reNature.

Yucatán Agroforestry Center, Mexico

Context Analysis → Model Farm Design & Implementation → Capacity Building & Initial Scaling → **Open for Carbon Investment** → Carbon Feasibility Study → Carbon Implementation & Scaling

The Yucatán Agroforestry Center (YAC) brings together distributed citrus agroforestry model farms, hands-on farmer engagement, and collective organization across southern Mexico. The initiative demonstrates how regenerative citrus systems can stabilize production, restore soils, and reduce input dependency in a drought-prone landscape. YAC is implemented by reNature in collaboration with Arpen and local farmer leaders, with support from IDH – Land Degradation Neutrality Technical Assistance Facility and Rabo Foundation, and is anchored in the Yucatán Peninsula through close engagement with the Instituto Tecnológico Superior del Sur del Estado de Yucatán (ITSSY).

Why This Project?

The Yucatán Agroforestry Center has a proven citrus agroforestry system and a strong local presence. A well designed agroforestry system reduces farming risks and improves the long term prosperity that carbon projects need. Agroforestry buffers extreme weather patterns like heat, drought, or flooding and reduces pests and diseases. By well designed poly-cropping, the crops become more efficient in nutrient absorption from the soil which will increase the yield. These factors lead to a high yield, durable and stable system.

At YAC, farmers see these benefits and are committed to scaling up these practises in the region. By bringing together smallholders across the peninsula, YAC enables coordinated adoption of standardized practices and efficient participation in carbon markets. Carbon credits add a performance-based revenue layer that translates ecosystem restoration into verifiable cash flows.

LOCATION:

Yucátan, Mexico

SIZE OF POTENTIAL AREA:

8000 ha

ESTIMATED CARBON SEQUESTRATION:

1.4 million tons of CO2*

MAIN TREE SPECIES:

Ciricote, Chaká, Guayaba and Limón persa

MAIN COMMODITY:

Citrus

GOAL:

Enabling farmers to scale regenerative citrus agroforestry while accessing carbon revenues that strengthen long-term farm resilience.

MAIN FOCUS:

Scaling agroforestry through farmer aggregation and carbon finance to improve livelihoods and restore ecosystems.

PARTNERS:

IDH, Rabo Foundation Instituto Tecnológico Superior del Sur del Estado de Yucatán (ITSSY).

*Carbon figures are indicative and will be further refined through a carbon feasibility assessment following investment.

Scale of Intervention

The design will have 376 trees per hectare (with a possibility of more in the next design).

Making the estimated carbon sequestration 1.4 million tons.

Currently, a group of 30 farmers have transitioned a total of 60 hectares. After scaling it is projected that this will increase to 4000 farmers with a total of 8000 hectares.

Intervention

Building on proven citrus agroforestry systems implemented by reNature in the area, the intervention focuses on scaling regenerative practices across aggregated smallholder farms in the Yucatán Peninsula. Citrus agroforestry systems, which integrate citrus with native and productive tree species, are implemented through a network of model farms. This process is supported by technical guidance and standardized farm designs from our team. This aggregated, practice-based approach enables coordinated implementation at scale, reduces operational risk, and provides a robust foundation for collective monitoring and participation in carbon markets, supporting long-term value creation.

Objective

To scale regenerative citrus agroforestry across the Yucatán Peninsula by aggregating farmers into coordinated initiatives that improve resilience, strengthen market access, and generate carbon-backed revenue.

Economic Impact

For farmers, regenerative citrus agroforestry improves long-term profitability by lowering input dependency, stabilizing yields, and diversifying on-farm production. Aggregation through cooperatives strengthens market access and bargaining power, enabling farmers to capture more value from their production over time.

For carbon investors, the project aggregates a big group of smallholders into a coordinated system capable of generating a large number verified carbon credits. Carbon revenues provide a performance-based return layer that is independent of citrus price fluctuations. The carbon market is shifting towards high quality carbon projects like YAC that have proven economic, social and ecological benefits. With demand for carbon credits increasing internationally, agroforestry carbon projects are a good investment to get high returns while also making social, ecological and economical impact.

Environmental Impact

Regenerative citrus agroforestry reverses the conventional monoculture harms. Improved soil structure and organic matter increase water retention and drought resilience, stabilizing production over time. As tree cover and plant diversity increase, biodiversity and ecosystem functions recover, strengthening landscape connectivity and carbon sequestration. What were once input-dependent systems transition into diversified, climate-resilient landscapes that retain water, store carbon, and remain productive over the long term.

Social Impact

Citrus farming supports thousands of households in the Yucatán Peninsula, yet climate stress and reliance on intermediaries leave many farmers vulnerable. YAC strengthens community resilience by enabling farmers to adopt regenerative citrus agroforestry through hands-on implementation and peer learning. By supporting farmer aggregation, the project strengthens bargaining power, reduces dependency on middlemen, and creates pathways to more stable incomes across the region.

Inspirational Impact

Through hands-on implementation and a network of model farms, the Yucatán Agroforestry Center demonstrates how regenerative citrus agroforestry reduces input dependency, restores soil health and biodiversity, and stabilizes production under drought conditions. By showcasing a practical and scalable approach, YAC supports wider adoption across the Yucatán Peninsula and engagement from value-chain and investment partners.

Interested? Contact marco.deboer@renature.co