FOR THE TIMBUKTOO PAN-AFRICAN AGRITECH INCUBATION

The Africa *Pilot.*

Ten aeroponic towers. Six structured months. The case for African controlled-environment agriculture, drawn from the ground.

I

The *Why.*

Where Africa farms, and where the gap between what the land can grow and what the market needs is widening.

Africa farms against the *weather.*

Rwanda, like much of sub-Saharan Africa, depends on rain-fed, soil-based agriculture that is increasingly exposed to climate volatility, water scarcity and soil degradation.

Urban demand for fresh produce continues to outpace what conventional supply chains can deliver year-round. The gap between what the land can grow and what the market needs is widening.

PRESSURE I

Climate *volatility.*

Rainfall windows are narrowing. A season's yield can turn on a fortnight.

PRESSURE II

Water *scarcity.*

Open-field irrigation costs Rwanda water. Every litre must grow more.

PRESSURE III

Import *dependence.*

Urban kitchens pay for produce that should come from an hour away.

A premium market *under-served.*

Kigali's 4-star+ hotels, organised supermarkets and HoReCa channel buy fresh produce every week. Reliable, year-round, premium-grade supply at scale is the constraint — not demand.

$10–13K

PER MONTH · ONE 4-STAR HOTEL · FRUIT & VEG SPEND

Radisson Blu Kigali — RWF 15–18M / month. Source: The East African, 2024.

8

LETTERS OF INTENT · SIGNED PRE-LAUNCH

Fine dining, hospitality, retail and food-group buyers in Kigali.

30+

AFRICAN CAPITALS · SAME PROFILE · POST-PILOT HORIZON

Continental opportunity at the franchise stage.

PART I · THE SYSTEM

Two configurations.
One greenhouse.

Two Agrotonomy tower formats side-by-side. Regular towers anchor whole-plant harvests on a 4–6 week cycle; high-density baby-green towers run a faster 10–12 day cadence. Same reservoir, same nutrient mix, two output profiles.

A · 7 UNITS · REGULAR

52 PLANT SITES PER TOWER

2.9 m · 13 sections · 4 ports each. Whole-plant harvest.

~10 kg leafy greens / tower / 30-day window.

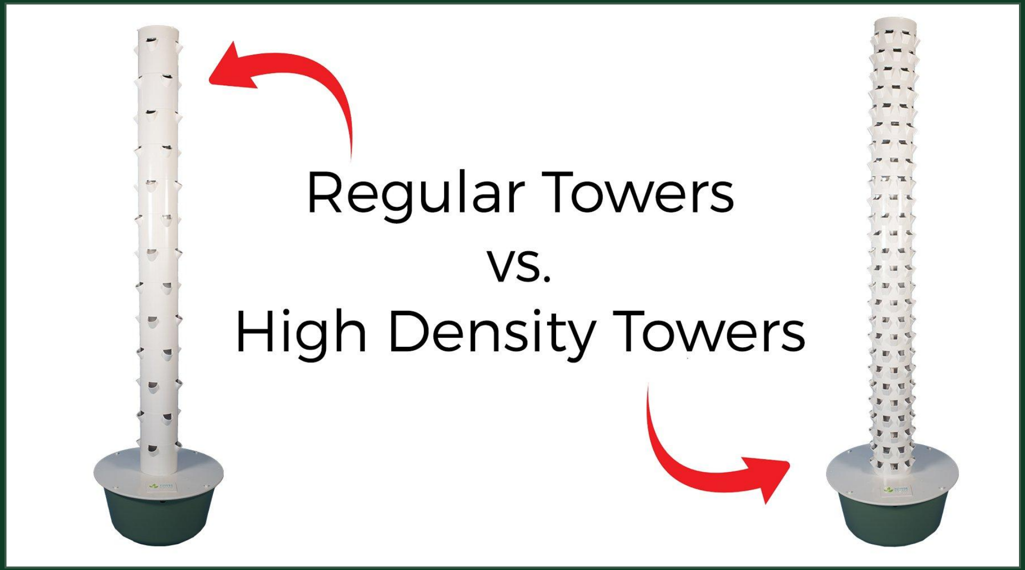
B · 3 UNITS · HIGH-DENSITY

196 PLANT SITES PER TOWER

2.9 m · 25 sections · 8 ports each. Baby-greens, 3–4 cuts.

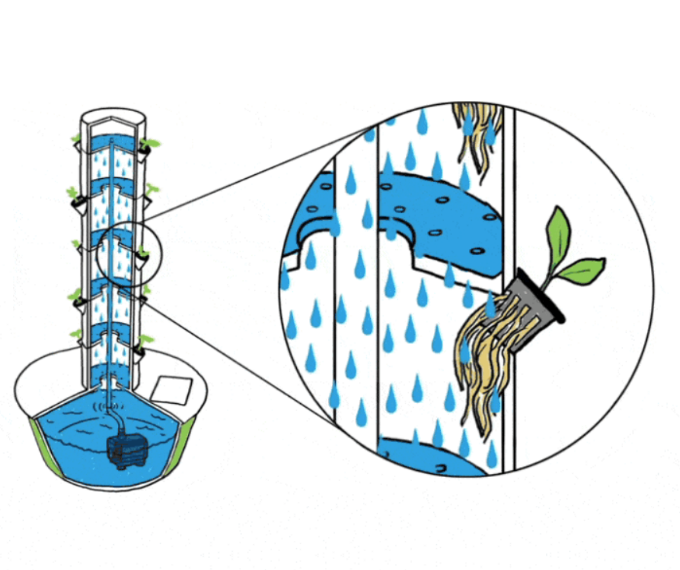
~5–6 kg baby greens / tower / 30-day window.

952 GROWING SITES · 95% LESS WATER · 90% LESS SPACE



HIGH-DENSITY (196) VS. REGULAR (52) · AGROTONOMY

Roots in mist.
Not in soil.



SOURCE: AGROTONOMY · TOWER-FARMS TECHNICAL DIAGRAM

PUMP CYCLE

3 / 12

Minutes on / off, 24-7. Closed-loop nutrient flow.

WATER SAVINGS

95%

Less water than soil farming. Tower uses ~3.8 L / day.

PUMP LOAD

45 W

Per tower. ~0.22 kWh / tower / day.

SPACE SAVINGS

90%

Less footprint per kg of produce vs. soil farming.

Nutrient solution sits in a reservoir at the base of each tower. A low-wattage submersible pump blasts it up the hollow centre column; gravity oxygenates the solution as it drizzles back down, misting the exposed roots. Roots hang in air, not soil — yield runs 35–50% above soil-grown organic, nutrient density 30–65% higher.

SOURCE: AGROTONOMY · TOWER-GARDEN TECHNICAL SPECIFICATIONS.

Demand committed *before launch.*

8

LETTERS OF INTENT

Signed across fine dining, hospitality, retail and food-group categories. Pre-launch.

01	Kultura Fine Dining	FINE DINING
02	Simba Supermarket · Gacuriro	RETAIL
03	Mocha Cafe	CAFE
04	Casamia · The Court Boutique Hotel	HOSPITALITY
05	Karu Group Ltd	FOOD GROUP
06	Farmhouse Rwanda Resort	HOSPITALITY
07	Soleluna	RESTAURANT
08	Ugarit Mediterranean Restaurant	RESTAURANT

Built with farmers.
Not over them.

> *"The pilot proves the system. The franchise extends it. The farmer holds a stake throughout."*

STRUCTURES UNDER EXPLORATION · POST-PILOT

STRUCTURE I

Land-lease arrangements

Farmers retain title; Upgrow operates the controlled-environment unit on a fixed lease per season.

STRUCTURE II

Shared greenhouse ownership

Equity in the physical asset shared between Upgrow and the farmer-partner from day one.

STRUCTURE III

Profit-sharing

Revenue from the greenhouse split on a transparent formula tied to operational performance.

STRUCTURE IV

Operator-employment

Farmers trained as certified Upgrow operators on a salaried basis, with bonus tied to yield.

Six months. Ten towers. *Real data.*

LAUNCHES *September 2026*

10 AEROPONIC TOWERS

952 GROWING SITES

15 CROP VARIETIES · V3 LIST

6 *mo.* STRUCTURED RUN

A 150 m² greenhouse footprint in Gasabo District, Kigali. Six months of structured operation to validate yield, water economy, farmer operability and unit economics under Rwandan conditions.

SIX-MONTH OPERATING CADENCE

M 1
Install
Towers up. First crops in.

M 2–3
Calibrate
Yield & water baselines.

M 4–5
Optimise
Crop rotation tuned.

M 6
Report
Unit economics confirmed.

WHAT WE MEASURE

— Yield per tower, per crop, per cycle.

— Water economy vs. open-field baseline.

— Farmer operability without expat oversight.

— Unit economics under Rwandan input costs.

The numbers *at scale.*

Stage 1 (100 towers, 9,520 plant-sites) conservative baseline — modeled with the company's Finance Director against sourced inputs and partner-negotiated rates. Pilot validates; Stage 1 is the proof point.

REVENUE · ANNUAL

$63.9K

100 towers, 65% premium B2B channel mix.

FIELD MARGIN

74.7%

Revenue after production OPEX.

OPERATING MARGIN

58.5%

Baseline / conservative. Mid 65.6%, Ceiling 73.4%.

HD TOWER PAYBACK

11 mo.

Network-blended at Baseline. 8 mo. at Mid · 5 mo. at Ceiling.

WHY HD TOWERS CARRY THE OPERATING LEVERAGE

HD towers represent 62% of plant-sites at lower CAPEX per growing site. The math compounds: more plants per square metre, more revenue per tower, and a faster path back to breakeven. The pilot tests both formats side-by-side so the Stage 1 mix is selected on evidence, not assumption.

CAPITAL EFFICIENCY

$0.53 OF ANNUAL REVENUE PER $1 OF CAPEX

Stage 1 baseline. Climbs to $0.66 (Mid) and $0.88 (Ceiling) as the upside levers price in.

The *team.*

KR
Kenny Rubaduka
FOUNDER & CEO
KIGALI

TN
Terry Ntwari
CHIEF OPERATING OFFICER
KIGALI

LU
Linda Uwase
FINANCE DIRECTOR
KIGALI

MD
Michel Dusengimana
HEAD OF AGRITECH
KIGALI

BF
Bailey Flint
CHIEF STRATEGY OFFICER
LOUISVILLE, USA

OD
Olivier Dushimimana
OPERATIONS LEAD
KIGALI

Five of six on the ground in Kigali. One strategy seat in Louisville, by design.

What we have *others don't.*

EDGE I

A signed institutional anchor.

MoU with Rwanda's Ministry of Agriculture, aligned to PSTA-5. Pre-launch. Most agritech founders ask for the door — ours is open.

EDGE II

Demand already in writing.

Eight pre-launch LOIs across hospitality, retail and food groups in Kigali. The premium channel is contracted before the first harvest.

EDGE III

A registered brand for the continent.

Upgrow® trademarked in Rwanda. Continental coverage planned across ARIPO / OAPI as the franchise model spreads.

EDGE IV

An operating partner at the source.

Agrotonomy training partnership confirmed at the 100-tower order. Hardware, agronomy and operating playbook come from the inventor of the system.

EDGE V

An AI operating layer.

Internal AI ops assistant (built on Anthropic Claude) runs briefings, documents and follow-ups. Founder leverage that scales with the company.

EDGE VI

Land already in our name.

Pilot site in Gasabo District secured. The half-hectare for the 100-tower Stage 1 greenhouse is owned outright — no lease overhead in the scale-up case.

Rwanda first. *Sub-Saharan Africa next.*

If the pilot validates the model, the long-term ambition is a farmer-partner network of controlled-environment food systems across the continent.

We are not making continental claims before the Rwandan pilot proves out unit economics. The work for the next eighteen months is the pilot.

THE WORK

Eighteen months. Prove the unit. Then earn the right to scale.

THE PATH OF REPLICATION

STAGE I · 2026 – 2027

Rwanda.

Kigali pilot proves unit economics. Single greenhouse. Two tower configurations. Real data.

STAGE II · 2028+

East Africa.

Franchise model into the East African Community — Uganda, Tanzania, Kenya, eastern DRC.

STAGE III · 2030+

Sub-Saharan.

Continental farmer-partner network — controlled-environment systems where soil agriculture is failing.

Months from launch.
Not in slides.

SIGNED	Memorandum of Understanding with Rwanda's Ministry of Agriculture.
SIGNED	Eight Letters of Intent from Kigali commercial buyers.
SECURED	Pilot site + half-hectare for the 100-tower scale-up.
PAID FOR	Ten aeroponic towers; landing in Kigali.
REGISTERED	Upgrow® trademark in Rwanda. Continental coverage planned.
PARTNERED	Agrotonomy training partnership confirmed at the 100-tower order.
IN PLACE	Founding team across all six leadership roles.
SEPT 2026	*Six-month pilot launches.*

Everything that needs to be true on day one — already is.

A grant inside *your published band.*

FORMAL ASK · TIMBUKTOO AGRITECH HUB

$100K

Equity-free grant. Inside Timbuktoo's published range across sector hubs ($25K Fintech → $100K HealthTech). Founder top-up and cohort co-investor introductions close any remaining Stage 1 gap.

PLUS THREE THINGS BEYOND THE CAPITAL

I — **Structured *incubation.***
Operational discipline during the most critical six months of the company's life.

II — **Investor *introductions.***
Access to the timbuktoo / Seedstars / SIGMA network as we close the first external round.

III — **Regulatory *advocacy.***
Support shaping a land-use partnership framework for controlled-environment agriculture across East Africa.

Where the *capital goes.*

BUCKET	AMOUNT	SHARE	NOTE
Stage 1 CAPEX · 100 towers (partner-sourced CIF Kigali)	$80,000	80%	70 LD + 30 HD towers at the Agrotonomy partner-negotiated rate.
Stage 1 CAPEX · greenhouse setup + commissioning	$10,000	10%	Setup, irrigation and dosing. Greenhouse already sized to scale into 200–300 towers.
Operating runway · 12 months, lean	$5,000	5%	$1,996/mo production OPEX + $650/mo overhead. Leadership equity-only through 100 towers.
Sage + commercial rollout	$3,000	3%	AI ops layer, connectivity, cold-chain delivery, premium-channel acquisition.
Working capital buffer · 60-day collections	$2,000	2%	Hotels pay on 30–60 day terms. Buffer absorbs collections lag.
Total deployment	$100,000	100%	Inside Timbuktoo's published band. Tight, defensible, evidence-gated.

Founder-deployed $25,000 seed already covered the 10-tower pilot CAPEX and 6-month pilot runway — not part of this ask.

A flagship *AgriTech case.*

Timbuktoo backs AgriTech in Africa. Upgrow is the kind of company the programme exists to surface — pre-launch institutional artifacts, conservative inputs, founder-team rigour, and a path the network can replicate.

We don't need a saviour. We need a network. The pilot proves the system; the cohort gives it gravity.

WHAT UPGROW BRINGS TO THE COHORT

A pre-launch institutional anchor.

Signed MINAGRI MoU, eight LOIs, registered trademark, secured land.

A model others can borrow.

Three site archetypes, two tower formats, one franchise blueprint.

An operating stack worth sharing.

Internal AI ops layer (Sage) that the network's other founders can learn from.

A franchise engine for the continent.

Phase 2 farmer-partnership extends from East Africa outward, with the cohort as the launchpad.

BACK COVER · CONTACT

Talk to *us.*

Investors, partners and farmers building the future of African agriculture — the door is open.

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