

CARBON FARMING

A HOLISTIC CLIMATE CHANGE SOLUTION

ACORN'S APPROACH TO OPENING UP THE VOLUNTARY CARBON MARKET FOR SMALLHOLDER FARMERS

Agriculture is an industry that is responsible for a great amount of greenhouse gas emissions. However, it is also capable of offsetting these through carbon farming. Similarly, while climate change and geopolitical developments put immense pressure on local food productivity and security, agriculture is an industry that can positively impact the income and livelihoods of large-scale agricultural operations and smallholder farmers. The solution, in both cases, is carbon farming.

Carbon farming

Carbon farming, or climate farming, takes a holistic approach to agriculture. It unites improved crop quality and yield with climate adaptation, climate change mitigation, augmented biodiversity, and land restoration.

There are several methods to approach carbon farming, such as soil organic carbon and biochar which both remove carbon, and manure management and nitrogen reduction biofertilizer which both reduce carbon. The one highlighted here is

agroforestry, combining land used for crops, animals, or both with woody perennials. These plants capture carbon from the atmosphere, sequestering it and restoring atmospheric balance, resulting in carbon removal units (or CRUs).

In addition, they improve soil health, resilience against weather and climate change, diverse nutrients, (diversity of) crop yields and subsequently farmer income, and afforestation.

Acorn's approach

While carbon farming is beneficial to implement, it is also financially complex and a long-term solution. For smallholder farmers, these factors are prohibitive. To combat this, Acorn (Agroforestry CRUs for the

Organic Restoration of Nature), an initiative by Rabobank (a global food and agri-bank), has built a global, transparent, and technology-enabled marketplace for carbon sequestration. This opens up the international voluntary carbon market for smallholder farmers who are realizing agroforestry projects for carbon sequestration through biomass growth, which is measured with the help of satellite monitoring. The trees planted by the farmers yield CRUs, sold by Acorn, with the farmer receiving at least 80 percent of CRU revenue – as well as support and expertise to organize and initiate agroforestry on their land. It can significantly assist countries with financial support to implement agroforestry programs on a large scale.



Important players and actions to take

To accelerate carbon farming, Acorn has identified the following actors (and actions):

Governments: **Facilitate** full function of carbon markets to the benefit of the farmer; **develop** large-scale programs and local agricultural intelligence centres; **leverage** synergies with other programs e.g. landscape level, rural strategies, or land mapping; **develop** national food security strategies that involve carbon farming; support farmers and farmer organizations.

Project developers: **Develop** farmer-centric, large-scale interventions; **ensure** long-term technical assistance; **determine** fair mechanisms to reward farmers; **establish** a well-functioning project council; promote new business and employment opportunities.

Financers **Develop** effective multiyear financing mechanisms incl. grace periods; **take** holistic business cases into consideration; **include** other KPIs in financing (e.g. biodiversity); **value** land based on (soil) quality; **facilitate** land acquisitions to prevent decreasing land size.



Carbon farming has the potential to significantly alter the course of climate change, food insecurity and land degradation, but only if farmers are supported in their indispensable work.