



Company Presentation
Ghent University
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Executive summary

Urban Crops wants to become the global independent reference of the fast-emerging **urban farming industry**.

Urban Crops wants to install the **best solutions** that can grow the **healthiest** Leafy Greens whenever and wherever you want!

Urban Crops creates **fully automated indoor farming systems** using LED lighting that are both efficient and effective under any given climate conditions.

As a company Urban Crops focuses not only on development and production of these systems but also on biological & plant technical research to relentlessly improve the Urban Crops growing systems and to provide customers with the **best technology** in terms of LEDs, substrate, nutrients and seeds.

What? Urban Crops is the specialist in the newest agricultural technology that will make food production local around the globe in the next decade

Why? • A vast majority of 80% of the land that is suitable for agriculture is already in use



• The world's population is increasingly urban: by 2050 more than 70% of all people will live in cities



• The world's population will grow with 2.5 billion to 9 billion in 2050, leading to a need to produce 70% more food



Facts?

	Traditional	Greenhouse	Urban Crops
Growth cycle	70 days	40-50 d	20 days
Water consumption per crop	35 l	15 l	1,5 l
Number of crops per square meter	18	25	250-300
Crop cycles	Seasonal	Seasonal	All year
Pesticides/Herbicides	Often	Less often	None
Location	Open field	Open field	Anywhere
Post harvest handling	High	Medium	Low

ADVANTAGES

- Higher yields and cost efficient
Growing happens indoor through LED growth lights in multiple layers (till 40 layers) with limited inputs and shorter growth cycles
- Higher nutritional value & Food Security
Optimized and fully controlled conditions lead to the healthiest and safest possible crops without pesticides or herbicides
- With care for the environment
Our production systems are closing the loop by consuming CO2, recuperating rain water and by its integration in the climatization systems of our customers
- Local production & consumption
Grow, harvest and consume, all in the same neighborhood adds value to the value chain by reducing costs for unsold stock, for polluting and expensive transport and by eliminating excess profits by intermediaries
- Extremely flexible growing system
More than 150 types of crops possible. Switch between them with low costs or just grow different types at the same time

The Urban Crops product range

includes standardized and custom made farming solutions and services!

Urban Crops Farm Flex

A flexible and climate controlled 40" freight container



Key Facts

- 50 m2 growing surface
- 1000 crops per growth cycle
- 16.000 crops per year*

Urban Crops Farm Pro

A fully automated and climate controlled 40" freight container



Key Facts

- 80 m2 growing surface
- 1800 crops per growth cycle
- 29.000 crops per year*

Urban Crops Plant Factories

A fully automated, climate controlled leafy green factory built upon your needs



Key Facts

- 250 m2 – 10.000+ m2 growing surface
- 9.000-25.000 crops per growth cycle
- 100.000- 300.000 crops per year*

Our experienced crop consultants can also help you to stay best-in-class by giving you personalized periodical advice and training

The Urban Crops technology: How does it work? – Zoom in



Hydroponics & nutrients for 150+ crops
Growing a variety of crops on a water solution with optimal nutrients

To deliver healthy crops our closed-loop irrigation system

- Minimizes the use of fresh water
- Increases plant nutrient uptake and can work with up to 70 nutrients and minerals
- Can be used for both freshwater and saline water crops



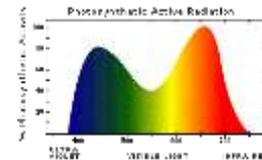
Automated & controlled process
Monitoring and automation allow perfect control of the growing system and harvest times

- Eliminates human intervention to achieve higher levels of process control
- Optimizes production according to market demand
- Monitoring of the growth cycle from anywhere in the world



LEDs
Grow LED lights provide the optimal spectrum for your plants, using limited energy

- The photosynthetic active radiation (PAR) range, enables photosynthesis in the range 400-700nm
- Using energy-efficient LEDs, our crops receive just the right light spectrum to grow efficiently



Climate controlled environment
In/out flow of air is controlled to limit unwanted elements while optimizing climate conditions

- Closed production plants have minimal external elements influencing the indoor climate
- Monitoring the in-&outflow of air allows for the best possible crops
- Flavor can be tailored to market demand by influencing climate, light and nutrients

Current R&D programs

with own R&D team, with universities or knowledge partners



Biological

- New crops
- New varieties
- Shorter growth cycles
- Increase in nutritional value or active compounds
- Substrates
- Plant algorithms



LED technology

- Production cost
- Light spectra
- Energy consumption



Internal process optimization

- Assembly efficiency
- International sourcing
- After sales processes



Resource use efficiency

- Energy
- CO2
- Nutrients
- Waste



Add-on processes

- Integrations with alternative energy (biogas/ solar panels/windmills) and battery systems

The Urban Crops farming systems allow to easily grow these crops:





URBAN
CROPS