



30MHz

# Insights for agriculture driven by data, powered by sensors

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# 30MHz Smart Sensing Toolkit

Deployable in minutes by anyone on any device



## Any sensors

Modular and customisable industry-grade sensors capture any metric, even from the most hard to reach places\*



## DigiMesh 868MHz

Makes any sensor wireless and meshes sensors together



## Gateway

Collects sensor data and connects the internet to the sensor network



## ZENSIE Dashboard

Analytics, alerts and your real-time data. Works on any device, mobile, tablet or desktop



Main

Heatmap

Battery

Dept 23

Dept 24

Test

Priva

DEPT 1

Basil Heatmap

+



16.19 °C

Basil 24 Surface Minimum

mins last 24 hours



16.88 °C

Basil 24 Air Minimum

mins last 24 hours



0.11 kPa

Basil 24 VPD Minimum

mins last 24 hours



40.97 %

Basil 24 Humidity Minimum

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20.28 °C

Basil 24 Average Surface

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20.56 °C

Basil 24 Average Air

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0.6 kPa

Basil 24 Average VPD

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77.77 %

Basil 24 Average Humidity

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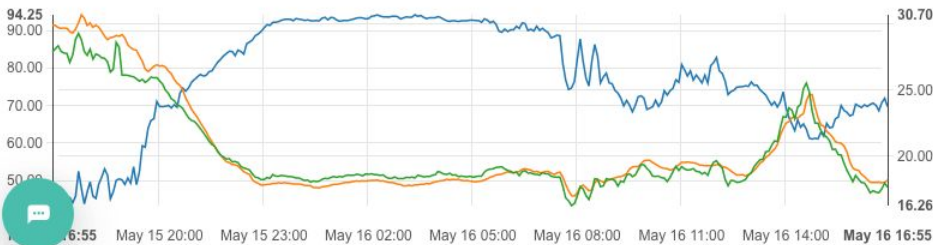
Basil 24 Surface vs Dew Point



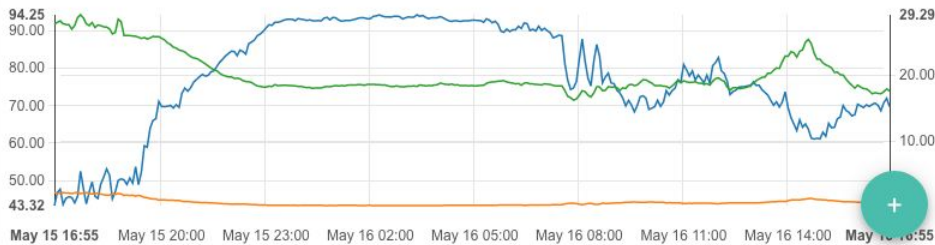
Basil 24 VPD



Basil 24 Humidity and Temperatures



Basil 24 VPD, Temperature and Humidity







# Real-time insights on your crops and environment

The more you know, the better (and faster) you can respond to changing circumstances, optimising operations and preventing unnecessary loss.

From cultivation to storage, processing and transport, 30MHz makes it easy for growers to turn data on their crops and environments into better decisions, improving and increasing yield, while reducing costs.



# 30MHz wireless sensor portfolio



# Sensor types

- Pointed Microclimate sensor
- Substrate moisture sensor
- Potted/Arable/Substrate Soil Moisture sensor
- Wind Speed/Direction sensor
- PT 100, 500, 1000
- Temperature Humidity sensor
- CO2 Sensor
- Photosynthetically Active Radiation sensor
- Airflow sensor (0-20 m/s & 0-2 m/s)
- Object Counter
- Passive Infrared sensor
- Vibration sensor
- People Counter
- Magneto sensor





# Metrics that matter

Customers can monitor metrics including:

- soil moisture and EC
- plant level dew point (frost point)
- vapor pressure deficit (vpd)
- CO<sub>2</sub>
- plant and leaf temperature of crops
- ambient temperature and humidity
- airflow
- weather (rain gauge, wind speed, light, wind speed)
- object counting



# ZENSIE - The data platform for agriculture







## Share sensor insights

Share data from your sensors with third parties. Dashboard social sharing lets your individuals outside your organization (like partners, customers or advisors) observe changing conditions in your environment in real-time.

## All your data on a single dashboard

See all your data points, from sensors to climate computers, in context on the user friendly ZENSIE dashboard.



# Notifications

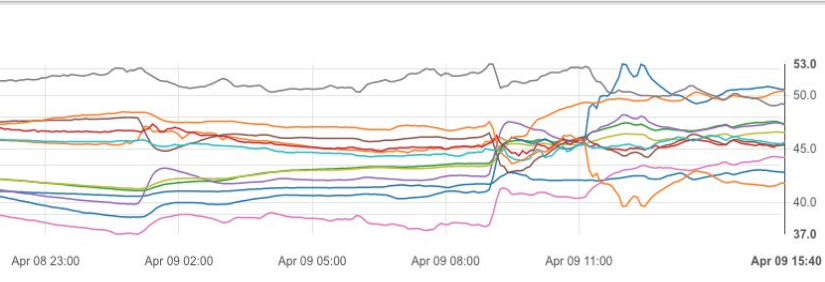
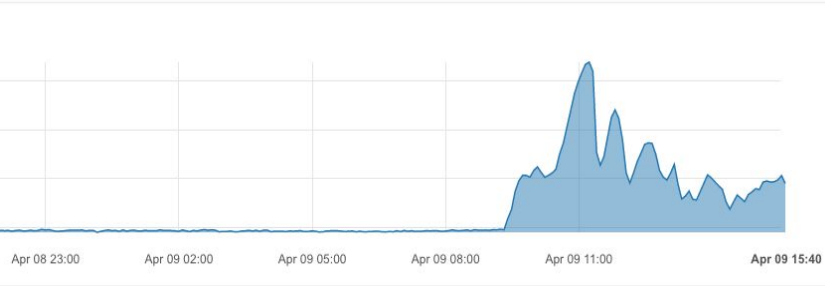
Set up custom notifications when sensor values cross certain thresholds, get alerts on uptime and connectivity, and stay up to date on each device's battery life in real-time with alerts via email, sms and pop-ups in the ZENSIE dashboard.



## Animated heatmaps

Used in combination with the image upload feature, heat maps generate color-coded visualizations of sensor value concentrations, sensor locations or signal strength across photographs, diagrams or maps.





## Image upload

Make sensor measurements tangible by plotting sensor values onto your choice of images. Visualize sensor readings on maps, diagrams, or photographs.

## A modern, powerful API

Connect data across technologies and see your insights in context. Use the ZENSIE API to bring data captured by your wireless sensors to external applications, or ingest third-party data into the ZENSIE dashboard.



## Control measuring frequency and billing

Pay only for the measurements you need, by adjusting how you measure with changing contexts. Switch measuring frequency, or pause sensors when you aren't using them.

## Export data

Data is a valuable asset, and we make sure you have full control over who accesses it. Customers are sole proprietors of their sensor data, and can easily download it in CSV.

## Check your uptime

The dashboard shows per sensor if it has been connected to your gateway 100% of the time. This lets you decide to what extent the data is valuable enough for your strategy.

## Compare locations

Track environments across the globe in a single dashboard. Create custom reports and visualizations based on location, or set one space as a benchmark for comparison.





# Customer stories

**syngenta**

  
**royal brinkman**

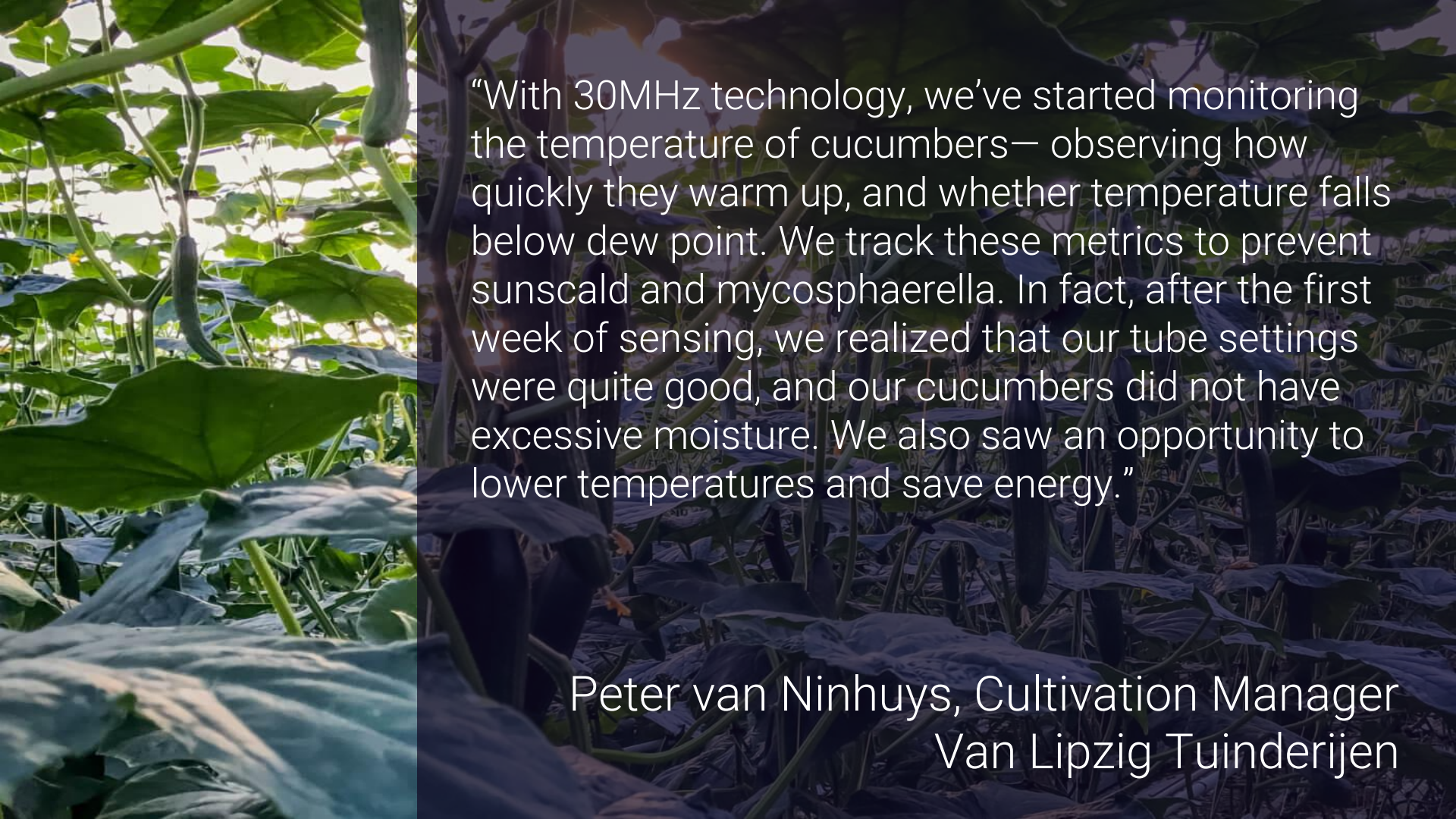


 **svensson**



The Kwekerij Moores logo features a stylized tulip flower with a green stem and leaves, integrated with a circular graphic element. Below the graphic, the text "KWEKERIJ moores" is written in a sans-serif font.





“With 30MHz technology, we’ve started monitoring the temperature of cucumbers— observing how quickly they warm up, and whether temperature falls below dew point. We track these metrics to prevent sunscald and mycosphaerella. In fact, after the first week of sensing, we realized that our tube settings were quite good, and our cucumbers did not have excessive moisture. We also saw an opportunity to lower temperatures and save energy.”

Peter van Nihuys, Cultivation Manager  
Van Lipzig Tuinderijen





Dashboard



25.8 °C

Vrucht Temperatuur



30.5 °C

Temperatuur omgeving vrucht



60.2 %

RV bij vrucht




21.9 °C

Dauwpunt bij vrucht







“Based on pointed temperature sensor data just days after deployment, we had insights that helped us optimise ventilation in our greenhouse to minimise moisture. Managing dew point can be a challenge, because our ambient reading can sometimes differ drastically from our crop-level measurement (ex: 70 vs. 95 RV). It’s interesting to see how drastically we can shorten our leaf-wetting period with the dew point sensor. I’m very happy with the product and look forward to measuring further.”

Matthijs Woestenburg  
Plantenkwekerij Gitzels

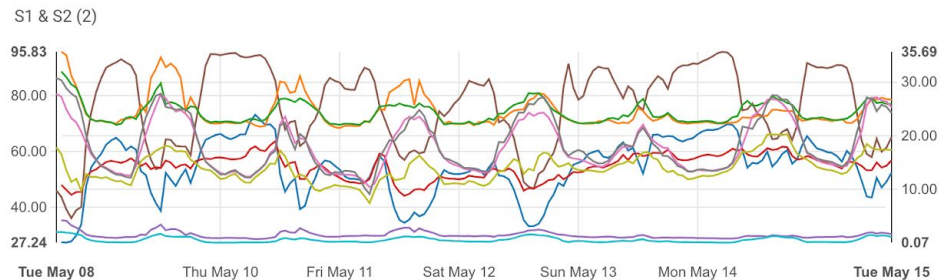
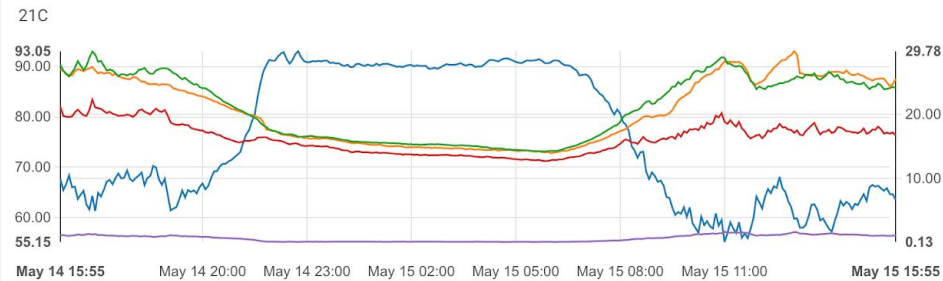
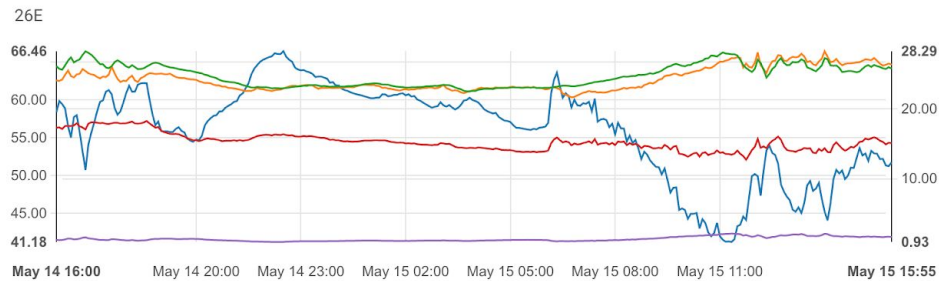





S1 &amp; 2

S1: Afd. CLEANPLANT

S2: afd. 26D





“Using the technology developed by 30MHz means that we get so much insight into the temperature of our peppers during the growth phase, and can adjust the greenhouse climate and the inputs we use accordingly. This has enabled us to continually improve the quality of our produce while cutting energy costs, and is expected to save us up to 5 percent per year in energy costs.”

Sander Berkers, Manager  
Kwekerij Moors





Frazier

Gialte

Redline

Gemiddelde

Temperatuur uren voorbeeld

heatmap


RV sensor someren

Heatmap someren



2018-04-20  
00:00





“Having greater insight into what the plant is doing with 30MHz smart sensing tech is really useful, and helps us focus on improving quality and reducing disease risk. We see the impact of capturing metrics that we previously didn’t have. It’s extremely easy to use, especially the ability to decide on how we visualise our data with various graphics, giving us the control to explore what we’re measuring in different directions. We’ve just started with Klimlink as well, so we can now pull data from external sources into one central place, and see the interactions. It’s very interesting insight and has had an impact on our crop management team, helping them focus on optimising output and growth while minimising input”

Jonathan Zwinkels  
Madestein UK Limited





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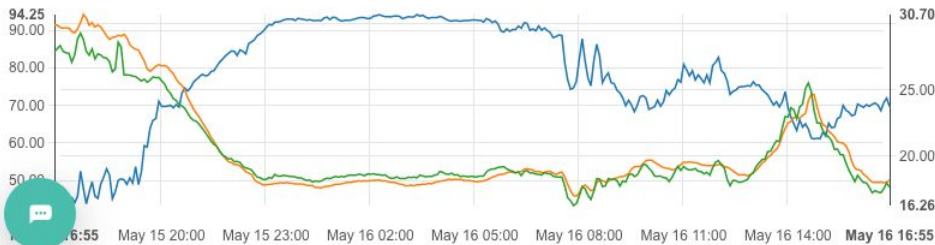
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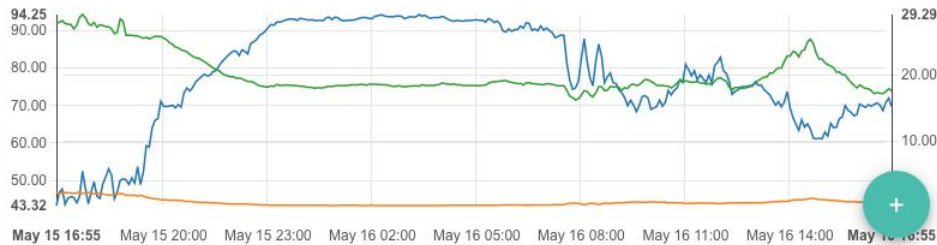
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[www.30MHz.com](http://www.30MHz.com)