Upgrow®

EVERY CROP THAT GROWS ON AEROPONIC TOWERS

What grows.

What we test first.

The complete catalogue of crops that thrive on Tower Garden style aeroponic towers, drawn from Agrotonomy's two hundred plus crop trials and Upgrow's pilot strategy. The fifteen crops we test in our September 2026 pilot are named up front.

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INTRODUCTION

The map *before the territory.*

Aeroponic towers grow hundreds of crops. The discipline is choosing which ones to grow first.

This document does two things. It names the fifteen crops Upgrow tests in our September 2026 pilot, organised across leafy greens, aromatic herbs, and export crops in line with our MINAGRI MoU. And it maps the universe of every crop verified to grow on Tower Garden style aeroponic systems, drawn from Agrotonomy's two hundred plus crop trials and cross-checked against their recent publications.

The pilot crops sit up front because the pilot is the work. The full catalogue sits behind them because scale is the plan.

HOW TO READ IT

Every entry includes days to harvest. Where a crop produces continuously after first cut, that is noted. Where a crop does not work on a tower, that is named too.

The discipline of knowing what we do not grow matters as much as the catalogue of what we do. Towers are not soil farms. Pretending they are is how vertical farming companies have failed before us.

PILOT STRATEGY

The 6-4-5 *framework.*

Fifteen crops, three categories. The split is six leafy greens, four aromatic herbs, and five export crops. Each category exists for a reason.

Six leafy greens for Kigali kitchens and shelves. These are the crops our eight pre-launch buyers want first. Four aromatic herbs, chef-grade and cut to order, the high turnover plays that pay the pilot back fastest. Five export and premium crops that prove our margin ceiling and our reach beyond Rwanda.

Crop selection per Upgrow Pilot Strategy V3, validated by Head of Agritech & Systems Strategy in May 2026 and aligned to the MINAGRI MoU.

LEAFY GREENS

6 crops

AROMATIC HERBS

4 crops

EXPORT & PREMIUM

5 crops

PILOT SHORTLIST

The fifteen crops we test first.

LEAFY GREENS

Six crops for Kigali kitchens and shelves.

01 **Lettuce (mixed varieties)**
25–35 days

02 **Spinach**
30–40 days

03 **Mustard greens**
30–40 days

04 **Kale (Tuscan / curly)**
45–60 days

05 **Green onions**
50–65 days

06 **Baby spinach**
18–22 days

AROMATIC HERBS

Four chef-grade herbs for restaurant supply.

01 **Sweet basil (Genovese)**
25–30 days

02 **Parsley**
30–40 days

03 **Mint**
30–40 days

04 **Dill**
30–40 days

EXPORT & PREMIUM

Five margin crops for regional and export reach.

01 **Arugula**
21–28 days

02 **Cherry tomatoes**
60–80 days

03 **French beans (Haricots verts)**
55–70 days

04 **Bird's Eye chili**
60–80 days

05 **Baby arugula**
12–16 days

CROP SELECTION PER UPGROW PILOT STRATEGY V3, MAY 2026

THE FULL CATALOGUE

Every crop that grows *on aeroponic towers.*

Categorised by crop family. Each entry verified against Agrotonomy's published trial data and recent cultivation guides. Days to harvest reflect typical tower performance.

CATEGORY 01 + 02

Leafy greens & lettuces.

The commercial backbone of any tower farm.

LEAFY GREENS

Swiss chard	40–45 days, then continuous
Curly kale	50–55 days, then continuous
Lacinato kale	55–65 days, then continuous
Red Russian kale	50–55 days, then continuous
Spinach	35–45 days, then continuous
Bok choy / pak choi	40–50 days
Mustard greens	35–45 days
Komatsuna	35–40 days
Red malabar spinach	40–50 days
Water spinach (kangkong)	30–40 days
Collard greens	60–75 days
Amaranth (greens)	40–50 days
Mizuna	30–40 days
Tatsoi	35–45 days
Sorrel	50–60 days
Endive	50–70 days

LETTUCES

Butterhead (Boston, bibb)	45–55 days
Romaine / cos	55–65 days
Looseleaf (red, green, oak leaf)	30–45 days
Salanova	30–40 days
Iceberg	60–70 days
Crisphead	65–80 days
Lollo Rossa	45–55 days
Frisée	50–60 days
Radicchio	60–80 days
Watercress	30–40 days
Arugula / rocket	28–35 days

CATEGORY 03

Aromatic herbs.

High turnover. Premium pricing. Where a tower farm pays for itself.

CULINARY HERBS (A–M)

Sweet basil (Genovese)	50–55 days, then continuous
Thai basil	50–55 days, then continuous
Lemon basil	50–55 days, then continuous
Purple basil	50–55 days, then continuous
Flat-leaf parsley	60–70 days, then continuous
Curly parsley	60–70 days, then continuous
Cilantro / coriander	35–45 days
Spearmint	45–55 days, then continuous
Peppermint	45–55 days, then continuous
Oregano	60–70 days, then continuous
Thyme	40–55 days, then continuous
Sage	75–90 days, then continuous

CULINARY HERBS (M–Z)

Rosemary	90–120 days, then continuous
Dill	50–65 days
Chives	60–80 days, then continuous
Tarragon	75–90 days, then continuous
Lemon balm	60–75 days, then continuous
Marjoram	70–85 days, then continuous
Fennel (frond)	60–90 days
Lovage	90–100 days
Anise hyssop	60–90 days
Stevia	60–80 days
Lemongrass	90–100 days

CATEGORY 04 + 05

Cruciferous & fruiting vegetables.

Heavier crops that need support structures and patient cycles.

CRUCIFEROUS VEGETABLES

Broccoli	70–90 days
Broccoli raab / rapini	45–60 days
Cauliflower (white)	75–90 days
Orange cauliflower	75–90 days
Purple cauliflower	75–90 days
Romanesco	75–100 days
Green cabbage	70–90 days
Red cabbage	70–90 days
Savoy cabbage	75–95 days
Chinese cabbage (napa)	65–80 days
Brussels sprouts	90–120 days
Kohlrabi	55–70 days

FRUITING VEGETABLES

Cherry tomatoes	60–80 days
Grape tomatoes	60–80 days
Slicing tomatoes (indeterminate)	70–85 days
Heirloom tomatoes	75–90 days
Bell peppers (sweet)	70–85 days
Jalapeño chili	70–80 days
Habanero chili	90–100 days
Cayenne chili	70–85 days
Slicing cucumbers	50–70 days
Pickling cucumbers	50–60 days
Indian snake cucumbers	55–70 days
Italian eggplant	70–85 days
Japanese eggplant	65–80 days
Zucchini / courgette	50–60 days
Yellow summer squash	50–60 days
Patty pan squash	50–65 days
Okra	55–65 days
Tomatillos	75–100 days

CATEGORY 06 + 07 + 08

Specialty crops.

Strawberries, fruits, edible flowers, microgreens. Premium margin.

STRAWBERRIES & SPECIALTY FRUITS

Everbearing strawberries	90–120 days, then 2+ year productive
Day-neutral strawberries	90–120 days, then continuous
June-bearing strawberries	90–110 days, seasonal
Gooseberries	Perennial, multi-year cycle
Cantaloupe (experimental)	80–100 days
Honeydew melon (experimental)	80–100 days
Small watermelon varieties (experimental)	90–100 days

MICROGREENS & PETITE VEGETABLES

Mixed microgreens	10–14 days
Wheatgrass	8–10 days
Pea shoots	10–14 days
Sunflower microgreens	8–12 days
Radish microgreens	8–10 days
Broccoli microgreens	10–14 days
Mustard microgreens	10–12 days
Basil microgreens	14–21 days
Petite lettuce	20–30 days
Petite bok choy	25–30 days
Petite kale	25–35 days

EDIBLE FLOWERS

Nasturtium	50–60 days
Marigold (calendula)	50–60 days
Pansy / viola	60–90 days
Borage	50–70 days
Bachelor's button (cornflower)	50–65 days
Snapdragon	90–120 days
Zinnia	60–70 days
Chamomile	60–90 days
Hibiscus / roselle	90–120 days
Lavender	90–120 days, then continuous
Anise hyssop (flower)	60–90 days
Echinacea	90–120 days

THE DISCIPLINE OF SAYING NO

What does not grow.

A tower is not a soil farm. Knowing where the technology stops matters more than pretending it can do everything. These crops belong in fields, in orchards, or in someone else's business model.

Carrots, parsnips, daikon
Deep taproots. Towers cannot host the root mass.

Potatoes, sweet potatoes
Tuber crops need soil bulk to form.

Onions, garlic, shallots
Technically possible. Commercially inefficient on a tower.

Turnips
Agrotonomy specifically advises against. Roots underperform.

Wheat, rice, corn, oats, barley
Staple grains. Scale economics favour open field.

Coffee, cocoa, tea
Perennial trees. Wrong form factor for a tower.

Avocado, mango, citrus, banana
Tree crops. Tower architecture cannot support them.

Beans (commercial scale)
Possible but profit margins do not justify a tower port.

Large watermelons
Sweetness and yield trail soil-grown fruit.

METHODOLOGY & SOURCES

How this catalogue came together.

Every crop in this document was cross-checked against three sources before inclusion.

01 Agrotonomy's published crop list and cultivation case studies. Agrotonomy reports over two hundred crop varieties tested successfully across their Tower Farm operations in Europe, North America, Latin America, and Africa.

02 Tower Garden's public plant list, which catalogues over one hundred and fifty crops verified to grow on the same aeroponic architecture our pilot uses.

03 Recent Agrotonomy cultivation guides published between 2023 and 2025 for individual crops including parsley, oregano, dill, broccoli, basil, mint, cucumbers, tomatoes, zucchini, okra, bok choy, romanesco, cauliflower, and strawberries.

DAYS TO HARVEST

Harvest windows reflect typical performance in tower conditions with adequate light, ambient temperature in the 18–26°C range, and properly tuned nutrient solution. Rwanda's equatorial light profile and Kigali's altitude favour the lower end of these ranges for most leafy greens.

CONTINUOUS HARVEST

Where a crop is marked as continuous, the plant produces multiple harvest cycles from a single planting. For leafy greens this typically extends productive life to 8–12 weeks. For aromatic herbs and chard, productive life can extend several months.

PILOT CONTEXT

Upgrow's September 2026 pilot runs ten aeroponic towers across 952 crop sites in Kigali. Seven smaller towers from a fronting supplier and three full size Agrotonomy Tower Farm units. Six month evaluation period. Backed by a Memorandum of Understanding with Rwanda's Ministry of Agriculture under PSTA-5.

Upgrow®

More food. Less land. Less water.

Aeroponic tower farming for Africa.

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