

Carbon Market Opportunities For Range & Pasture

Wool Policy Forum
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Agoro Carbon Alliance



Introducing Agoro Carbon Alliance

- **Agoro Carbon** is a U.S. based company backed by **Yara International** - providing stability and resources, while providing input-agnostic practices
- Agoro Carbon works with ranchers in long-term partnerships to develop carbon capture programs that create healthier, more productive soils for future generations
- The generation of carbon credits creates a new revenue stream
- **Since June 2021, Agoro Carbon has paid over \$15 million to American farmers and ranchers**



Agoro Carbon & Yara

- **Yara International is a world leader in crop nutrition and environmental services**
 - Based in Norway
 - The world's leader in nitrogen production with 118 years of experience
- **Focused on carbon, we don't promote or sell Yara's products**
- **Agoro Carbon offers agronomic assistance to growers and facilitates the trade of carbon credits between growers and carbon buyers**

Our only role is to help facilitate the transition to conservation practices that will generate carbon assets



How It Works: Producers

- 1. Enroll**
Ranchers sign up to the Agoro Carbon Program to get one-on-one support in creating a carbon cropping plan
- 2. Practice changes**
Ranches implement practices to capture carbon, while reducing emissions
- 3. Verify Reductions**
Agoro Carbon's independent partners verify carbon reduction
- 4. Sell Credits**
Agoro Carbon sells carbon credits to our global partners looking for high-quality carbon solutions



A Carbon Credit Is

- **A tradable asset/environmental attribute**
- **Traded in units of metric ton of CO₂** (2,205 lbs.)
 - or an equivalent amount of another greenhouse gas (e.g. N₂O, CH₄)
- **High quality carbon credits developed by Agoro Carbon using:**
 - Third party randomized soil sampling
 - Analysis by independent labs
 - Audits by accredited independent verification services
 - Verra Registry to issue credits



Carbon Markets: Two Types

Domestic/International Compliance (Offset) Markets

- Regulated (cap & trade) emissions and/or offsetting

Voluntary Markets

- Created by private enterprise
- Companies buying carbon offsets or insets to voluntarily minimize their carbon footprint
- Major buyers = large corporations -> CPG companies, tech companies, banking, airlines etc.

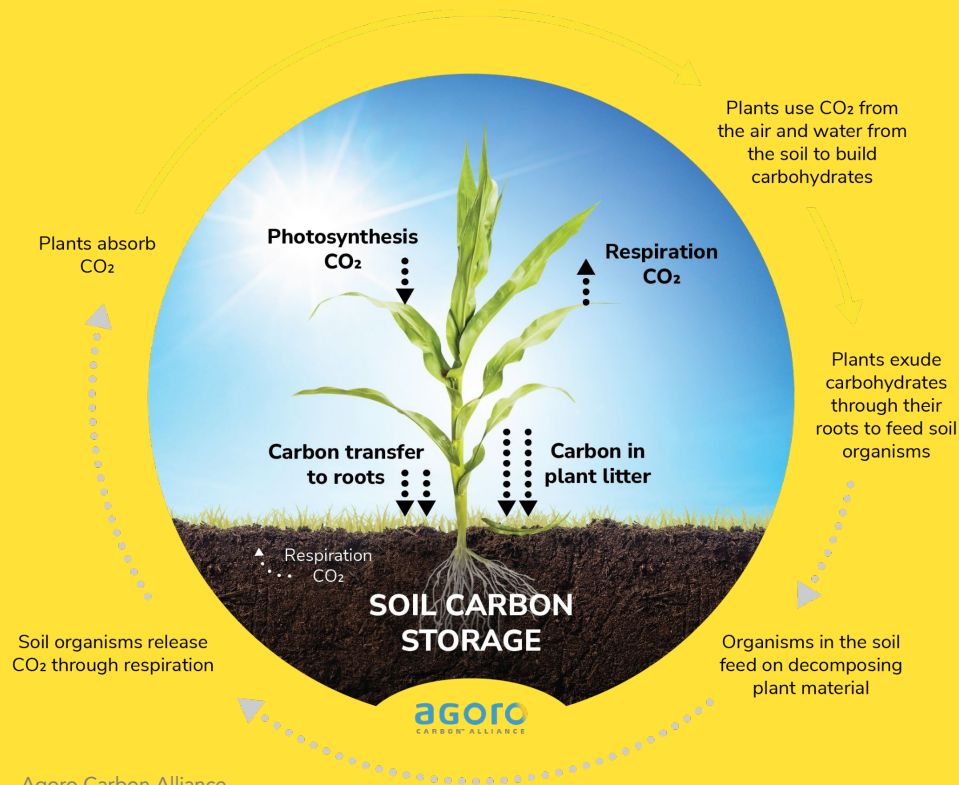


Agoro Carbon's work is focused on the voluntary market

A photograph of three sheep standing in a grassy field. In the center is a black-headed sheep with thick brown wool. To its left is a white sheep with a small orange tag on its ear. To its right is another white sheep with a green tag on its ear. A large, dark green tree stands behind them. The background shows a rolling green landscape under a clear sky.

Understanding the Carbon Cycle

Carbon Capture Practices Improve Soil Health & Build More Resilient Agriculture Systems



1. **Cover the Soil** (protects from water & wind erosion)
2. **Less Tillage/Soil Disturbance** (reduces soil compaction & carbon loss)
3. **Plant Diversity** (increase soil microbial diversity)
4. **Continual Live Plant Roots** (adds more carbon to soil)
5. **Integrate Livestock** (recycles carbon)

Carbon Projects Require a Change in Practice

- **Need to prove additionality to qualify for a carbon program**
- **Practice must have approved methodology from carbon registry**
- **Evaluate what a ranch has done historically**
 - Stocking rates
 - Grazing practices
 - Inter-seeding
 - Fertilization
- **Determine what practices can be adopted or improved upon**

Agoro Carbon Alliance

Range & Pasture Practices



Carbon Practices for Ranchers



Grazing Management

Altering stocking rates, pasture size and grazing days can improve yield and forage intake, while improving soil carbon



Biodiversity/Seeding

Adding species to your ranch can improve yield, carbon storage and animal health

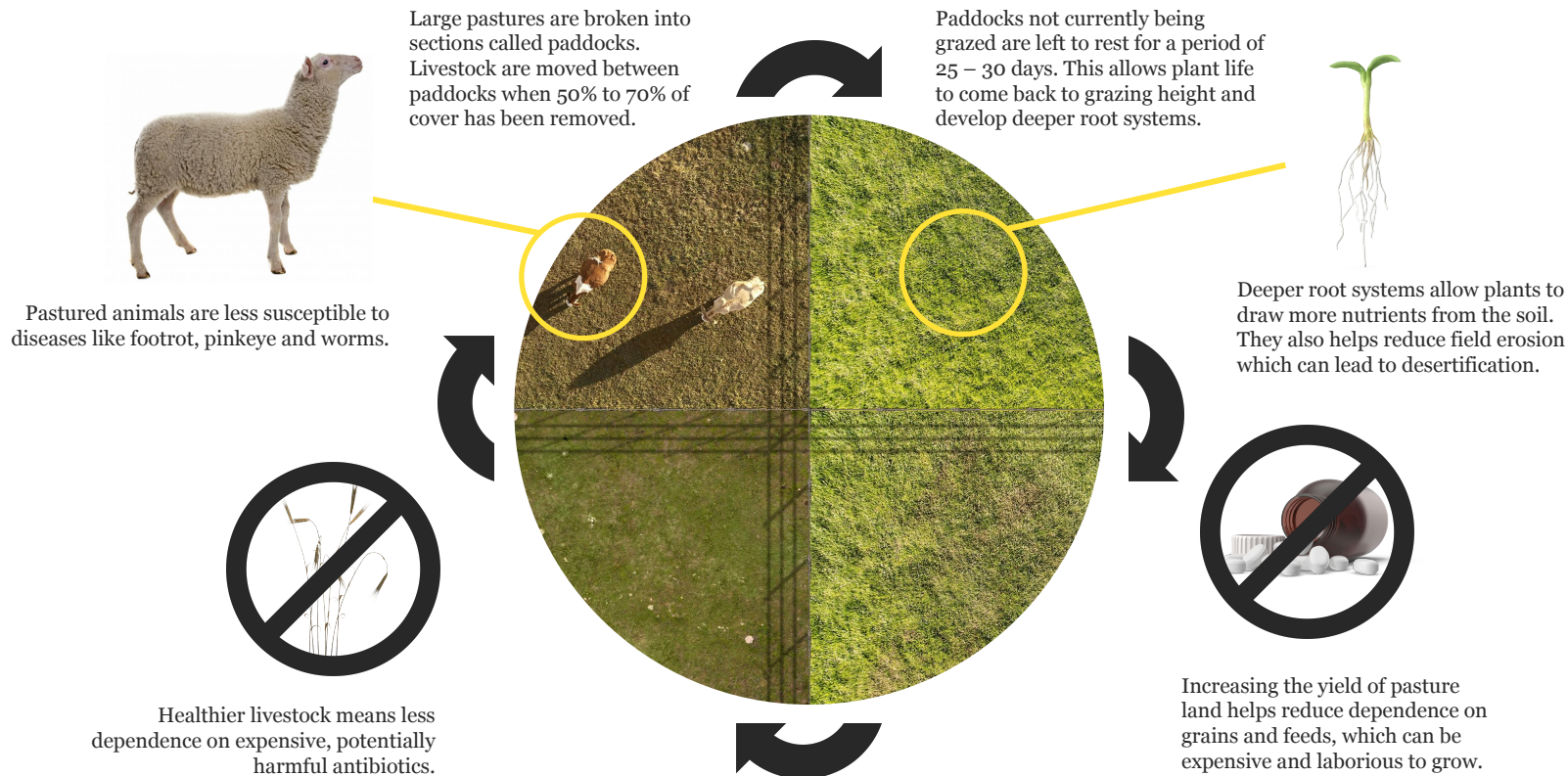


Fertilization

Judicious use of N-containing fertilizer helps optimize carbon storage, boost yield potential and improve forage












What Is Rotational Grazing?







Rotational Grazing

TO THE LAND

INCREASED:






-  Forage biomass
-  Soil organic matter
-  Soil aggregation
-  Soil microbial populations
-  Water infiltration
-  Water quality
-  Plant species diversity and complexity
-  Plant brix and nutritive value
-  Pollinator insects, birds and wildlife

REDUCED:







-  Fertilizer needs
-  Need for mechanical or chemical weed and brush control
-  Soil erosion and harmful runoff
-  Drought and flood impact

TO THE LIVESTOCK

INCREASED:







-  Utilization of forage on a year-round basis
-  Performance
-  Consistency in manure & urine application
-  Stocking rates over time (as biomass increases)
-  Ability to support multi-species grazing

REDUCED:



-  External and internal parasites
-  Common disease issues
-  Need for antibiotic treatment
-  Need for administered hormone treatment
-  Supplementation – hay and/or other feedstuffs
-  Livestock costs of production (COP)

TO YOUR LIFESTYLE

INCREASED:

-  Investment in fencing and watering systems
-  Time spent interacting with the livestock and observing them and the land
-  Observational skills
-  Net return per acre
-  Enjoyment (in our humble opinions)
-  Ability to capture available market premiums

REDUCED:

-  Need for equipment, fertilizer, supplemental feed and hay
-  Labor needed for operating equipment, maintaining equipment, haying and feeding

Biodiversity/Seeding

Many pastures or grasslands are limited in species unless they are untouched native prairies. Increasing the biodiversity, by seeding another cereal or dicot can lead to increased C storage.

- Add one new species to qualify
- Species and application rate are up to you
- You can aerial apply, broadcast seed, drill, etc.
- All we need to know is what species you chose, the rate it was seeded/acre and what method you established the seed

***Only has to be seeded one time during 10 years*



Fertilization

Grasslands and pastures are inherently low in N. Minimal additions of N applied at the optimal time for the region and soil needs helps to boost yield, prime decomposition and facilitate stability in microbes.

- The type of N added should be considered
- 5 units of N or more is required for qualification
- Additional manure, N containing products, hydrolyzed fish, some synthetic are all qualifying methods of nitrogen addition
- Fertilizer only has to be applied one time during 10 years



How to Determine Carbon Project Eligibility

Contact Agoro Carbon Alliance for a free carbon estimate

Estimated Payment Plan

Hi
Producer,
here is your estimation!



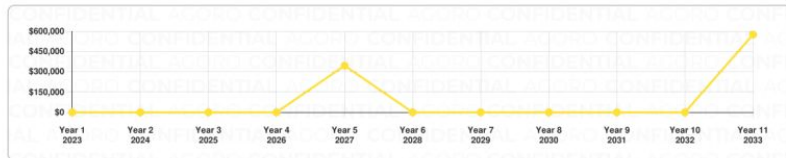
Monterey County, CA

RANGE AND PASTURE

PRACTICE	ACRES	C/ YEAR/ ACRES	PAYMENT
Improved grazing	10000	0.15	\$230,400.00
Fertilization	10000	0.11	\$168,960.00
Biodiversity /Seeding	10000	0.34	\$522,240.00

Estimated Carbon Capture (tons/acre/year) after 20% buffer removal **0.4800**

Payment Schedule (Option A)



Breakdown of potential payments

Carbon Payments (Year 5) \$345,600.00

Carbon Payments (Year 11) \$576,000.00

Potential Payment \$921,600.00

Let's talk about it!



Jake Tilden-Browning

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agorocarbonalliance.com



- Considers local county specific data
- Factors in irrigation (Y/N)
- Breaks down payments by practice
- Provides potential payment schedule

****This is an estimate. If you sequester more carbon/acre, you will get paid for it.**

Review Current Agoro Carbon Contract

- **10 year contract** - Carbon sequestration takes time and permanence
- **Contracts can be signed for private land, or lands that are leased from a private land owner. State or federal lands are not eligible**
- In order to qualify for a carbon project, you must enroll a minimum of 500 acres
 - Do not have to be contiguous. Sign up specific parcels for specific practices
- Not all R&P practices are required for a carbon project
- Your data is confidential
- Contracts can be terminated with 60 days written notice

How does a rancher get paid for carbon?

- Baseline soil carbon analysis is conducted within the first year
- Payments made in year 5 & year 11 for verified tons
- Guaranteed pricing for carbon in year 5 and year 11
 - **Option A - No Pre-payments** - Carbon payments issued in years 5 & 11
 - **Option B - With Pre-payments** - available when practices are implemented
 - Carbon Payments Issued in years 5 & 11



What Happens After Signing Up?

1. **Within the first 60 days of signing up, meet with Grower Success Team**
 - a. -Agronomist & Data Specialist
2. **Provide Baseline Data: Baseline Information Needed for Range & Pasture**
 - a. Herd size, herd makeup, breed of grazing animal, supplements used and when, date in and out for grazing, field boundaries, fuel use, etc.
3. **Documents that could help**
 - a. FSA maps
 - b. Excel files
4. **Practices are implemented and prepayments can be issued.**
5. **Third party conducts soil analysis in year 1 to establish baseline carbon levels**

Grower Success Team - Annual Data Collection

- **Grower Success Team will meet with you at least once per year**
 - Annual data collection
 - Can meet more frequently if needed (quarterly)
 - Data is needed to prove additionality and generate carbon credits
 - Help with audits/verification

Onboarding



Eliza Hunzeker
Data Specialist

Support



Lindsey Miller
Agronomist, Support

How The Cycle Works:



Farmer & Rancher Voices



Brian Miller

“No one’s going to keep doing something if they are not successful, and Agoro Carbon wants you to be successful. What benefits us on the farm also benefits everyone else in this environment.”

- INDIANA FARMER



Todd Trask

“What I was wanting was something that would provide extra cash flow to the operation, but also not hinder the management of the operation. Agoro Carbon was just a perfect fit for us”

- SOUTH DAKOTA RANCHER



Devin Moon

“In our climate I don’t see a downside to capturing carbon. People love to romanticize the image of the farm life; nah, we are production ag we are a business, and ultimately you have to take the emotion out of it and be profitable.”

- WASHINGTON FARMER



Del Ficke

"Agoro Carbon demonstrated a high level of expertise and unmatched commitment to ensure producers' success. They are a dedicated carbon company that only strives to increase carbon sequestration..."

- NEBRASKA RANCHER

Thank You! Questions?



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