

35546. Farm24
(2025.9.16)



farm 24

Transforming Agriculture for a Sustainable Future

Unlocking Efficiency, Yield, and Sustainability in Agriculture

Farm24's Unique Edge

Unrivaled Integration: The only platform seamlessly merging advanced crop monitoring with brand-independent machine telemetry.

Designed for Independence: Works across all brands, crops, and equipment.

Regenerative agriculture: Farm24 adds value to regenerative agriculture by providing clear insights into soil, biodiversity, and climate impact.

AI: AI ensures that Farm24 can optimize agricultural processes by combining insights from activities, sensor data, and camera technology with precise analyses of crop growth.

Blockchain: Farm24 is building a blockchain from planting, sowing, to harvest and further in along the chain.

Proven Impact and Core Benefits

- **Enhanced Quality:** Improved crop health and consistency.
- **Increased Yields:** Optimized farming practices for maximum output.
- **Greater Efficiency:** Reduced time, labor, and machine costs.
- **Targeted Resource Use:** Inputs applied precisely where needed.

Farm24 : The Future of Farm Management

End-to-End Platform

Farm24 is the industry's first comprehensive farm management platform, providing fully automated, real-time, brand-agnostic intelligence for connected equipment control and optimized yields.

Integrated Solution

Without other solutions address only parts of the challenge, Farm24 covers the entire farm, delivering a single, integrated solution.

With our own brand-independent hardware on all self-driving machines (in field and connected machinery (in-fleet)) on the Farm, we automatically build a blockchain of every event, from planting/sowing to harvest, and further in the chain.

Advanced Crop Monitoring

Combined with advanced crop engineering (satellite & field vision), the continuous data capture enables growers to drive crop-change improvements to:

- Yield
- Quality
- Sustainability
- Efficiency
- Cost

Index

1. Introduction
2. Product & Technology
3. Market & Competition
4. Impact & ESG



Chapter 1

Introduction

- Mission & Vision
- The Problem (Market Frictions)
- Agriculture 4.0 – Future Vision 2030
- Our Solution (Farm24 in one slide)

"Farm24 makes agricultural companies worldwide successful by enabling them to grow data-driven and scalable, with sustainability and transparency as priorities."

Driven Mission



To revolutionize global agriculture through accessible smart technology, empowering farmers to increase yields while reducing environmental impact.

Sharp vision



Our vision is an agricultural sector in which precision, collaboration and accountability go hand in hand. We strive to become the leading platform that supports farmers and their chain partners in realizing improvements in quality, higher yields, higher efficiency, lower costs, lower environmental impact and complete traceability.

The Problem: What Farm24 Solves?

- **Lack of insight** into field activities and machine usage
- **Fragmented data streams** and limited access to own data
- **Inefficient use of resources** (water, fertilizers, etc.)
- **High administrative burden** for accountability
- **Limited traceability** in the supply chain
- **Insufficient data available** for strategic decision-making
- **Increasing difficulty** in finding suitable personnel

Farming transformed – Vision 2030

- Increasing **digitization** of agricultural processes
- Growing demand for **sustainable** and **traceable** production
- Pressure on **efficiency** and **cost savings**
- Need for **data-driven decision making**
- Increasing **regulatory pressure** in the agricultural sector
- Farm24 adds value to **regenerative agriculture** by providing clear insights into soil, biodiversity, and climate impact. It also helps farmers gain recognition and rewards for sustainable practices.
- **Climate-Adaptive**: farming practices that respond to and mitigate the effects of **climate change**



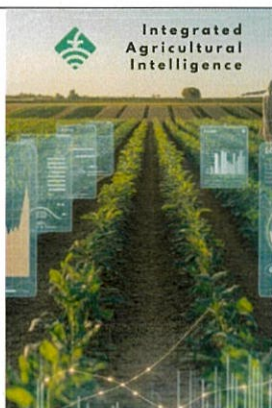
Let a farmer make decisions like a data scientist

Smart Hardware + Farm24: Take Back Control of Your Farm Data

Today, valuable agricultural data often ends up fragmented and locked away in proprietary systems. As a result, farmers lose ownership and clear insight into their own operations.

Farm24 changes this with brand-independent A- and S-Boxes that can be easily mounted on any machine or implement. Equipped with GPS, Bluetooth, Wi-Fi, and SIM, they connect seamlessly to sensors, cameras, and loggers, capturing and processing data fully automatically—no manual input required.

From machine performance and fuel consumption to crop growth, irrigation, and fertilization, Farm24 unifies all information in one platform. Farmers regain direct access to their own data, enabling them to cut costs, reduce waste, and run their operations more efficiently and sustainably.



Chapter 2

Product and Technology

- Farm24 Platform
- Smart Hardware: A-box and S-box
- How it works: Full-Cycle Approach
- Data Lake & AI – Application and Benefits
- Farm24 Advantage – Unique approach
- Customer Segments - Who benefits from Farm24
- Examples of Farm24 in practice in Spain



The Platform. Two Smart Boxes. Infinite Field Intelligence



Farm24 Platform

Our modular, cloud-based platform delivers real-time insights and control. It integrates machine data, crop models, and AI analytics for optimal decisions in irrigation, fertilization, and sustainability.

This integrated system ensures full transparency, significant cost savings, and enhanced control over your entire farming operation.



A-box: Smart Hub

This rugged onboard hardware for self-propelled machines logs real-time machine activity like fuel use, RPM, and GPS. It connects to the platform for live performance insights, enabling centimeter-level precision.



S-box: Sensor Gateway

Designed for attached implements and various sensors, the S-box collects crop-level data, supports cameras, and syncs to the cloud. It's flexible and compatible, revealing critical insights from soil to leaf.

How It Works: The Full-Cycle Approach

Real-Time Data Collection
Smart A-boxes and S-boxes automatically log all machine and field operations (fuel use, speed, crop stage, etc.) — per second, per hectare.

Automated Reporting & ESG Compliance

The platform generates reports for certification, traceability and sustainability goals — essential for chain partners and regulators.

Optimization & Forecasting

Resources (water, fuel, nutrients) are optimized. Farm24 delivers early warnings, yield forecasts and cost savings.



Data Lake Centralization
All raw data (machine, crop, weather, satellite, soil, chain input) is stored in a unified, scalable data lake, ready for analysis and benchmarking.

Live Crop Monitoring

Sensors and cameras track crop growth, biomass, nitrogen balance and stress indicators — in real time and at plot level.

AI-Powered Decision Support

Advanced models advise on irrigation, fertilization and harvesting, using weather, growth curves, and historical patterns — tailored per crop and region.

Result: One unified platform from data to decisions — boosting yield, reducing waste, and delivering full transparency.

Farm24 – Data Lake & AI for Smarter Farming

All data, one central hub.

Farm24 brings together every piece of agricultural data in a unified Data Lake:

- Machine & field data (GPS, fuel, sensors)
- Cultivation and crop growth metrics
- Weather, soil, and satellite imagery
- Supply chain and certification data

AI turns raw data into profitable insights:

- Predict yield, harvest timing, and disease pressure
- Optimize water, fertilizer, fuel, and labor efficiency
- Automate reporting, ESG accountability, and certifications
- Learn through benchmarking and adaptive crop/region models

The Impact:

- ✓ Data-driven decision making
- ✓ Lower costs, smarter resource use
- ✓ Higher yields and stronger margins
- ✓ Scalable and sustainable farming worldwide

Farm24 transforms agricultural data into profitable, sustainable decisions.



Our Unique Approach: The Farm24 Advantage

Farm24 offers more than technology — it delivers a full-stack, farmer-centric ecosystem that turns data into action. While other AgTech solutions focus on fragmented tools or lock farmers into proprietary systems, Farm24 brings hardware, software, AI, and service together into one seamless platform.



Built by Farmers, Backed by Science

Developed in collaboration with Wageningen University and CropConsult, Farm24 combines practical agricultural knowledge with world-class crop models — tested and proven in real farms.



Fully Integrated Hardware & Cloud Platform

Farm24 connects every machine, implement, and sensor via rugged A-boxes and S-boxes, streaming real-time data into one central dashboard. No brand lock-in, no manual hassle.



Centralized Data Lake

All data — from machines, crops, weather, and satellites — flows into a secure and scalable data lake. This enables benchmarking, forecasting, and precise resource optimization at scale.



AI That Learns With Every Hectare

Our AI modules improve decision-making across the full crop cycle — from irrigation and fertilization to harvest timing and sustainability reporting.



24Farmers: High-Touch Support

Technology is nothing without adoption. That's why we offer hands-on training, onboarding, benchmarking, and expert guidance — locally delivered by our support network.



Customer Benefits

- Less Manual Registration - 60%
- Stronger Financial Negotiations + 70%
- Higher Yield + 8%
- Less Product Usage - 8%
- Higher Product Quality + 17%
- Machine Efficiency + 5%

Customer Segments: Who Benefits from Farm24



Progressive Bigger Farms

Profile: 100-40,000 hectare operations, tech-savvy owners seeking efficiency

Pain Points: Rising input costs, labor shortages, climate variability

Value Proposition: Positive impact on efficiency, costs, management



Agricultural Cooperatives

Profile: 50-300 hectare operations per farm, and those farms are members of this cooperative

Pain Points: Increasing the innovation and performance level of small and medium-sized farms

Value Proposition: Data-driven decisions, increase the results of the cooperative and of individual farms



Agricultural Contractors

Profile: Contractors have a lot of tractors and machines, and serve potential Farm24 customers

Pain Points: Contractors are unable to invoice costs to their customers correctly due to a lack of the correct data

Value Proposition: Huge savings on manual registration, insight into work performed and increased financial income through correct invoicing



Chain Parties

Profile: Chain parties that purchase products from growers at the beginning of the chain

Pain Points: International legislation requires chain parties to account for the impact of the cultivation and production of the products

Value Proposition: Farm24 is the link between growers and the supply chain. The supply chain has insight into cultivation and production, allowing growers to receive better compensation



Chapter 3

Market & Competition

- Competitive landscape
- Competitive Advantage- entrance barriers

Competitive Landscape: The Telemetry Ecosystem

The precision agriculture market features four main competitor types:

Traditional Equipment Manufacturers

Examples:

- John Deere Operations Center
- 365FarmNet (Cialis)
- NextFarming (AGCO)

Focus: Brand specific or CANBUS only, focus on fleet management

Point Solution Providers

Examples:

- Agrosmart
- CropX
- Agrovision

Focus: Single-function tools (disease pressure, irrigation, farm registry)

Farm Management Software Providers

Examples:

- Farm24
- XFarm

Focus: Data collection platforms with broad range of modules and customization

Agricultural Input Suppliers

Examples:

- Fieldview (Bayer)
- Cropwise (Syngenta)

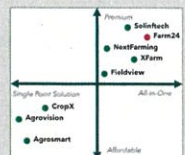
Focus: Comprehensive solutions competitively priced



Our Competitive Advantage: All-in-One & Independent

Feature	Farm24	XFarm	Fieldview	Next Farming	Agrosmart	Solintec
Fleet management	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓
Employee Management	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓
Crop Monitoring	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓
Sensor Data Integration	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓
Independent Ownership	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓
Standalone Solution*	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓
Alerts & Notifications	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓	✓✓✓

* solution independent of CANBUS availability





Chapter 4

Impact & ESG

- Sustainability impact (metrics)
- Strategic value for chain parties

Farm24 & the Sustainable Development Goals

Farm24 supports all the SDG's however most evidently:

2. Zero Hunger

Farm24 contributes to food security by optimizing cultivation processes. This results in less food waste, higher product quality, and a significant increase in net yield for growers. Through efficient resource management, we ensure more stable food production.

8. Decent Work and Economic Growth

We enable farms to achieve better performance through data-driven insights and decision-making. Farm24 offers innovative tools for both direct and external management advice, leading to sustainable economic growth and fair working conditions in the agricultural sector.

12. Responsible Consumption and Production

Farm24 contributes to responsible consumption and production by helping farmers use resources more efficiently and reduce waste. This includes optimizing water, fertilizer, and fuel use, leading to more sustainable agricultural practices and a reduced ecological footprint.

13. Climate Action

Farm24 plays a crucial role in climate action by helping farmers reduce their ecological footprint. We optimize the use of resources such as water and fertilizers, reduce CO2 emissions through more efficient machine use, and contribute to resilient agricultural systems that are better able to withstand climate change.

15. Life on Land

Through precision agriculture methods, Farm24 helps protect biodiversity and the health of ecosystems. We promote sustainable land use, reduce soil erosion, and support the restoration of degraded lands, which is essential for preserving life on land and the sustainability of the agricultural sector.

Farm24 SDG Metrics 2028

Farm24 supports all the SDG's however most evidently:

8. Decent Work and Economic Growth

+50 direct permanent jobs in 2028 directly and 50 - 100 jobs indirectly

12. Responsible Consumption and Production

Farm24 creates transparency over the entire production chain resulting in reduced food waste (minus 8.5%)

13. Climate Action

5% less CO₂ emissions * 150.000 hectares under management in 2028 results in saving an average of 40 liters of diesel per hectare per year = 6 million liters of diesel equivalent to 16.000 tons CO₂ yearly plus 4.000 ton CO₂ on fertilizers

15. Life on Land

Average use of fertilizers is 133 kg/ha worldwide and 2-3 kg on pesticides per ha. Farm 24 aims to have over 150.000 ha under management in 2028 saving 8% on fertilizers and pesticides means a reduction of 1.6 million kg on fertilizers and 30.000 kg on pesticides.



WORKER PRODUCTIVITY HAS REBOUNDED

Wageningen University & Research Business Unit Greenhouse Horticulture

Anne Elings
Team Leader Physiology and Product Quality



1

Facilities Bleiswijk



2

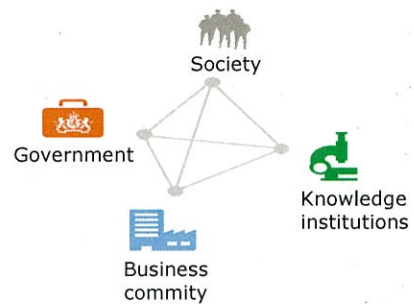
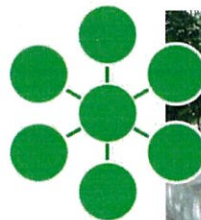
Facilities Wageningen



Mission-driven research for sustainable horticulture

Co-creation is the key to impact

- Business community
 - *Club of 100*
 - *Growers*
 - *Branche organisations*
- Government
- Knowledge institutes
- Vocational education
- Society



Integrated, multidisciplinary approach

Broad range of in-house expertise

Biology based

- Crop physiology
- Entomology
- Microbiology
- Cultivation
- Molecular biology
- Plant pathology

Technology based

- AI
- Robotics
- Physics
- Material science
- Engineering
- Modelling / mathematics



5

Innovations in greenhouse horticulture over the last 50 years (primary production)

Focus: to become independent of...

- Soil (substrates)
- Environmental conditions (greenhouses, climate control)
- (Fossil) energy (energy saving, sustainable sources)
- Chemicals (IPM, biological control)
- Labour (Logistics and robotics)
- Water saving (closed cycles, rainwater)

Innovations in...

- Breeding
- Marketing and trade



6

Opportunities for CEA

15x more productive

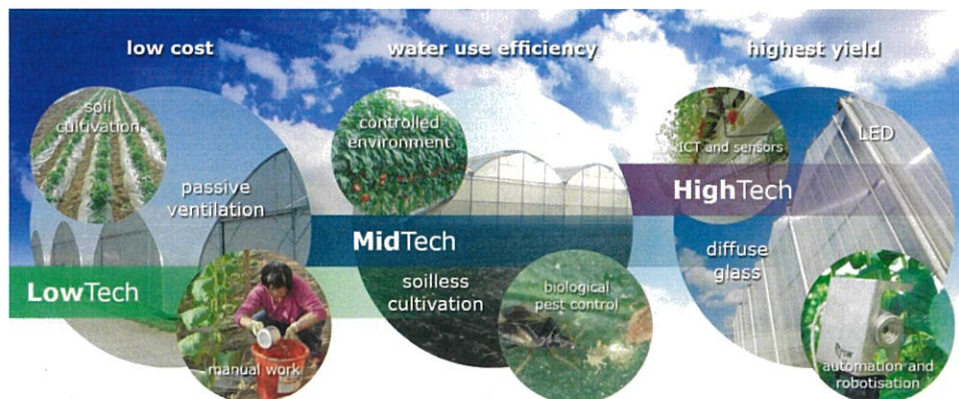
Kg fresh product per m² water



Increasing control of production factors

9

Sustainable greenhouse production

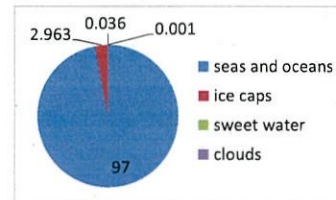


STEPWISE TOWARDS SUSTAINABLE PRODUCTION

10

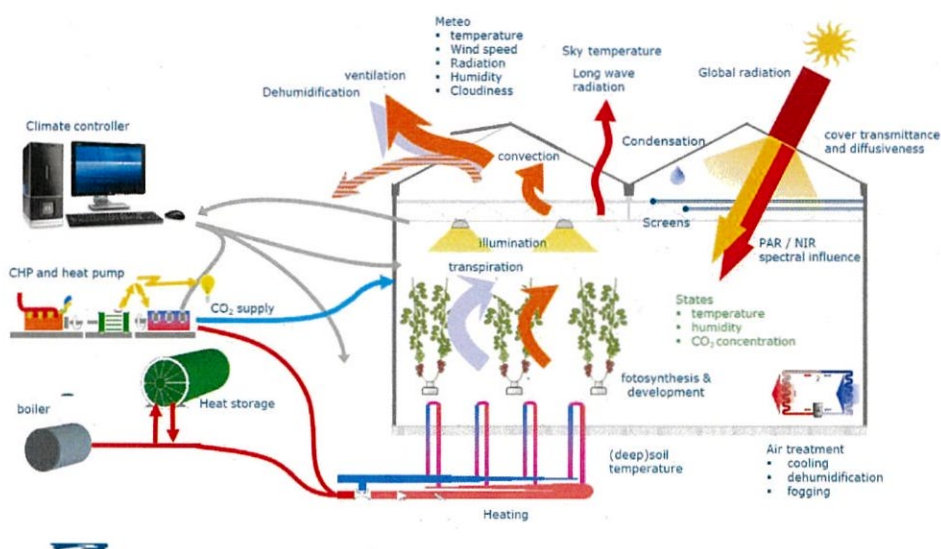
Sustainability

- Environmental sustainability
 - Resource use (water, energy, electricity, CO₂, nutrients)
 - Resource use efficiency
- Economic sustainability
 - Production
 - Product quality
 - Investment costs
 - Running costs
 - Pay-back period



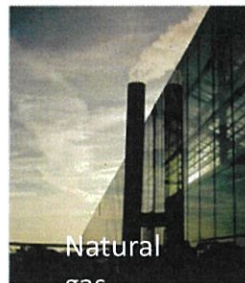
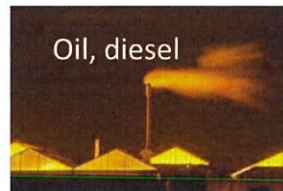
11

Energy transition



13

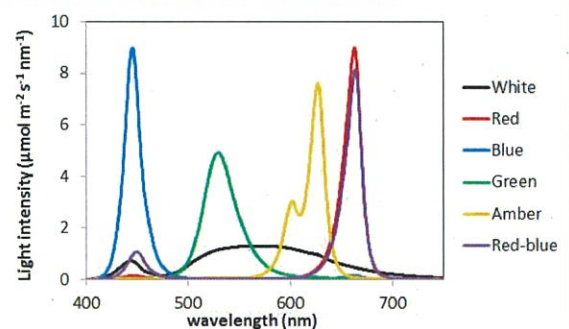
Energy



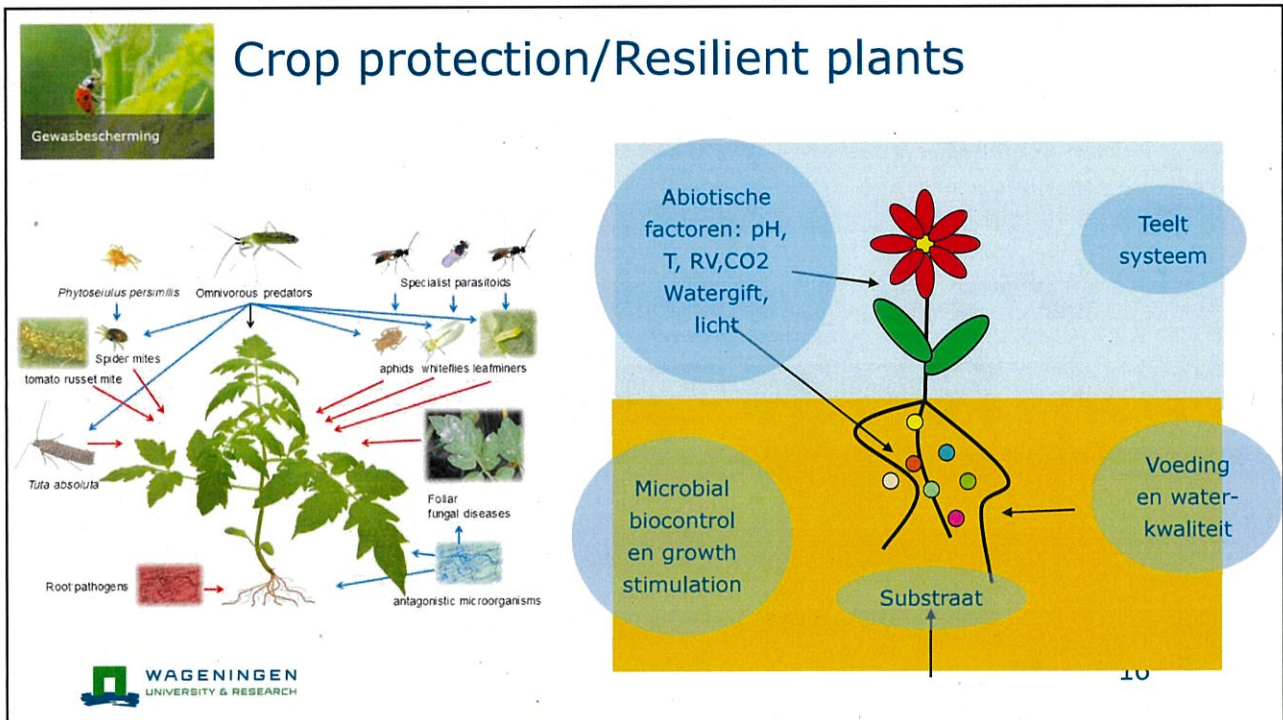
14

Advantages LEDs

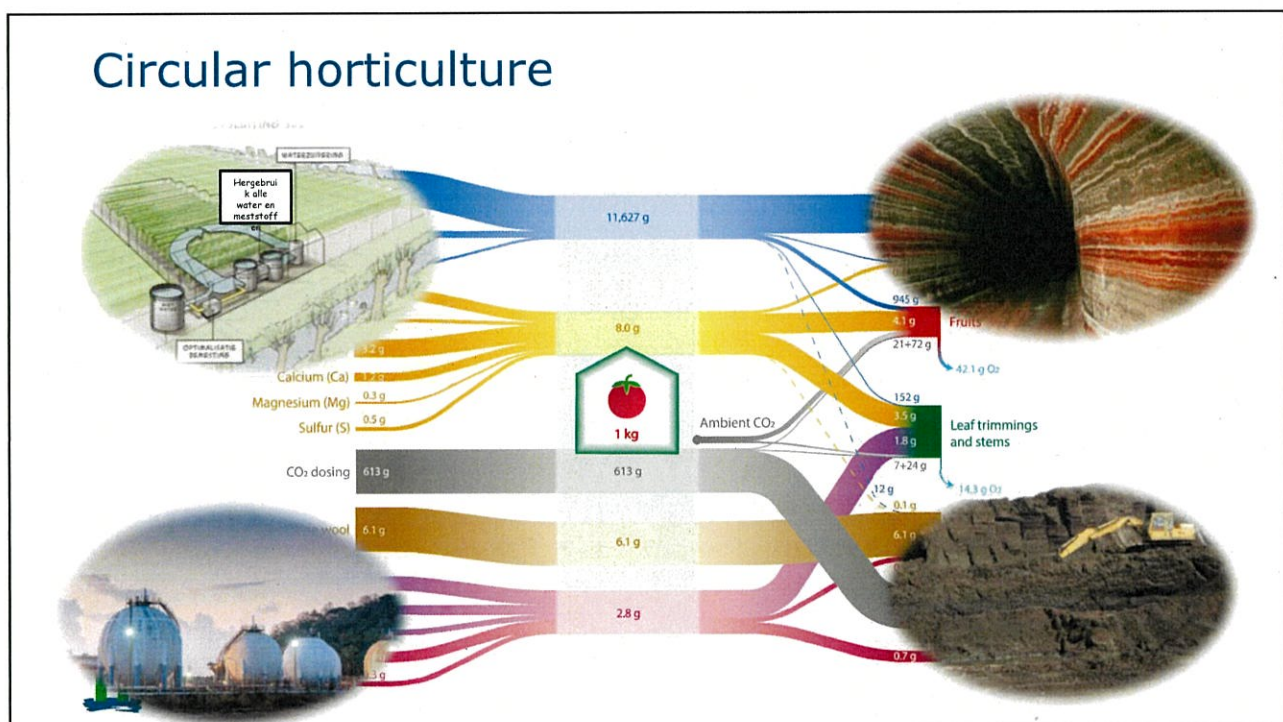
- More efficient conversion of electricity to light than HPS (reduction of energy use)
- Rapid change in intensity and spectral light composition
- Can be placed close or within the crop
- Spectral composition on the basis of the needs of the crop
- Long life-time



15



16



17

Autonomous cultivation



WAGENINGEN
UNIVERSITY & RESEARCH

18

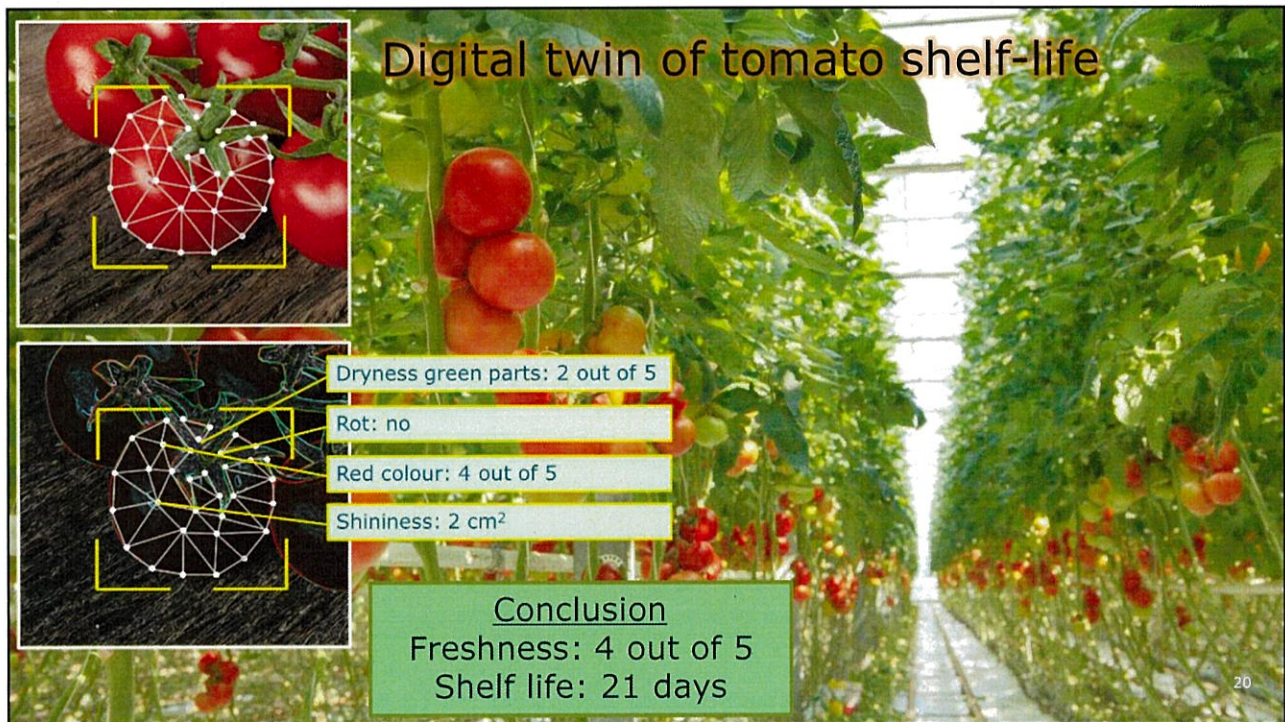
Vision & Robotics



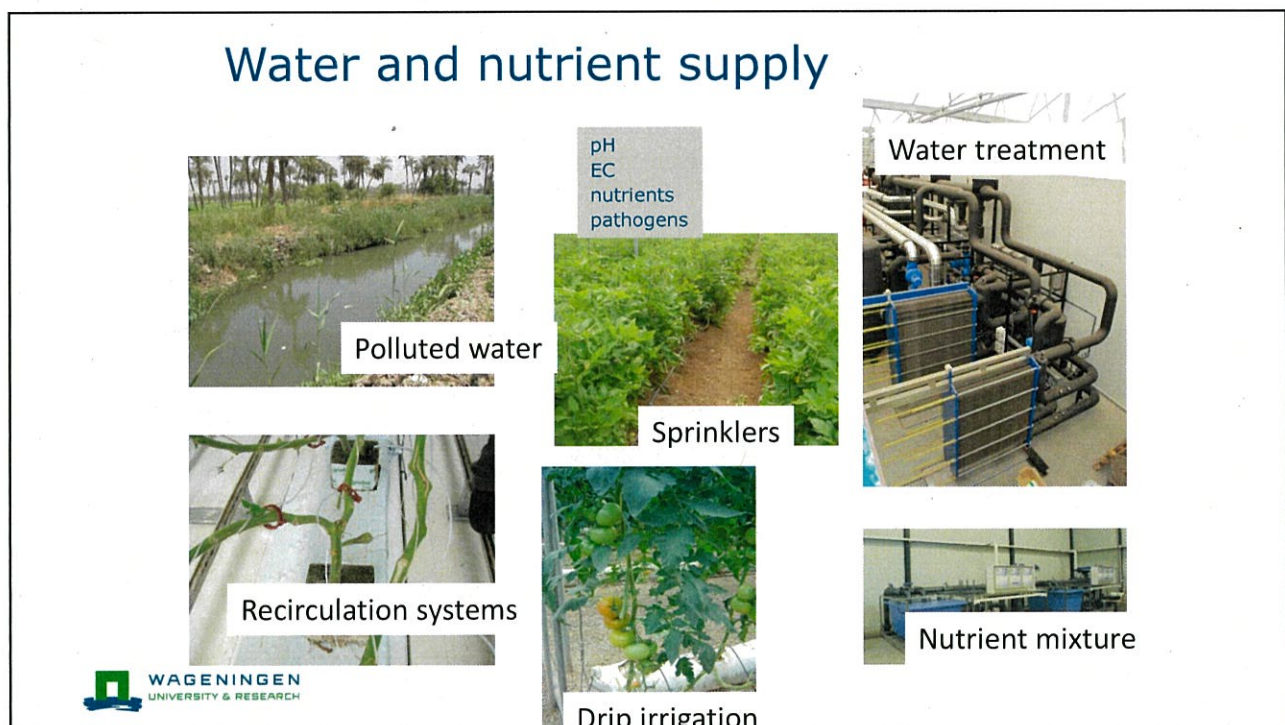
WAGENINGEN
UNIVERSITY & RESEARCH



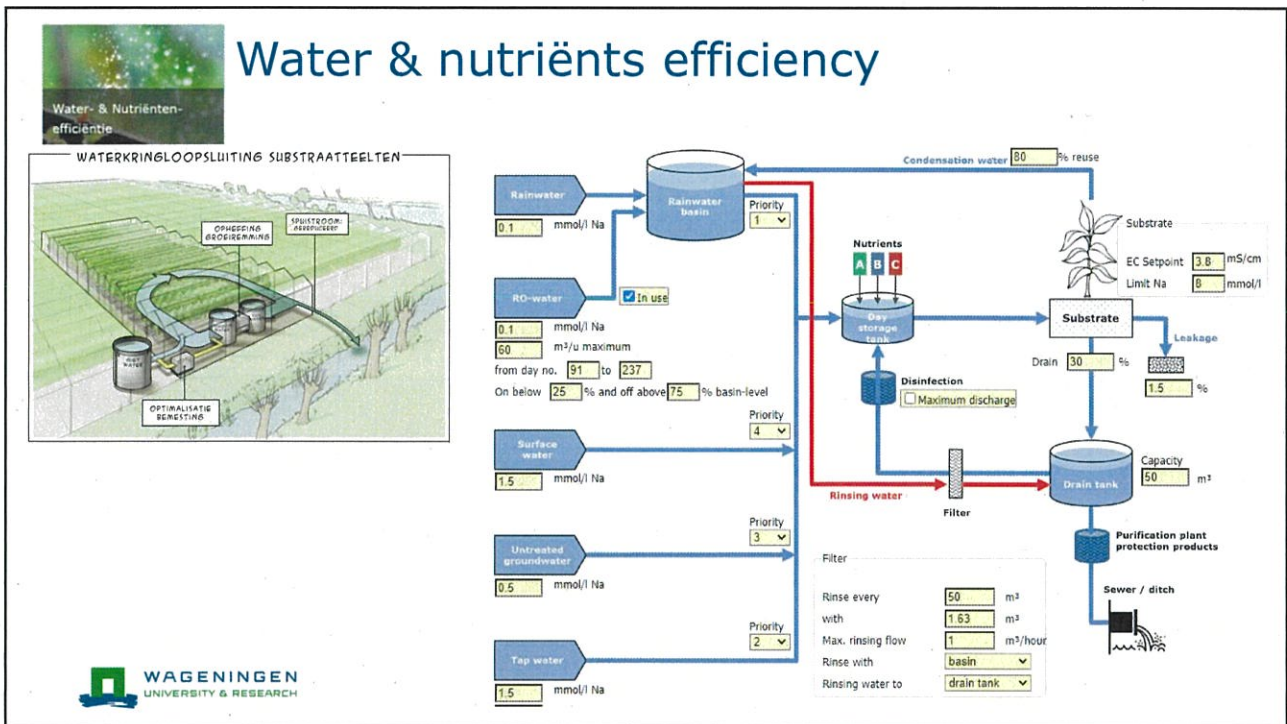
19



20

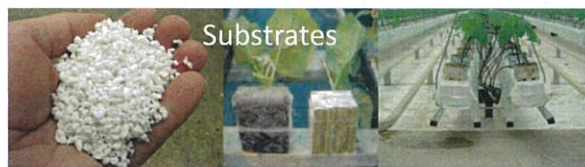


21



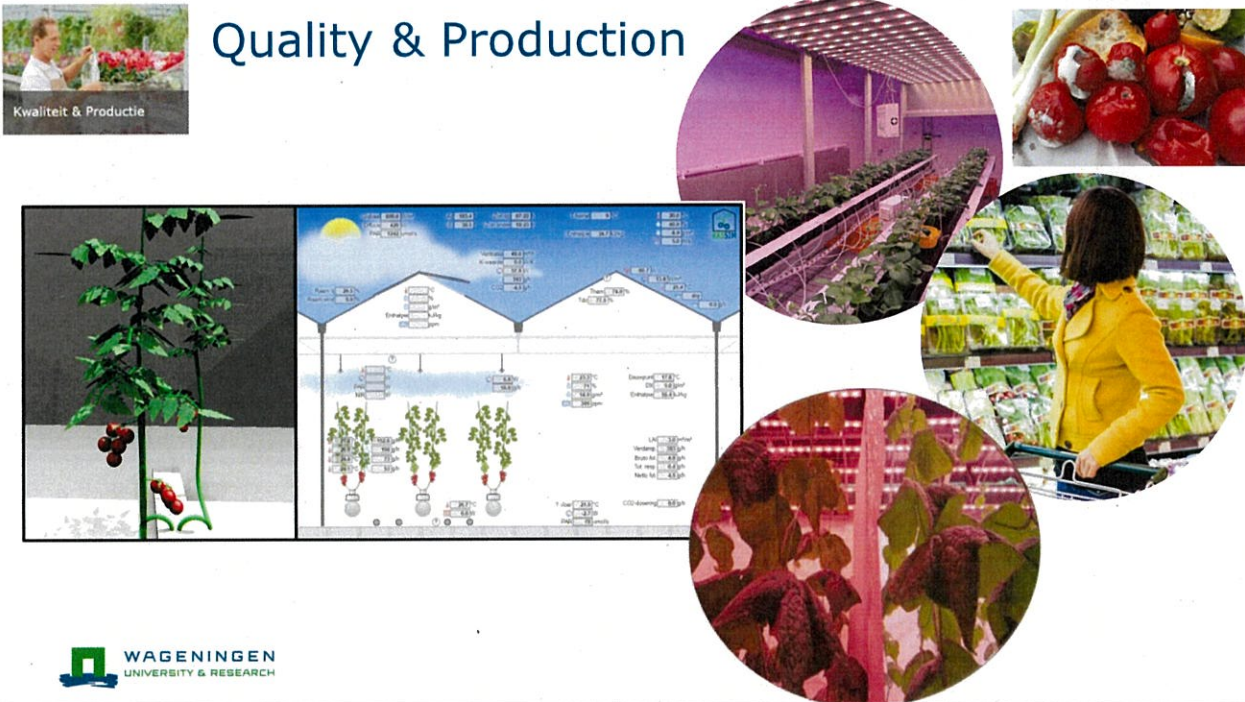
22

Growing systems and substrates



23

Quality & Production



Kwaliteit & Productie

WAGENINGEN
UNIVERSITY & RESEARCH

24

Product quality – research topics

Sensory & visual panels



Sensory models

- Flavour Destructive
- Flavour Non-destructive
- Visual



25

Keys to success

- Get the right cultivar
- Have the best possible crop management
- Make sure this results in good consumer liking
- Have very good post-harvest logistics, storage and retail
- Make sure consumers don't throw



FarmedHere, Chicago, IL
Source: <http://www.freshfruitportal.com>



Mirai, Japan,
Source: <http://awareness-time.com/the-future-of-food-take-a-look-inside-the-worlds-biggest-indoors-farm/>

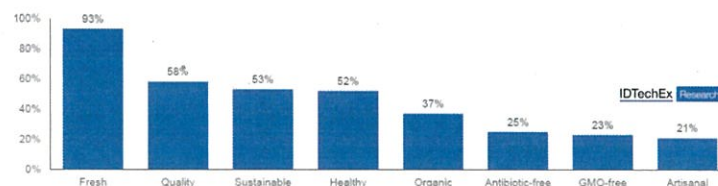
Indoor Plant Production / Plant Factory / Vertical Farm

Advantages

- Minimal land use,
- Minimized water and nutrient use
- Fresh, pesticide-free produce
- Regardless of climate or location, year-round.

Challenges

- High energy and facility installation costs
- Cultivation technology and protocols are being established
- High-level training required
- Improvement of environmental homogeneity
- Need for automation



A 2017 consumer study on the most important attributes in purchasing local food.

Situation in the tropics

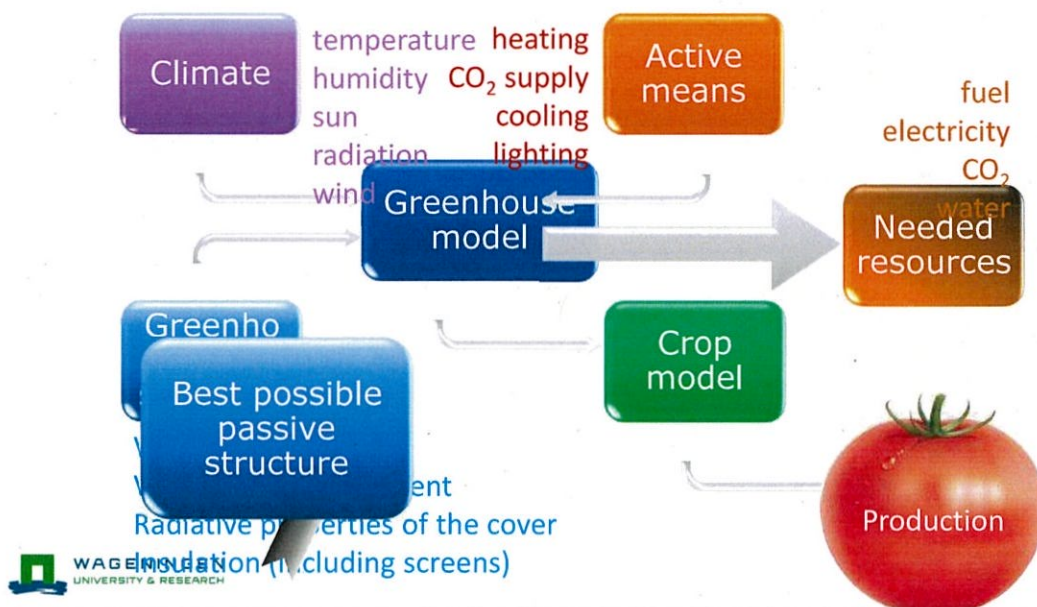
- Growing demand for high-quality produce
- Tropical climate:
 - high temperature and air humidity
 - high wind speeds
- A variety of suppliers of greenhouses & installation
- Variation in technology level
- Need / willingness to innovate
- Natural ventilation
- High insect and disease pressure



28

28

The adaptive greenhouse method:



29

Design criteria for a greenhouse in the tropics

- **Covering material:**
 - Nets/plastic/glass; screens
 - Good light transmission
 - Protection against sun
 - Good insulation against pests
- **Construction:**
 - Good light transmission
 - Ventilation for temperature and humidity management
 - High volume
 - Wind proof
- **Installation**
 - Clean water
 - Substrate
 - Good and efficient cooling
 - Automation
- **Sustainability:**
 - water
 - nutrients
 - economics
- **Knowledge:**
 - Sanitation
 - Crop, water, nutrient management
 - Delegate!
- **Market**
 - Crop
 - Variety

30

Greenhouse construction

Make use of natural ventilation, it is for free!!!
Air exchange → temperature/humidity control
Air exchange → natural CO₂ supply



31

Thanks for your
attention!

Anne Elings

anne.elings@wur.nl

+31 6 537 11 095



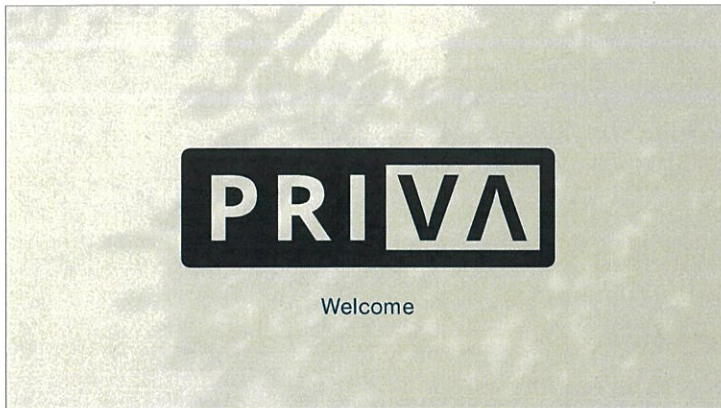
Wageningen University & Research
Business Unit Greenhouse Horticulture & Flower Bulbs
P.O. Box 644, 6700 AP Wageningen
and P.O. Box 644, 2665 ZG Bleiswijk
glastuinbouw.wur.nl



To explore
the potential
of nature to
improve the
quality of life

32

附件 8. Priva
(2025.9.18)



PRIVA
The Experts' Choice

Welcome

Dennis de Wit
Account Manager Horticulture Europe



2

Priva in numbers



- > 40 years
Experience in Building automation
- > 65 years
Experience in Horticulture
- > 10 years
Experience in Indoor Growing
- > 600 employees
with 120+ colleagues working in product development
- Worldwide
represented by 17 Priva offices and by a worldwide network of partners and dealers in over 40 countries.



3

<https://www.priva.com/nl/compliance>

18 Branche Offices

- > 110 countries
- > 450 partners
- > 60.000 projects



Priva presence in Asia

Priva China Beijing

- Huixin Plaza building A unit 901
8 Beichen East Road
100101 Beijing
Chaoyang District
China
+86 10 64 94 02 80
service.cn@priva.com

Priva SE Asia

- Bangkok 3/F Summer Hill,
Spacore Summer Hill,
1106 Sukhumvit Rd,
Prakhanong, Khlong Toei,
Bangkok 10110
Thailand
+66-02 012 5100
manuel.madani@priva.com

Priva India

- Botanical Garden Road
Hyderabad
500064
Telangana
+91 81211 01297
raghu.kambhampati@priva.com

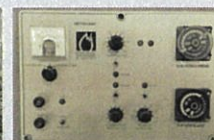


5

History of Priva



Heating & CO2



Thermostat & timers



Analog Controls



Digital control



Climate & Irrigation integrated



Model-based controls

That's what we do



Horticulture

We help entrepreneurs to take further steps in their development. From Mexico to China and from multi-field plastic greenhouses to closed high-tech greenhouses.



Building automation

We create a pleasant working environment where people perform better while reducing energy consumption.



Indoor cultivation

By combining our knowledge, we create perfectly controlled environments that result in high yields with the highest possible quality.

PRIVA

Priva Building Automation In numbers



40+

Years of experience in building automation

40k

Successfully installed Priva Building Management Systems

40%

of Dutch Office buildings have a Priva system



65+

Years of experience in horticulture

100+

Countries represented by Priva

400+

Priva Distributors Worldwide



PowerPoint Template

Building automation

Building automation



Lely Group, Maassluis
Optimal control with Priva ecoBuilding

"Ultimately, our mission is to make the world a better place and leave good for future generations. That's what we're doing it for."



International School Amsterdam
HVAC Management

All systems can be viewed at a glance using the Priva Building Operator app. Everything is connected: both heat and cold can be transported from one system to another.



St. Paul's Cathedral
Energy efficiency with fingertip control

"The biggest advantage is the ease of use. The frontend is really easy to reach. In addition, St. Paul's has significantly reduced maintenance time/burden."

PRIVA



Horticulture

Horticulture



Reinhard Busigell GbR
Cucumber plants

"The move to Priva exceeds my expectations. My greenhouse is now optimally equipped for energy-efficient and future-proof production."



Eulhyun Kim
Strawberries for larger retailers

"In our community, Priva is the definition of air conditioning and the operation of a modern greenhouse, which has given us the confidence and it's going great."



Meewissee Roses
4.3 ha Roto Naomi-Rosen

"I'm always open to innovation, as long as I understand what it's all about, and I'm confident they will add value."

PRIVA

14



Indoor cultivation



15

Indoor / Urban cultivation



Agrotopia Belgium
Largest rooftop park in Europe

With its 6,000 square meters of cultivation space, the research center offers plenty of space to develop, test and demonstrate new technologies under real conditions.



Endless Acres of Farms
Fruit and vegetables from indoor cultivation

If a container farm equals two acres of farmland, imagine what you can grow with 80 acres.



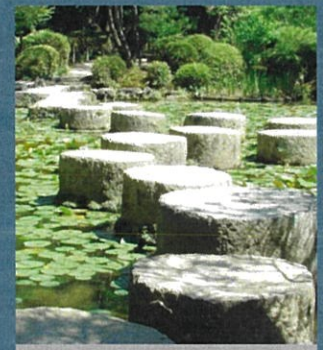
Herbs
Medicinal herbs grown in Canada

Health Canada Licensed producer of medicinal herbs in North America.

PRIVA

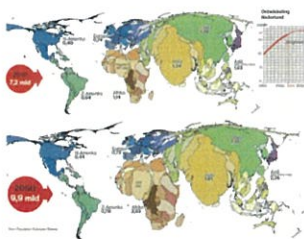
16

To increase food production comes often step by step...



17

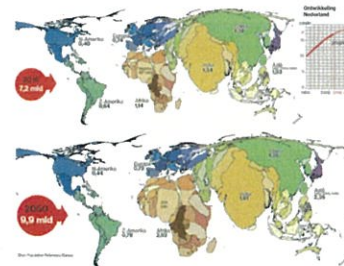
expected growth to 9.9 Billion People (+37% in 34 year)



<http://www.prb.org/>

PRIVA

expected growth to 9.9 Billion People (+37% in 34 year)



All those people have to eat and drink...



<http://www.prb.org/>

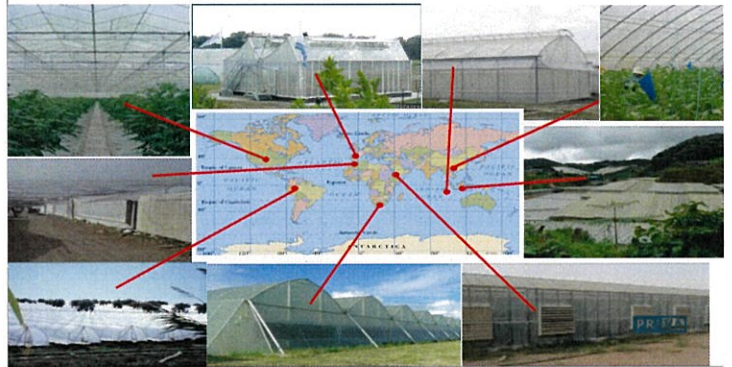
PRIVA

The horticulture industry is very diverse

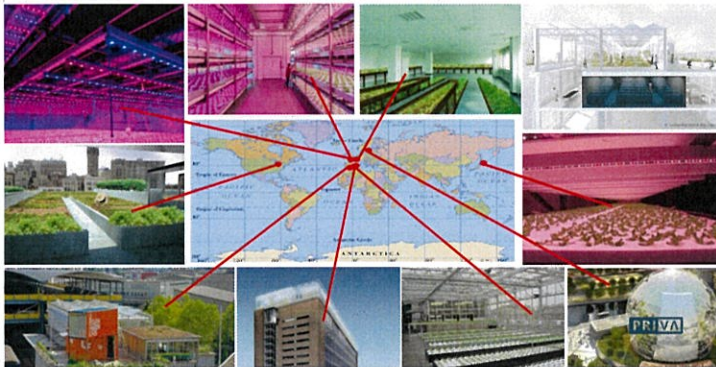


PRIVA

A lot of different types of greenhouses ...



A lot of other ways of growing plants ...

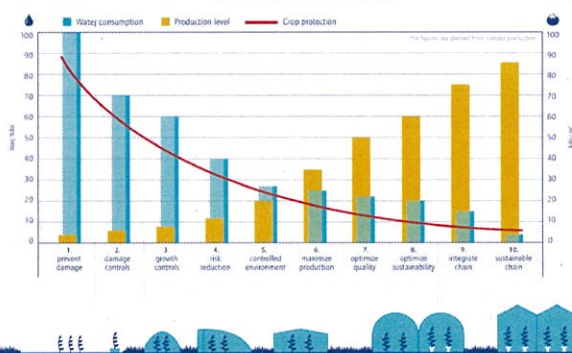


A lot of training centers worldwide ...



STEPPING STONES

For example:
a tomato cultivation ...



PRIVA

Steppingstone 1: Prevent damage

- Growing in soil
- Water by hand
- No nutrients
- No crop protection
- Local market

100 L
5kg



PRIVA

Steppingstone 2: Damage Control

- Plastic tunnels
- Growing in soil
- Nutrients by hand
- Disease control
- Local market

70 L
7kg

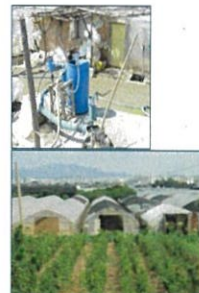


PRIVA

Steppingstone 3: Growth Control

- Stock fertigation
- Simple irrigation unit
- Growing in soil
- Plastic tunnel
- Disease control
- Local market

60 L
8kg



PRIVA

Steppingstone 4: Risk Reduction

- Simple irrigation unit
- Climate control by hand
- Simple crop protection
- Local market/Export
- Disease control
- Growing in soil
- Plastic tunnel

40 L
12kg



PRIVA

Steppingstone 5: Controlled Environment

- Cost price focus
- Thermostats (on/off)
- Growing in soil
- Plastic tunnel
- Simple Irrigation System
- Disease control
- Local market/Export

27 L
20kg



PRIVA

Steppingstone 6: Maximizing production

- Disease control
- Water control
- Climate control
- Cost price focus
- Crop control
- Plastic tunnel
- Marketing channel

24 L
35kg



PRIVA

Steppingstone 7: Optimizing quality

- Growing in substrate
- Quality control
- Labor management
- Water treatment
- Biological treatment
- Local and export market

22 L
50kg



PRIVA

Steppingstone 8: Optimizing sustainability

- Integrated controls
- Tracking & Tracing
- Greenhouses
- Growing in substrate
- Water re-use
- Local and export market



Steppingstone 9: Optimizing and integrating chain

- Energy supplier
- Added value focus
- Biological treatment
- Closed water loop
- Water disinfection
- Marketing
- Tracking & Tracing



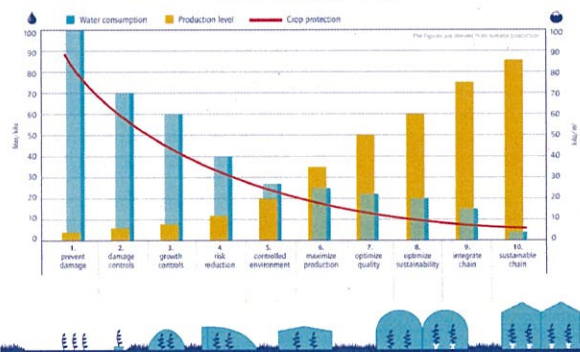
Steppingstone 10: Sustainable Urban farming

- Footprint driven (CO_2 , H_2O)
- Energy grids
- Closed water systems
- Market driven production
- Optima-houses

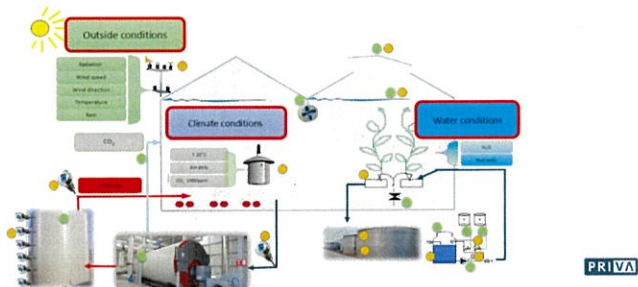


STEPPING STONES

For example:
a tomato cultivation ...



Integration all processes



Climate condition controls for:

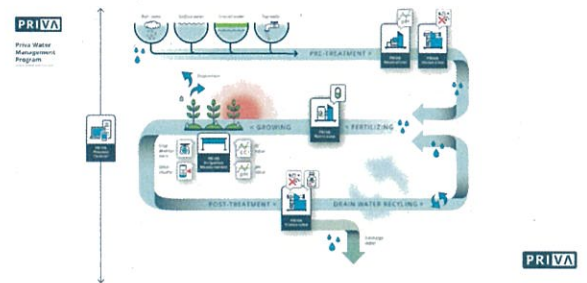
- Ventilation systems
- Heating systems
- Screens
- Lights
- Fans
- Humidification
- CO₂-Dosing



Computer & sensor technology



WATER condition CONTROLS like:



Example: Priva WATER units



Priva creating a climate for growth for among others:

- Vegetables
- Soft fruits
- Cut flowers
- Potted plants
- Flowering plants
- Medicinal herbs
- Propagation & Seeds
- Universities & Research



Poly tunnels



Plastic greenhouses





Glass greenhouses

PRIVA
The Experts' Choice

Thank you!



Assignment 9. Dutch Greenhouse Delta

(2025.9.18)



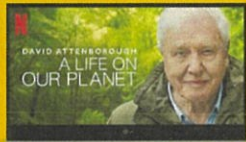
Mirjam Boekestijn Dutch Greenhouse Delta CEO

With more than 10 years of experience in the horticulture sector, originating from a horticulture family, I am ambitious, enthusiastic, and committed to advancing Dutch horticulture worldwide



The Dutch horticulture sector

The Netherlands is renowned for its innovative solutions in controlled environment agriculture (CEA)



“Dutch farmers have become experts in getting the most out of every hectare (David Attenborough: A Life on Our Planet, 2020)



“This tiny country feeds the world (National Geographic, 2017)



How it started?



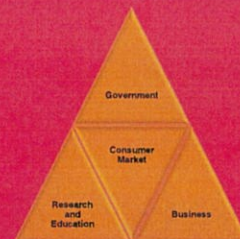
How it started?

- Dutch entrepreneurialism, trading spirit, and pioneering is in our DNA
- Optimal location and climate
- Can-do mentality and collaborative communities
- Integrated collaboration between growers, suppliers, innovators, researchers, and educators
- Market opportunities

The Dutch Greenhouse Delta



Quadruple helix approach



Global Challenges



Rising global temperature, changing Precipitation patterns and extreme Weather events



We are currently using up the resources of 1.7 earths – unless things change, we'll need 3 by 2050



By 2050 the world's population will reach 9.1 billion, mega-cities will arise



Reducing the food system's toll on biodiversity is a critical challenge (e.g., soil depletion & pollution, deforestation)



Global healthy and safe food production must increase 70% by 2050 to meet our needs



Challenges agriculture

>80% of deforestation and loss of biodiversity



Challenges agriculture

Yield fluctuation, relatively low yield and inconsistent quality



Challenges agriculture

70% of freshwater is used for agriculture



Challenges agriculture

80% of farms use chemicals and pesticides

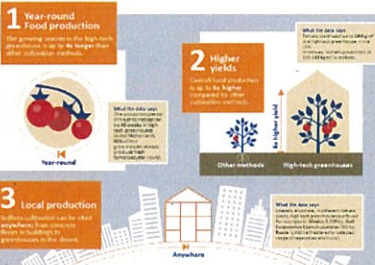


Making the step to controlled environment agriculture

- Controlled Environment agriculture (CEA)
 - CEA means using different technical solutions, from low to mid-tech, to grow fruits, vegetables, flowers and plants
- This controlled environment enables us to create the optimum climate for crops, regardless of weather conditions and outdoor environment:
 - temperature
 - humidity
 - light
 - nutrients and CO₂
- Use of substrate and cultivation systems
- Use of biological crop protection products



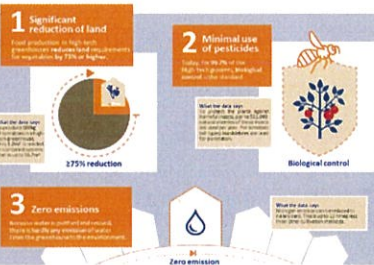
CEA ensures access to fresh food anytime, anywhere



CEA protects and saves water (and fertilizer)



CEA optimizes land use and environmental protection



Continuous innovation

- From fossil-based energy to smart energy and renewables
- Digitalization, automation, robotisation
- Application of AI
- Data analysing and data sharing
- Autonomous greenhouse growing



Together, in steps, to sustainable production locally



Introduction Dutch Greenhouse Delta

Dutch Greenhouse Delta (DGD) is a powerful international platform representing the entire ecosystem of horticultural expertise from the Netherlands.

We serve as the gateway to Dutch horticultural innovation, collaborating closely with our partners to create sustainable ecosystems that address the global demand for fresh, high-quality products.



Our purpose

In the quest for global food security and the development of sustainable societies, the need for locally produced vegetables, fruits, flowers, and plants has never been more vital.

Our collective has the ambition to contribute to the provision of sufficient, fresh products that are produced sustainably and locally.

Dutch Greenhouse Delta contributes to the well-being and lifestyle of today and future generations by greening the living environment.



Contribution to UN's Sustainable Development Goals (SDGs)

2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



8 DECENT WORK AND ECONOMIC GROWTH



17 PARTNERSHIPS FOR THE GOALS



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Together we are Dutch Greenhouse Delta



Farming the Future



Creating sustainable ecosystems together



Our integrated approach delivers a comprehensive Fork2Farm solution, ensuring efficiency across the entire value chain. By fostering extensive partnerships with local stakeholders and industries, we realize a complete system that provides fresh, affordable products. At the same time, we enhance the shift towards renewable energy, advocate for responsible water usage, and support the development of a sustainable economy.



Creating sustainable ecosystems around the world



Promotion & Pre-Business Development



Knowledge2Knowledge programs



Program K2K Saudi Arabia

75

Trainees



130

Hours of education



27

Trainees



200+

Online participants



Team



Hilma Broekmans
CEO



Gerit Oel
General Manager



Derek Rasmussen
General Manager



Gerrit van der Meer
General Manager



Daria van der Heijden
General Manager



Rianne Vink
Marketing & Communications



Yusuf van der Meer
Marketing & Communications



Frederik Vroomer
Finance Manager



Michael Ma
Representative China



Murtaza Khan
Representative India and Asia



Taranjit Kaur
Representative India and Asia



Abdulaziz Alshahr
Representative Saudi Arabia



Ahmed Aron
Representative Egypt



Let's Connect

to Grow the Future Together.

✉ info@dutchgreenhousedelta.com

☎ +31 6 25 27 60 71

📍 Europa 1, 2672 ZX Naaldwijk, The Netherlands

🌐 dutchgreenhousedelta.com

Follow us

- 📱 dutch-greenhouse-delta
- 🌐 Dutch Greenhouse Delta



Wechat



Website



