3 year period (maximum)
- Other evidence can include: remote sensing imagery, clearing permit/s, farm management records, tax invoices, published
 vegetation mapping or derived vegetation cover data

Activities:

 Primary activity is to manage an existing forest to achieve a mix of native trees, shrubs and understorey species consistent with the local bioregion under the Interim Biogeographic Regionalisation for Australia (IBRA)

Restrictions:

No commercial harvesting

Activities Carbon farming method **Potential opportunity and eligibility REFORESTATION BY ENVIRONMENTAL OR MALLEE PLANTINGS (FULLCAM)** Generating credits through **Eligibility: Activities:** permanent plantings of • Mixed tree plantings involve tree of mallee species Mixed species tree native trees or mallees to native to the local area plantings establish forest cover. • Land clear of forest cover: Consistent management - for 7 years if lawfully cleared by current land manager OR **Restrictions:** 25 year crediting period. - for at least 5 years prior to project starting (forest cover Projects cannot be is 20% crown cover with trees at least 2 metres tall) Credits issued in line with undertaken on land that if land was cleared by previous management reporting schedule. was unlawfully cleared **Requirements / considerations:** • Cannot be a monoculture • Permanence period of 25 or 100 years · Cannot be undertaken on Mallee species only to be planted in areas with less than land with woody biomass 600 mm rainfall or where an invasive native • Plantings must have potential to reach forest cover scrub species needs to • Trees cannot be harvested except in limited circumstances be cleared **except** if the e.g. personal use, thinning for the purposes of enhancing woody biomass or where biodiversity or carbon stocks, or hazard reduction an invasive weed species or the clearing has been **Opportunities** Challenges authorised by law • Extensive opportunities • Can be high cost in Queensland particularly

25 years on pastoral leasehold land.

Generating credits by changing land management practices to regrow native forest on land where vegetation has been removed for grazing or cropping.

25 year crediting period.

Credits issued on submission of project reports.

Eligibility:

NATIVE FOREST FROM MANAGED REGROWTH

in regions

shelter belts

• Can be undertaken on land where a declared weed species has been cleared Can be used for establishing

- At least one comprehensive vegetation clearing for grazing or cropping purposes (evidence required)
- No forest cover in the 10 years before starting the project (forest cover means 20% crown cover of trees 2 metres or more tall)
- · Regrowth has potential to reach forest cover
- Regrowth is not the result of direct seeding or tree planting
- 25 year permanence period on pastoral leasehold land

Requirements / considerations:

- Permanence period of 25 or 100 years
- Regrowth can be cleared for hazard reduction purposes in specific circumstances
- Thinning can be undertaken but biomass must remain within the carbon estimation area
- Regulator may request evidence that grazing is not negatively affecting carbon stocks in the project area

- Challenges **Opportunities**
- · Grazing permitted on proj-2020 FullCAM update may ect site providing it does limit opportunities in western not prevent the vegetation regions of Queensland while reaching or maintaining increasing opportunities in forest cover eastern and coastal regions
- Up to 10% of fallen timber can be removed for personal use (personal use means not for sale or other commercial use of the timber)

Must involve:

• Promoting native forest regrowth by ceasing to clear vegetation

May involve:

- Excluding livestock
- Changing timing and extent of grazing on the project area
- Managing weeds and feral animals

Cannot involve:

Use of lime or fertiliser

• A permanence period of

Generating credits by

establishing trees as

permanent plantings or

rotational harvests on land

previously cleared of forest

and used for agricultural

25 year crediting period.

Credits issued on submission

There is potential for

this method across

of project reports.

Queensland.

purposes.

Carbon farming method Potential opp

d Potential opportunity and eligibility

MEASUREMENT BASED METHODS FOR NEW FARM FORESTRY PLANTATIONS

Eligibility:

- Trees planted as a permanent planting (no harvest) or a farm forestry plantation (commercial harvest)
- Land predominantly used for grazing or cropping for minimum 5 years prior to project starting
- Plantings have potential to reach forest cover (20 per cent crown cover of trees at least 2 metres tall)
- Project size capped at 100 hectares or 30 per cent of farm area, whichever is smaller, where annual rainfall is >400 mm
- Project size capped at 300 hectares or 30 per cent of farm area, whichever is smaller, where annual rainfall is <400 mm
- Can remove tree biomass for fire management, fencing materials, cultural practice, ecological purposes, and personal use
- Where land was lawfully cleared, it occurred:
 - If new land manager, 5 years previously
 - If current land manager, 7 years previously

Requirements:

• Permanence obligations of 25 or 100 years

Challenges
2020 FullCAM update may limit opportunities in western regions of Queensland while increasing opportunities in eastern and coastal regions

Activities

Activities:

- Mixed species planting (no harvest)
- Single species planting (commercial harvest)
- Develop and implement a management plan for weeds, harvesting, rotation length, planting

Restrictions:

- Opportunity constrained by rainfall
- Cannot be undertaken on land unlawfully cleared
- If established as a
- harvest project, it cannot be converted to a permanent planting in the future
- 25 year permanence period on pastoral leasehold land

PLANTATION FORESTRY

Generating credits by establishing a new plantation forest, increasing rotation length, or changing to a new method.

25 year crediting period.

Credits issued on submission of project reports.

Eligibility:

- Forest growers undertaking commercial plantation forestry
- Must be in a region identified in the Australian Government's National Plantation Inventory
- New plantations must be established on land where there has been no plantation for 7 years

Requirements / considerations:

- Permanence obligations apply
- Projects in locations with >600 mm annual rainfall need to meet additional conditions to manage impacts on water availability
- Need to notify the Commonwealth Minister for Agriculture if undertaking a new plantation or expanding an existing plantation

Opportunities	Challenges
May provide an additional revenue stream for forestry plantation operators	 More complex than other vegetation methods May have limited opportunities in Queensland, particularly on pastoral leasehold land
	 Projects in locations with >600 mm annual rainfall need to meet additional conditions to manage impacts on water availability
*	• May be refused by the Commonwealth Minister for Agriculture if assessed as having an undesirable impact on agricultural production in its proposed location

Activities:

- Establishing a new plantation forest on land that has had no forest for 7 years (maximum rotation <60 years)
- Convert a short-rotation plantation to a long-rotation plantation
- Maintain a pre-existing plantation forest that was established under another method

Restrictions:

Certain forestry plantations are excluded (African mahogany in the Northern Territory, Indian sandalwood in any region)

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Carbon farming method	Potential opportunity and eligibility		Activities
REFORESTATION AND AFFO	RESTATION		
Generating credits by planting forest trees in agricultural areas. 25 year crediting period. Credits issued on submission of project reports.	 Eligibility: A permanent planting on land that was grazed, cropped or left fallow for at least five years before undertaking a project Must be able to support the growth of a new forest Can harvest the trees for fire management, thinning for ecological purposes, cultural practices, or for personal use (fencing, craft) Requirements: Permanence period of 100 years 		Activities: • Tree planting Restrictions: • Landscape planting • Limits on use of fertiliser use and preparation burns
	Opportunities	Challenges	
	This method is one of the most simple vegetation methods	Pastoral leasehold land excluded	

S FIRE



Projects use cool, early dry season burns to avoid the release of highly potent greenhouse gas emissions from hot, intense late season bushfires.

Carbon farming method

Potential opportunity and eligibility

SAVANNA FIRE MANAGEMENT (EMISSIONS AVOIDANCE)

Crediting is based on emissions reductions delivered through early dry season cool burns to avoid release of highly potent greenhouse gases (methane and nitrous oxide) produced by intense, late season hot fires, compared to an averaged baseline.

7 year crediting period.

Eligibility:

- Project must be located in one or both of the two geographic or rainfall areas and contain vegetation fuel types identified as 'savanna'
- Project must undertake planned burning in each project area every calendar year (exceptions made for circumstances outside a landowner's control)

Requirements:

- Project area must not include land that is not in one of the approved rainfall zones
- Project area must include a listed vegetation fuel type
- Project area does not contain a relevant weed species (e.g. gamba grass)

Opportunities	Challenges
 There are opportunities for savanna burning projects across far northern Queensland 	May require access to heavy machinery e.g. helicopters
 No permanence period Opportunities for First 	8

Nations people

Activities

Activities:

• Undertaking appropriate fire management (cool burns and mosaic burns) that avoids emissions of methane and nitrous oxide that a generated by hot fires.

Restrictions:

- Limited to specific areas
- Burning can only be undertaken within specified timeframes





Carbon farming method Potential opportunity and eligibility

SAVANNA FIRE MANAGEMENT (SEQUESTRATION AND EMISSIONS AVOIDANCE)

Generating credits through **Eligibility:**

fire practices that limit high intensity fires that create greenhouse gases with high global warming potential.

This method accounts for carbon stored in dead biomass like logs.

• Project needs to be located in one or both of

- the two geographic or rainfall areas and contain vegetation fuel types identified as 'savanna'
- Project must undertake planned burning in each project area every calendar year (exceptions made for circumstances outside a landowner's control)
- Project does not result in increases in emissions from other sources such as livestock

Requirements:

- Project area must not include land that is not in one of the approved rainfall zones
- Project area must include a listed vegetation fuel type
- Project area does not contain a relevant weed species
- 25 or 100 year permanence

OpportunitiesChallenges• Opportunities for savanna
burning projects across
far northern Queensland• Access to equipment
e.g. helicopters• Opportunities for First
Nations peoples• Increased monitoring and
reporting requirements• Limited increase in credit
generation in some instances

Activities:

Activities

- Undertaking appropriate fire management activities (cool burns and mosaic burns) that avoid emissions of methane and nitrous oxide that a generated by hot fires
- Fire undertaken during the early dry season

Restrictions:

- Limited to specific areas
- Burning can only be undertaken within specified timeframes