

Coffee co-ops in Rwanda and Uganda now plan around a weekly climate signal, and pass it on to farmers

KEY TAKEAWAY

In a Gates-funded pilot with COSA, coffee cooperatives moved from generational intuition to a crop-specific climate signal. Once a forecasted dry spell arrived as predicted, the question changed from "should we trust this?" to **"what does the forecast say this week?"**

BACKGROUND AND CHALLENGE

COSA works with smallholder coffee cooperatives in Rwanda and Uganda, where farming has run on generational knowledge: rain in July and August, sun in October. Shifting rainfall and mid-season dry spells broke that pattern, and a smallholder with roughly 40 harvests in a lifetime cannot afford to bet on signals that no longer hold.

Cooperatives had general weather forecasts. What they lacked was a forecast that says what rain or drought means for coffee, in their location, at that point in the season. A single mistimed week is expensive.

“Getting one specific week wrong at the beginning of planting can affect your whole season's production. That's why this matters, it's about making the right decision at the right time.”

Saurin Nanavati, Founder, Ethos Agriculture, implementing partner on the pilot

WHAT WE DID

Under a Gates Foundation-funded initiative on agile tools for smallholder farmers, COSA deployed the Helios AI climate intelligence module with coffee cooperatives in Rwanda and Uganda. Helios provides crop-specific climate risk at 2.3 km resolution, updated every 24 hours against 10 years of local weather history, plus Helios Horizon for plain-language questions about the forecast.

Ethos Agriculture turned that signal into a coffee calendar mapping planting, drying, transport and export against the climate outlook week by week, reviewed in a monthly co-op session. COSA ran baseline and follow-up surveys on three questions: do co-ops value the information, does it change their behaviour, and do they pass it on to members.

“We will be able to know when to harvest, process, and when shipments can be planned for. This helps one to avoid price and weather changes.”

John Masereka, Production and Logistics Officer, Rwandaro Farmers Cooperative, at pilot launch

What each cooperative got out of it

Early warning

AT THE COOPERATIVE

■ Early warnings now reach members, not just the office

"The platform helps us know the right time for agricultural practices according to weather conditions. Our members now receive early warning information to cope with unfavorable climate."

Gustave Nikomeze, Sustainability Manager, Abateraninkunga ba Sholi Coffee Cooperative

Adoption

ON THE FARM

■ Trust in the signal, and a weekly forecast habit on the farm

"When the dry spell came exactly as predicted, my parents stopped relying on what they had always known and started asking every week: what does the forecast say? Farmers adopt this faster than you think, as long as the signal is accurate."

Brian Masereka, Founder & Operations Manager, Bagheni Coffee Estate

Resilience

IN THE HOUSEHOLD

■ Risk on the other crops that hold up household income

"Accurate data from Helios AI, the risk about certain crops, even not only coffee, helps the cooperatives and the farmers to get a stable income, but to also look at their livelihoods."

Brian Masereka, Founder & Operations Manager, Bagheni Coffee Estate

Ownership

ACROSS CO-OPS

■ Made the coffee calendar their own

Adapted it to local conditions, shared it with extension officers and built it into farmer training programs, without being asked to.

The impact

54%

OF ALL PLATFORM
ACTIVITY ON THE
CLIMATE TAB, THE
SIGNAL CO-OPS RELAY
TO FARMERS

2

USAGE PEAKS, DEC 2025
AND APR 2026,
MATCHING HARVEST
PREP AND PLANTING

~28

SESSIONS IN THE
BUSIEST MONTH,
AGAINST ~6 IN A QUIET
ONE

1

ACCURATE FORECAST
WAS ENOUGH TO TURN
DOUBT INTO A WEEKLY
HABIT

HOW THIS SHOWS UP FOR THE COOPERATIVES

None of this replaced an existing routine. The signal ran alongside extension services and the monthly co-op session, and no cooperative needed a data team: Ethos turned the platform output into a four-week calendar, and Helios Horizon answers questions in plain language. Usage was heaviest exactly when the calendar said decisions were due, and Rwandan cooperatives logged more sessions than Ugandan ones in every month of the pilot. The signal moved from the cooperative office to extension officers, to training programs, and, in the households that saw the first forecast hold, to a weekly question at the kitchen table.

STILL RUNNING

The pilot did not end with the pilot. COSA and Helios AI have decided to continue the partnership: the cooperatives in Rwanda and Uganda keep receiving the weekly signal, COSA's follow-up surveys will measure how far it has spread to members, and both partners are looking at where to bring the same approach to other coffee-growing locations.

“For too long, data has been extracted from farmers without giving anything meaningful back. With Helios AI, we're testing tools that make climate data accessible and practical, helping co-ops anticipate risk in real time.”

Jeroen Bollen, Senior Advisor and Project Lead, COSA

GO DEEPER

The pilot is documented end to end. Start with the launch, then hear the partners in their own words.

[Partnership announcement](#) →

How the Gates-funded pilot was set up, the cooperatives involved and what each partner brought (Jan 2026)

[Webinar replay](#) →

The fireside chat with COSA, Ethos Agriculture and Progreso Foundation, where most of the quotes on this page were said (Jul 2026)

Running a smallholder program or sourcing from cooperatives? Write to hello@heliosai.com and we will scope the same signal for your origins.