



De plant aan de macht  
door data-analyses en monitoringstools

# Changing companies

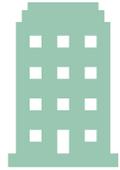


- Average of 2 hectares



- Average of 10 hectares

# 20 years of LetsGrow.com



Vlaardingen, 2001



increase ROI through Data Driven solutions



Spin-off Wageningen University,  
currently part of Batenburg



2000+ customers over 40+ countries



Cloud Platform, data collection,  
share & analysis

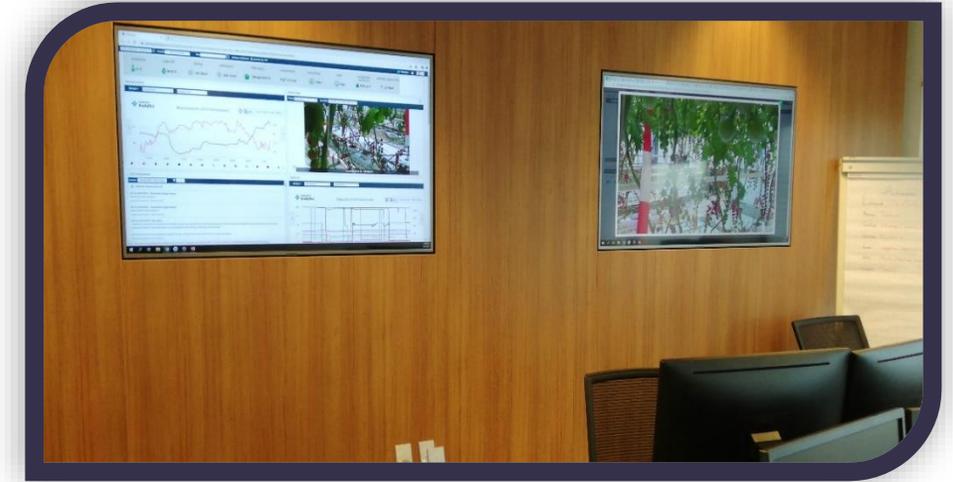


40+ colleagues

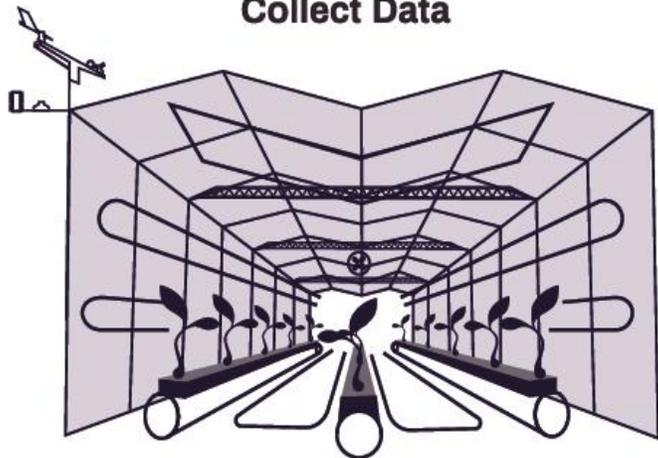


If you want to go fast go alone, if you want to go far go together!

# Control Room



### Collect Data



12°C  
 N 4m/s  
  
 40°C  
 80%

**Partners**  
 Manual Input  
 Sales Systems  
 Climate Computers  
 Machines & Sensors

### Add Value



Researchers



Growers

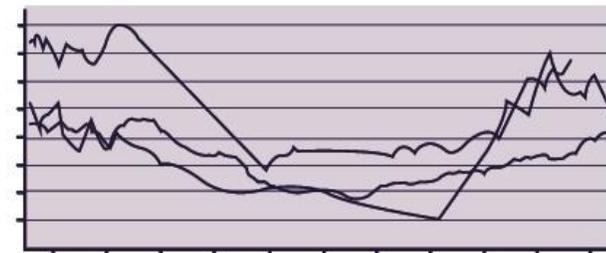


Crop Consultants



**Calculations**  
 Analysis Tools  
 Growth & Plant Models  
 Artificial Intelligence Engines

### Information



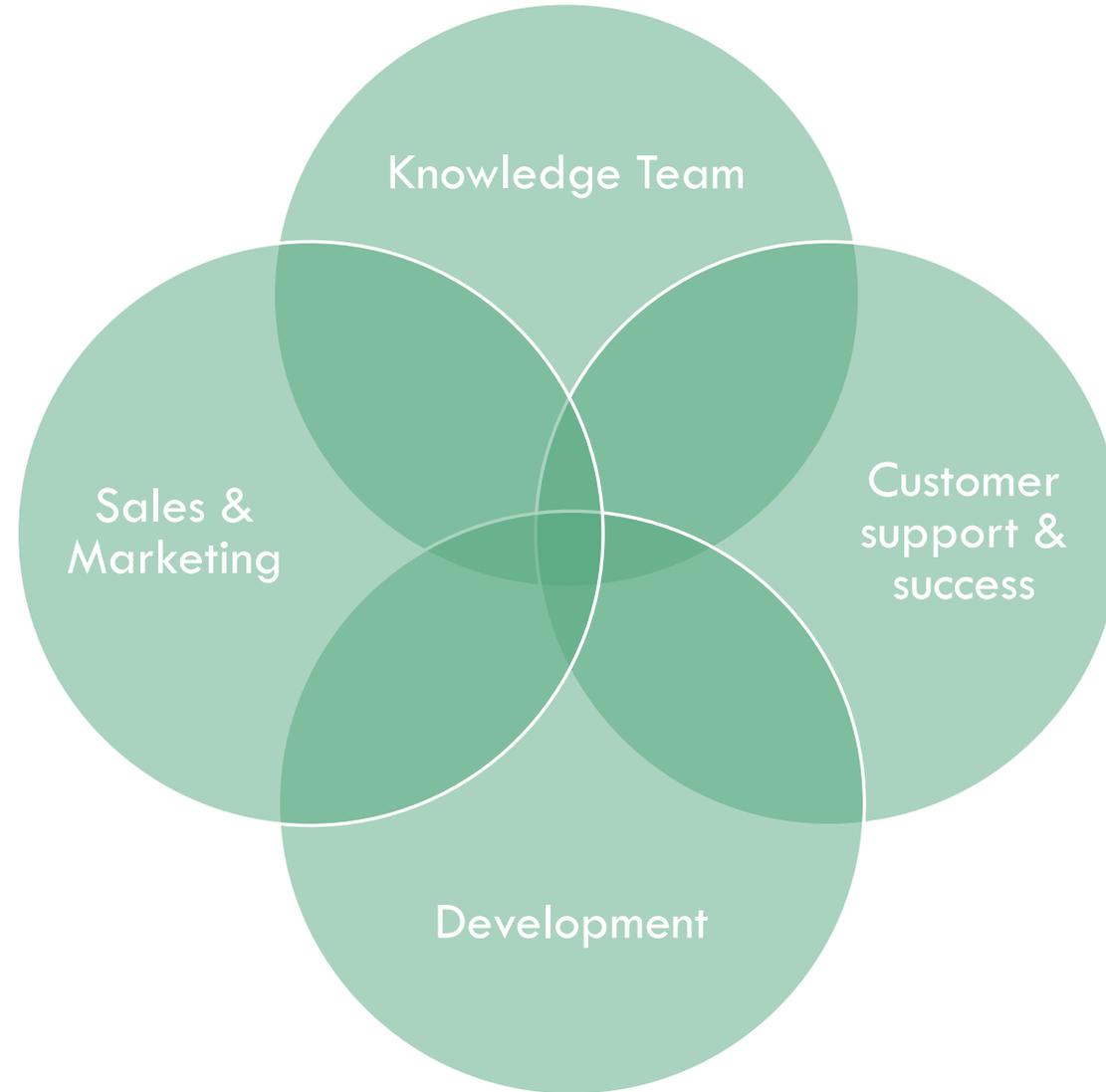
**Research**  
 Consultancy  
 Decision Support  
 Growth Optimisation  
 Compare & Benchmark



SHARE THE INFORMATION WITH WHO YOU WANT



# Team composition



# Wat is Plant Empowerment?



## A unique cultivation method Plant Empowerment

As a grower, optimising your cultivation results is essential for success. At the same time, we need sustainable solutions for the enormous challenge to feed the growing world population with less resources and minimal emissions. Surprisingly, the solution for sustainable cultivation and optimal results is provided by nature itself. This unique growing method is called Plant Empowerment.

- Plant Empowerment ▾
- Research & Education ▾
- In practice ▾
- Contact



## Plant Balances

The growth processes of a plant are mainly determined by its three balances; water, energy and assimilates. Growing by Plant Empowerment supports the plant in keeping its three balances in equilibrium. This way our plants are enabled to become strong, healthy, resilient, and efficient regarding water, fertilisers, CO2 and energy. This results in higher production and quality.

[More Plant Empowerment ->](#)

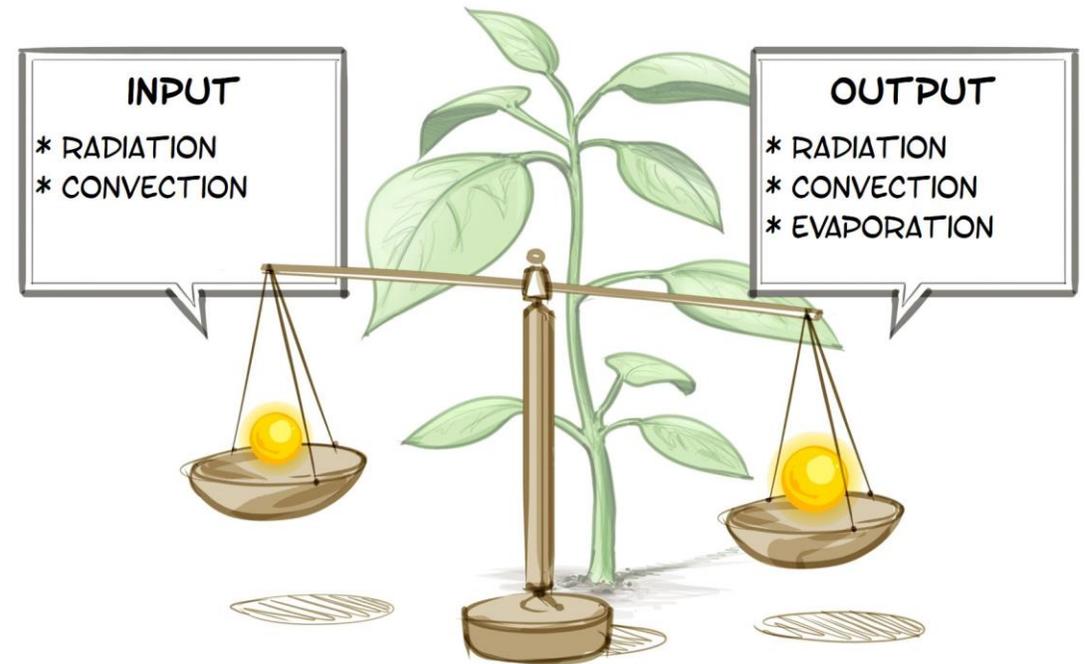
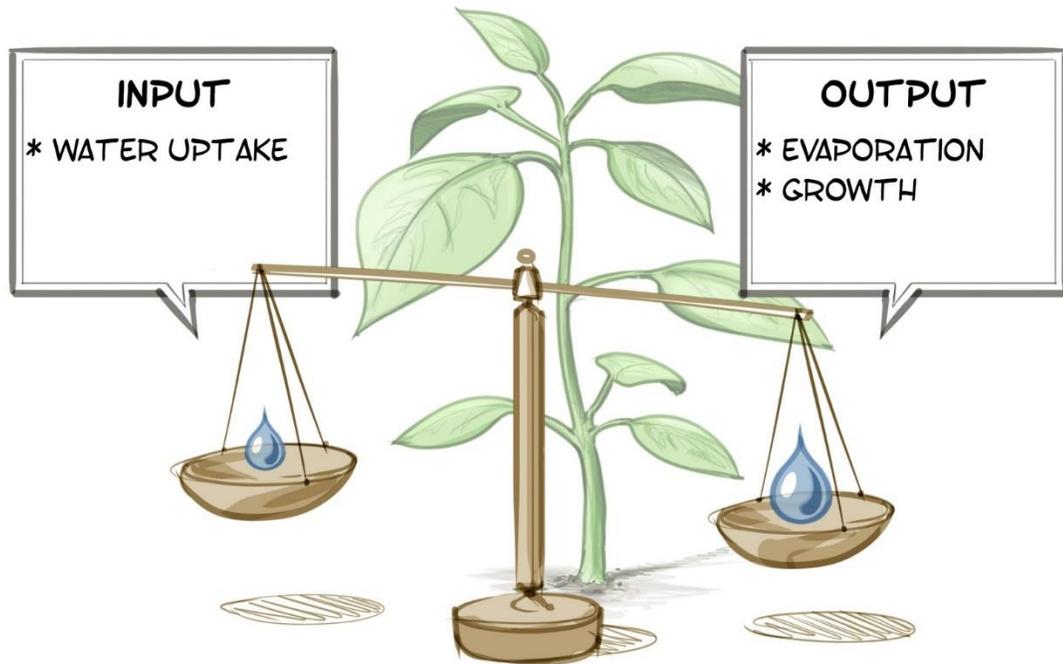
# Plant Empowerment perspectief



# Thinking in balances



# Water & Energie Balans

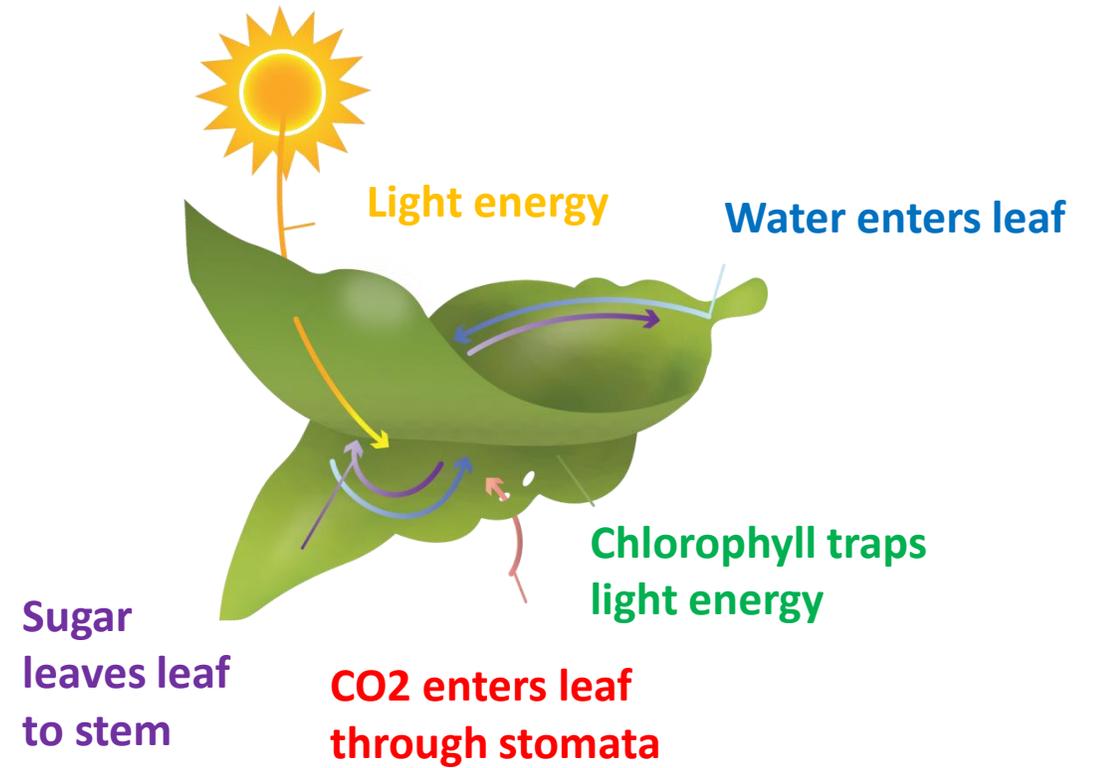
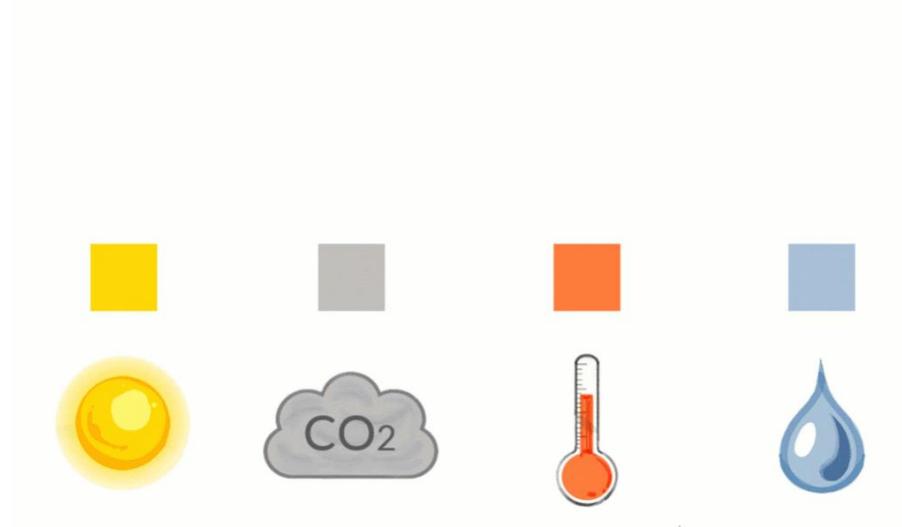


# The Limiting Factor

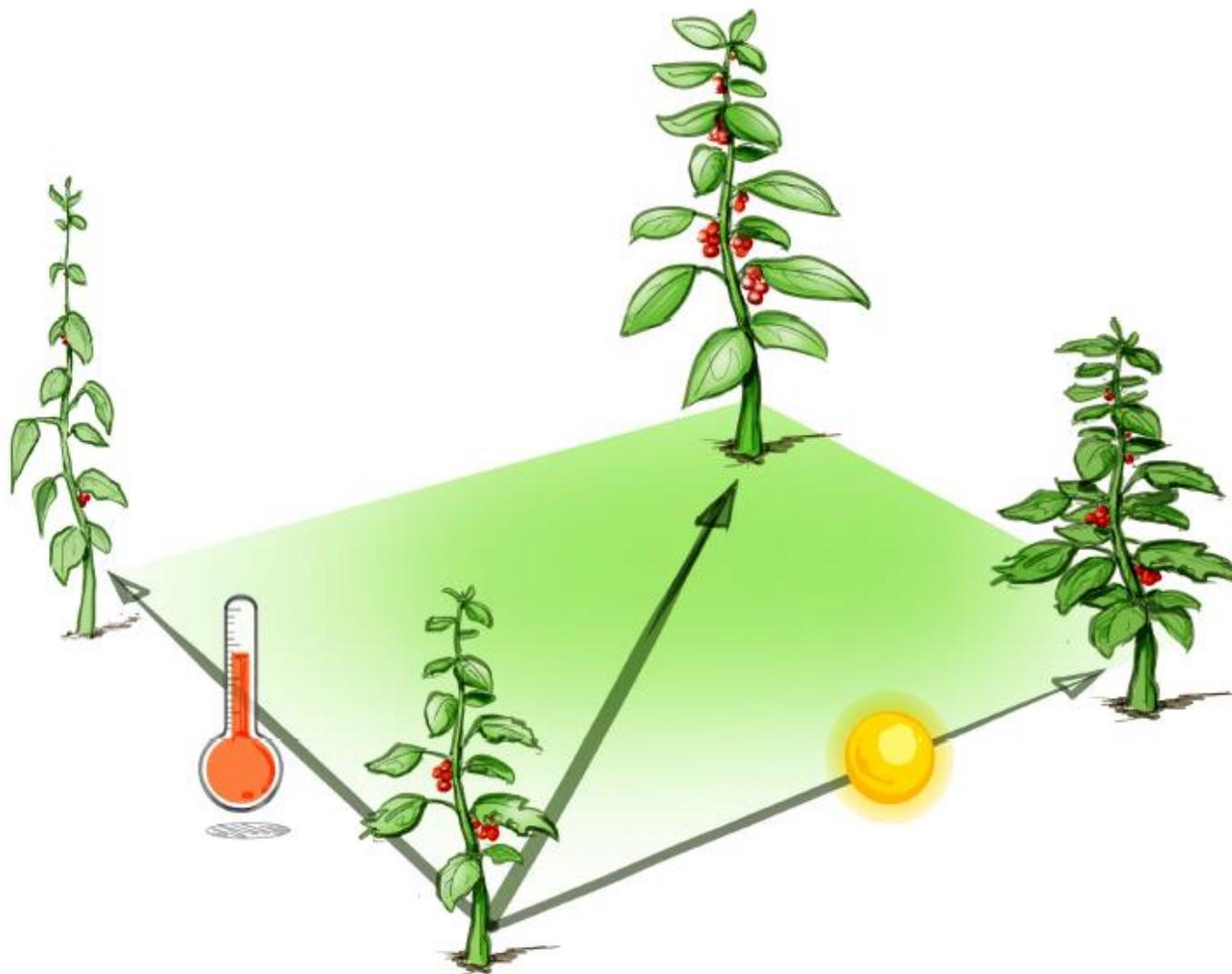
“ Total growth is dictated not by total resources available, but by the scarcest ”



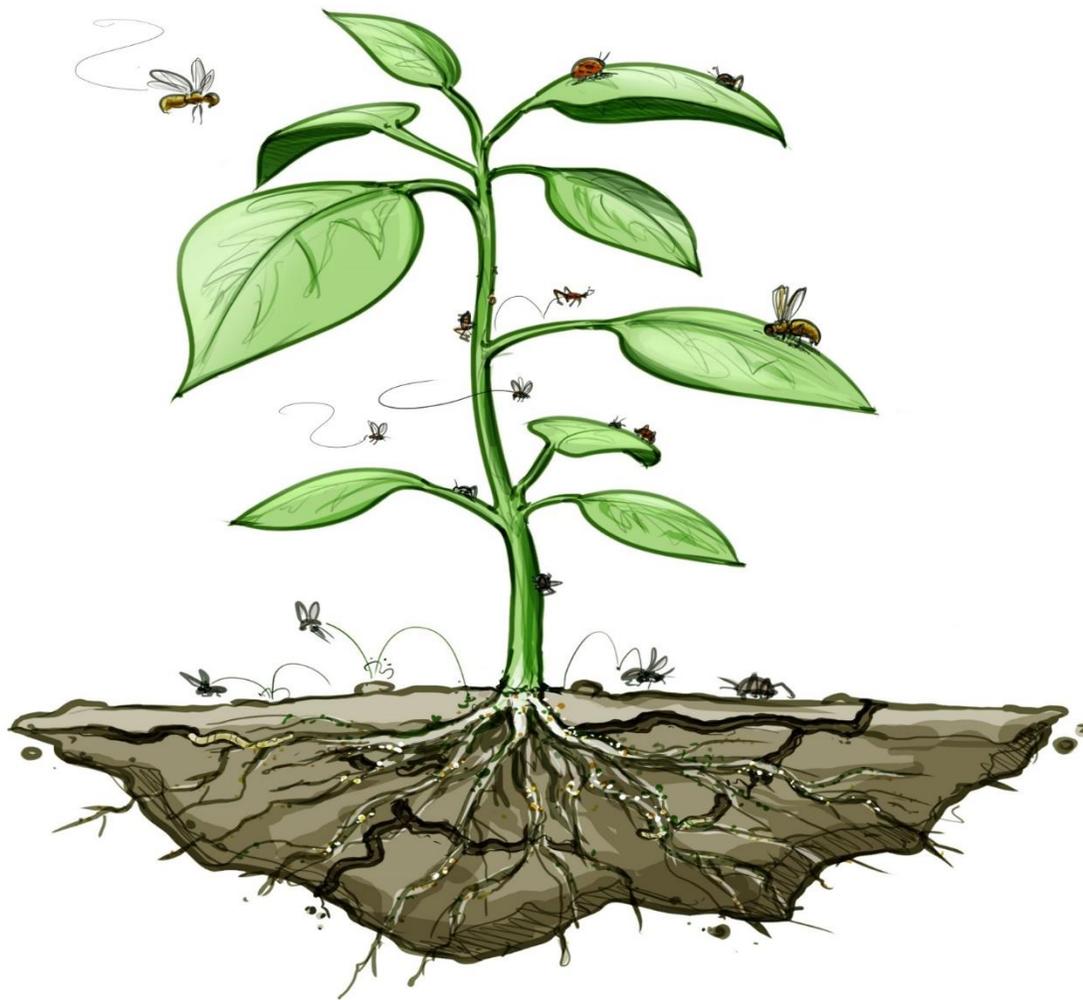
# Assimilaten Balans



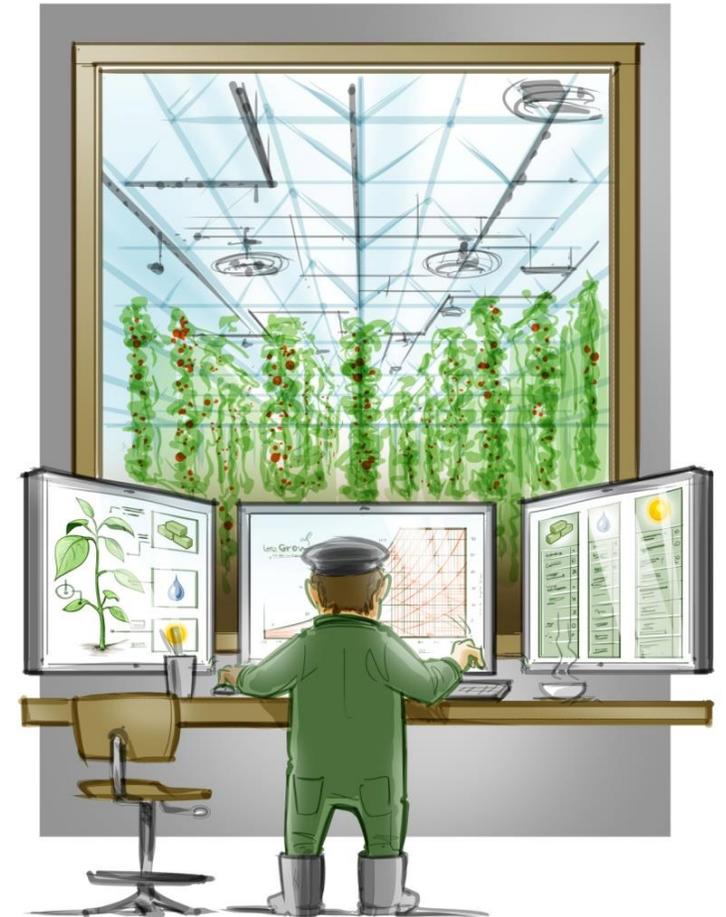
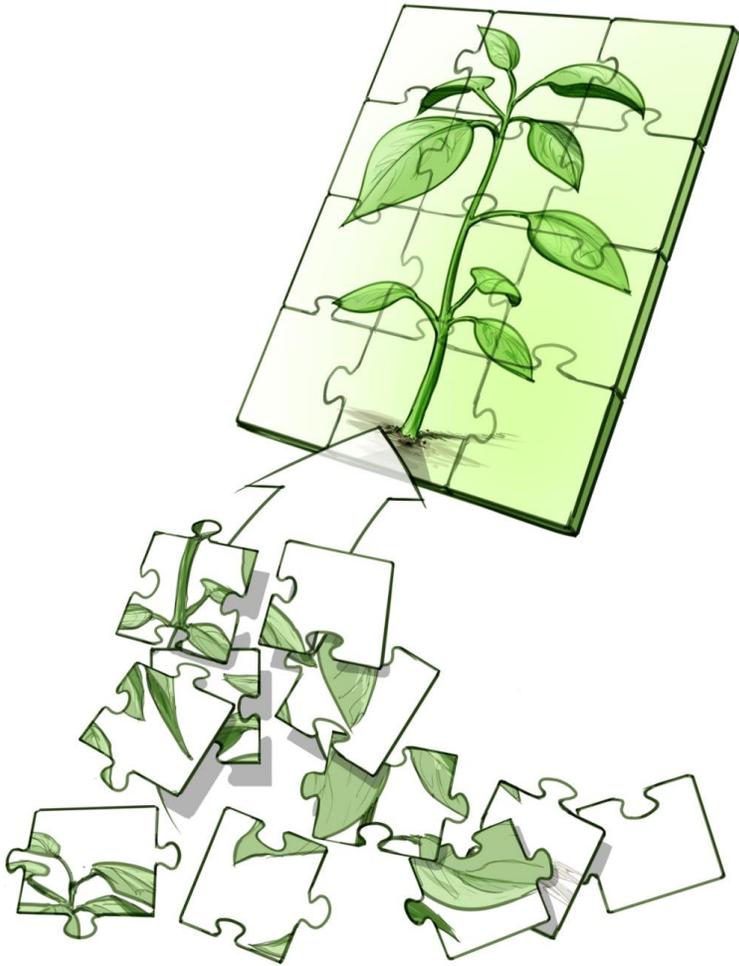
# Ratio Temperature Radiation (RTR)



# Gezonde planten zijn weerbare planten



# Plant Empowerment is the guide for optimisation



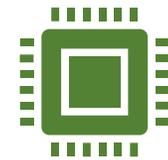
# Growing by Plant Empowerment



Controls  
(Climate computer)



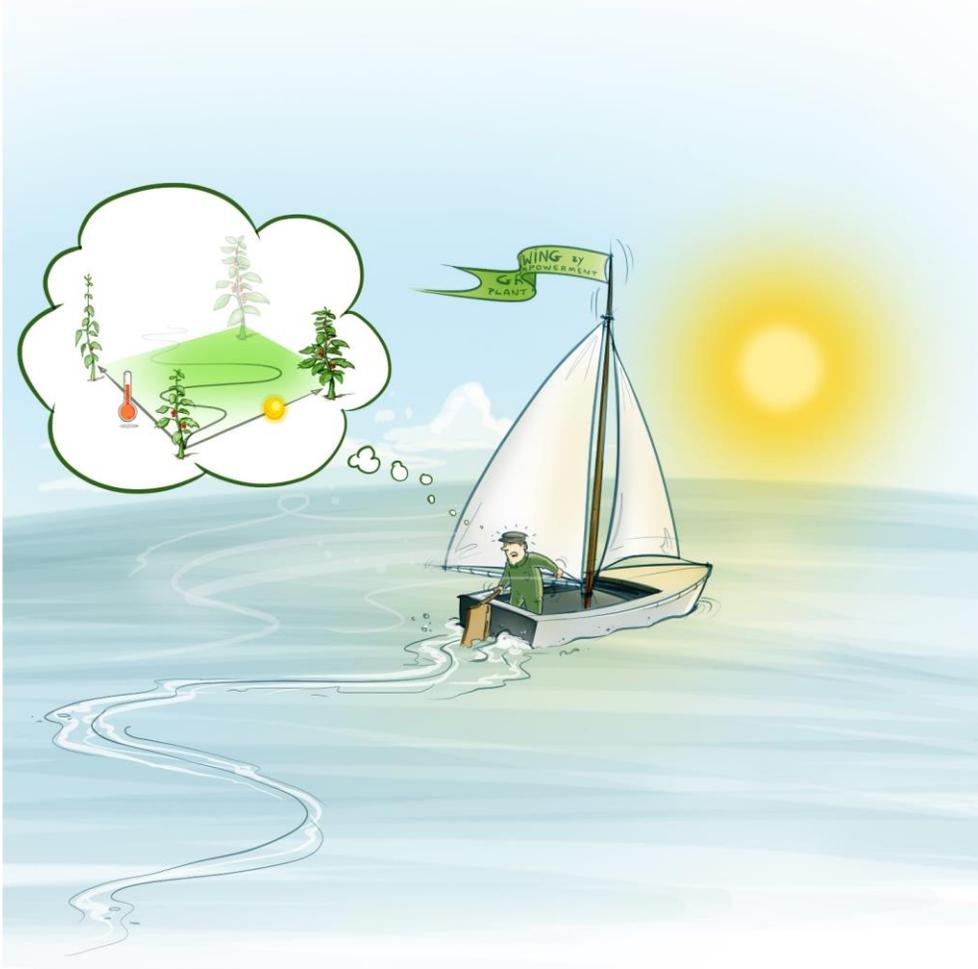
Data collection  
Data analysis (LetsGrow.com)



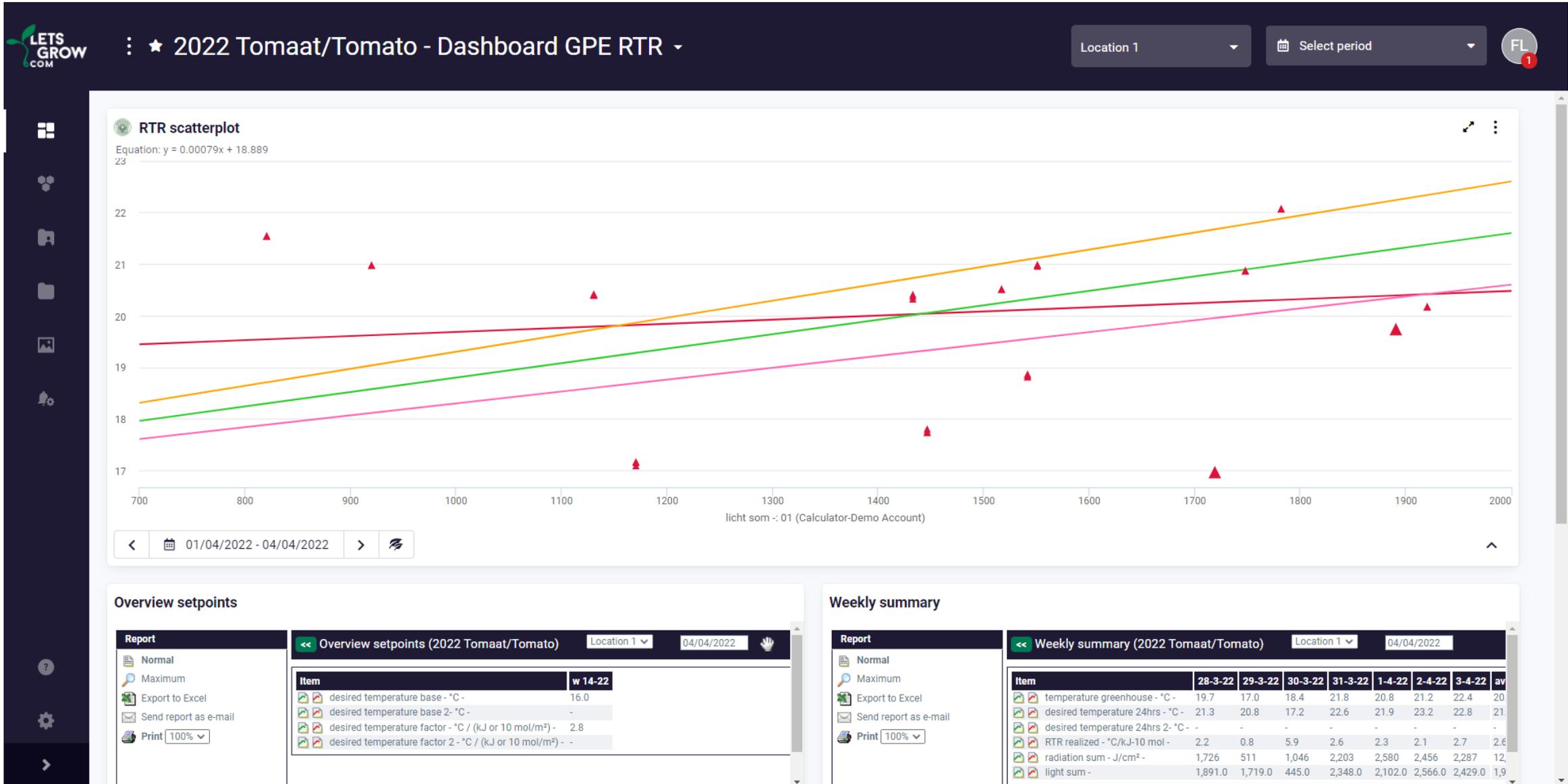
Decision supporting tools  
(LetsGrow.com)

# Plant Empowerment

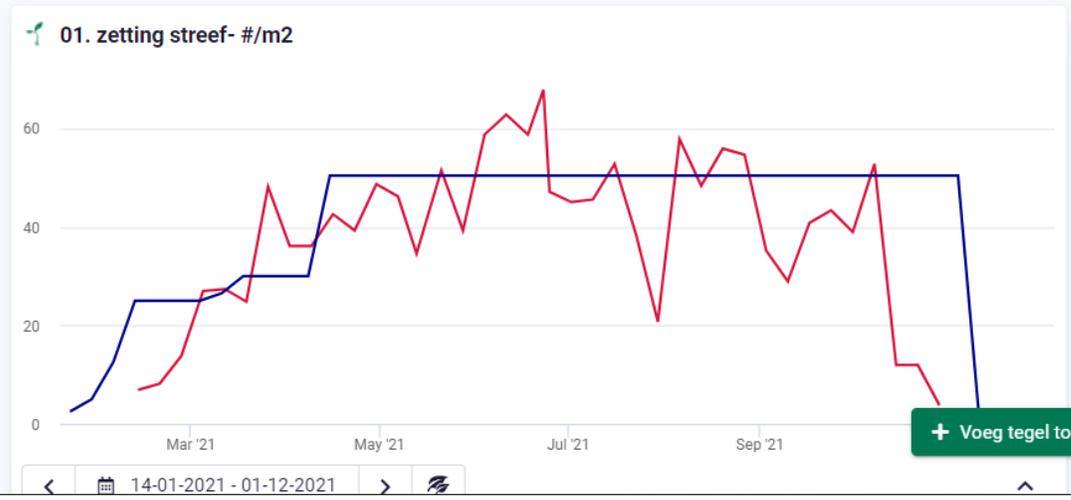
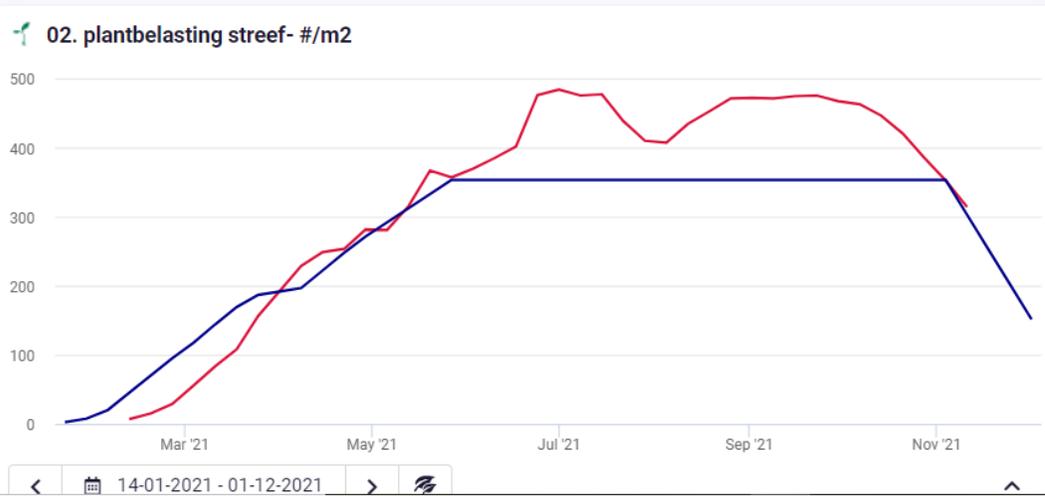
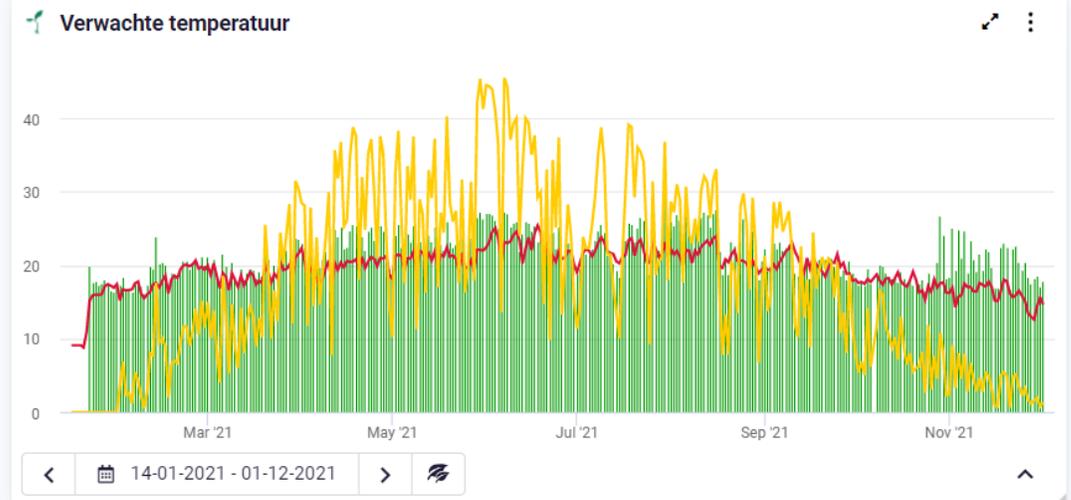
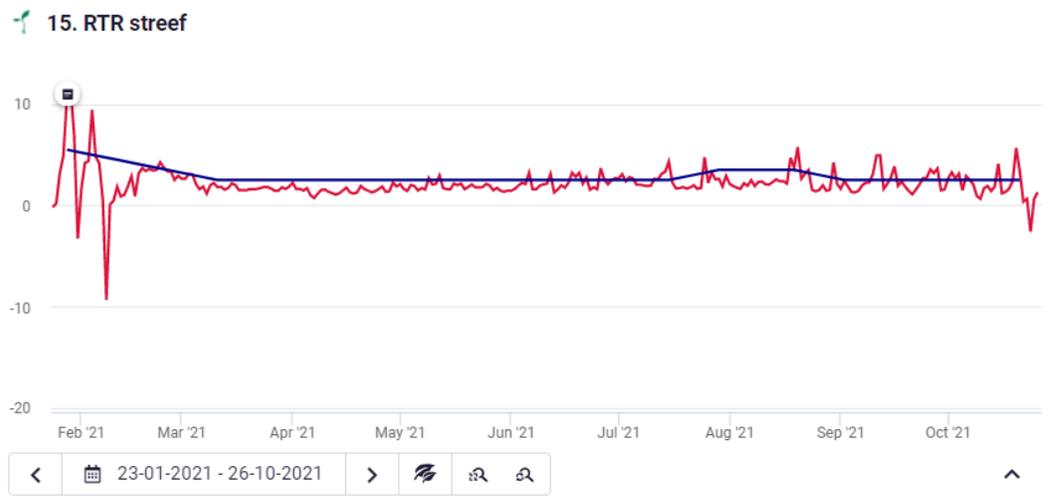
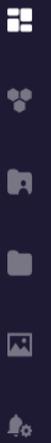
# Terug of vooruit kijken?



# Ratio Temperature Radiation (RTR)



# Target values



# Decision support

★ 2022 Decision Support Demo - DS Climate ▾

Demo ▾
Periode selecteren ▾
DA 2

### Weather and lighting forecast

31. Mar 06:00 12:00 18:00 1. Apr 06:00 12:00 18:00 2. Apr

31-03-2022 - 02-04-2022

### Temperature profile

31. Mar 06:00 12:00 18:00 1. Apr 06:00 12:00 18:00 2. Apr

31-03-2022 - 02-04-2022

### Settings

← Settings (2022 Decision Support Demo)
Demo ▾
31-03-2022

Item	31-3-22
RTR streef - °C / (kJ of 10 mol/m²) -	2,0
basistemperatuur - °C -	16,0
DS: minimum temperatuur - °C -	15,0
DS: maximum temperatuur - °C -	28,0
DS: maximum temperatuur daling - °C/uur -	5,0
DS: maximum temperatuur stijging - °C/uur -	5,0
DS: minimum DIF - °C -	1,0
DS: maximum DIF - °C -	10,0
DS: start uur etmaal - uu -	-
DS: aantal dagen vooruit - dagen -	2
DS: tuning factor -	50,0
kastemp. streef - °C -	-
kastemp. streef dag - °C -	-

Versie 2.39.21 Gebruiker: Preview

### Result

← Result (2022 Decision Support Demo)
Demo ▾
31-03-2022

Item	25-3-22	26-3-22	27-3-22	28-3-22	29-3-22	30-3-22	31-3-22
basistemperatuur - °C -	16,0	16,0	16,0	16,0	16,0	16,0	16,0
RTR streef - °C / (kJ of 10 mol/m²) -	2,0	2,0	2,0	2,0	2,0	2,0	2,0
kastemp. streef - °C -	-	-	-	-	-	-	-
kastemp. verwacht - °C -	19,4	19,5	19,0	18,1	18,2	18,5	17,4
DIF verwacht -	6,8	6,8	6,6	4,2	4,4	5,3	4,8
kastemperatuur - °C -	20,0	20,5	19,8	20,1	18,7	18,8	-

Versie 2.39.21 Gebruiker: Preview

# Working with data is a step by step process







Zonder data kan je niet telen.



Ook in 2025 hebben we telers nodig.



AI lost alle problemen op in een kas.