



# GREENHOUSE MONITORING



## Trutina

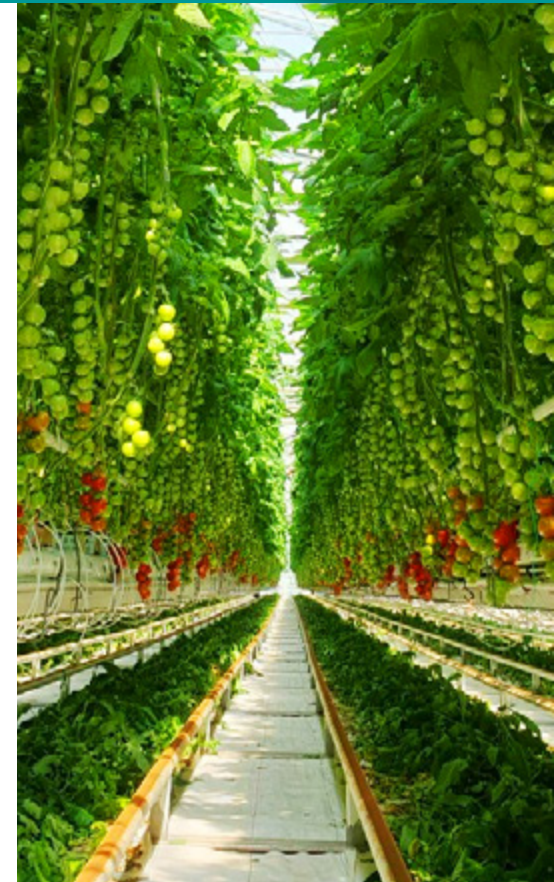
Cloud-based data monitoring and analytics system, designed for innovative greenhouses

ACHIEVE YOUR HIGHEST YIELD WITH  
OPTIMIZED **GREENHOUSE PROCESSES**

### 5-SEC SOLUTION

Even with your best intentions and experience, you don't know whether it's right or wrong how you operate your greenhouse: it turns out only later – when it's too late. Trutina gives you instant feedback about how your plants feel – in fact, in every 5 seconds – so you can fine-tune your strategy right at the moment, without any delay.

It's our 5-sec solution for a problem of centuries: analyzing weight, temperature, humidity, electro-conductivity, biomass and more, Trutina will lead you to healthier roots, better yield, and a cost-efficient operation. Let data drive your cultivation and eliminate uncertainty from your greenhouse – once and for all.



## COMMON PROBLEMS THAT MOST GREENHOUSE OWNERS EXPERIENCE:



### **You can never be sure if your irrigation strategy is good enough**

Without instant feedback, it turns out only when it's too late.



### **You never reach the genetic maximum**

The real potential of your greenhouse is much more than what you currently achieve.

## THE ANSWER LIES IN THE DATA

**Measure → Analyze → Optimize → Repeat:** that's how **Trutina** helps your operation, giving you several immediate benefits and taking your cultivation to the next level on mid/long-term.

## START USING TRUTINA FOR THESE INSTANT BENEFITS:



### **Save time and effort in your daily routine**

No need to manually measure and try drawing the conclusions: it's automatic and done remotely. With Trutina, you will have better operation with less manpower.



### **Get rid of uncertainty**

In every moment you will be perfectly aware of what's happening with your plants – Trutina provides updates every 5 seconds, to give you instant feedback on how they react to irrigation.



### **Use automated insights**

Trutina does not just measure data but turns them into clear insights via a user-friendly interface, simplifying your operation and eliminating uncertainty.





## KEEP USING TRUTINA TO ACHIEVE EVERY GREENHOUSE OWNER'S DREAM:



### Master your irrigation strategy

Understand how your plants react to irrigation and reveal those weak parts of your system that hold you back from reaching your crop's full potential. Trutina helps you perfect the timing and amount of irrigation water, so you can take your irrigation strategy to the master level.



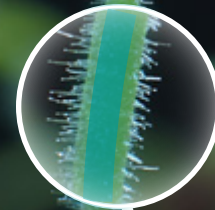
### Reach the genetic maximum

Your crop depends on so many factors that it's impossible to manage manually. You need a helping hand to digitize and analyze data to maximize yield efficiency while allowing long-term, healthy plant growth.



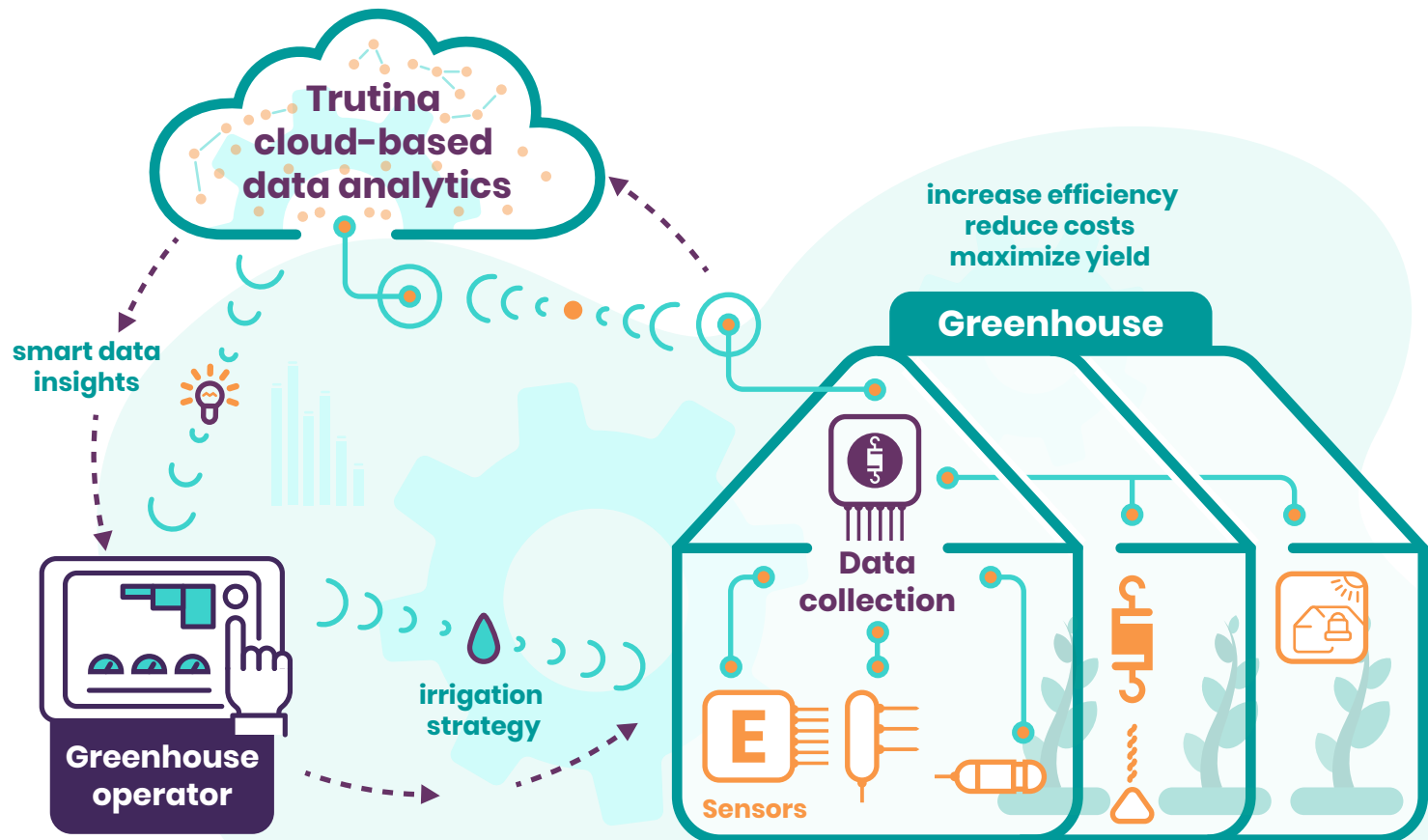
### Lower your energy costs

By reaching the optimal level of every process, you can simplify your daily routine and eliminate waste and unnecessary tasks, this way switching to a much more cost-effective operation.



## WHAT IS TRUTINA?

It's a combination of smart sensors and a cloud-based data analytics platform that lets you understand what's happening in your greenhouse – at every moment. Using these insights, you'll have a vast amount of valuable data to automate and optimize processes – leading to the full potential of your crop.





## HOW DOES IT WORK?

### **Example:** weight measurement and its benefits

By automatically measuring the weight of plants, you can analyze the effects of each irrigation cycle, and see how much percentage of water is taken up by the plants. The whole cycle, including the take-up speed, and the curve of evaporation as well will be visible with precise values and graphs – pointing out the weak parts of your system. This way, you can reach the optimal number and volume of irrigation cycles that will contribute to the best plant balance and crop.

## FEATURES



### **Easy to install**

Trutina offers a non-disruptive way of monitoring, without any significant infrastructural changes in your current greenhouse system.



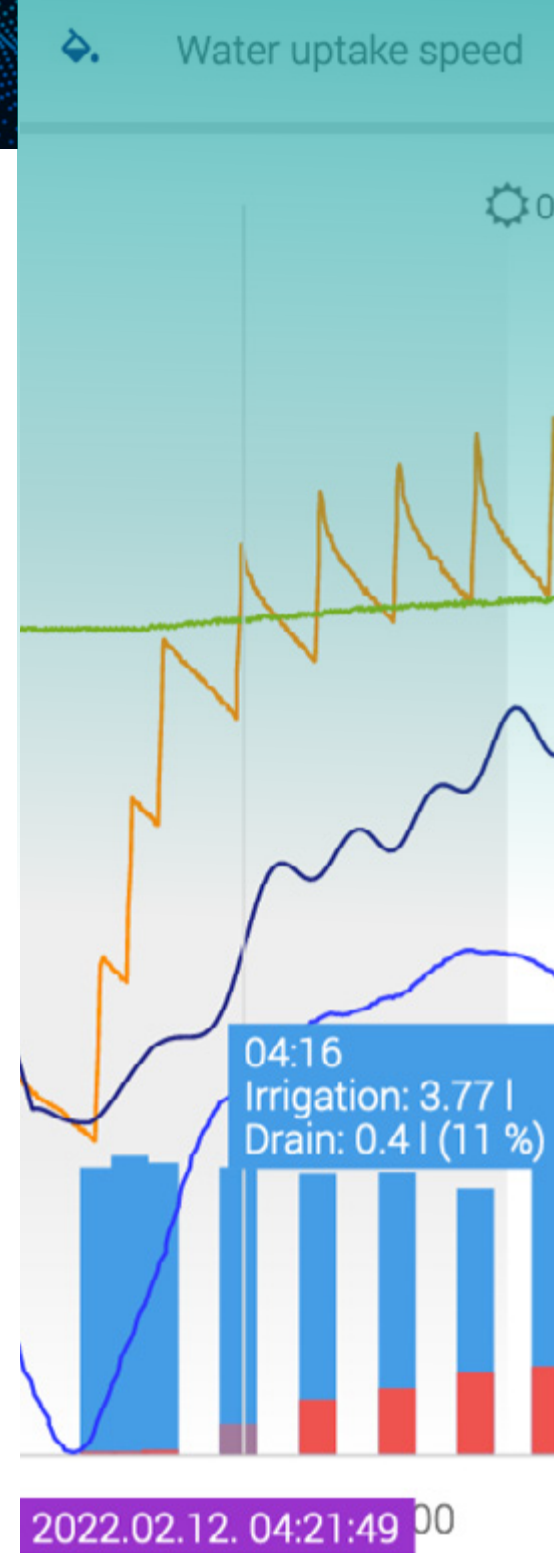
### **Modular & extendable**

Use only those features that you need now and extend your system any time easily. Connecting the modules is simple and plug & play



### **Connects everything**

It's one system that integrates all the data you need for better decision making: from drainage to EC, and from water uptake speed to biomass production

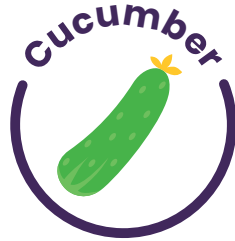


## PROBLEMS – HOW CAN I HELP MY PLANTS TO:

PROBLEMS & WISHES:	TRUTINA is an all-in-one solution, helping you
I'd like my plants to develop healthier roots.	Monitor water content and EC level more accurately.
I'd like to maintain a better plant balance (vegetative / generative).	Control your plants more efficiently between vegetative and generative growing according to the daily changes of water capacity.
I'd like to reduce my operating costs.	Better monitor your drain and irrigation strategy at each watering cycle.
I'd like to verify whether my irrigation strategy is good enough.	Get real-time feedback on how plants react after you change your setting by monitoring plant activity values (water uptake speed, evaporation, light usage efficiency and more). Without instant feedback, it turns out only when it's too late.
I'd like my plants to reach the genetic maximum.	Find out which variable (temp. humidity, VPD, drain volume, number of irrigation etc.) limits your production.



## TRUTINA IS IDEAL FOR:



## DATA-DRIVEN HORTICULTURE IN A NUTSHELL

Today, owners of advanced greenhouses are always aware of what's happening with their plants – literally, at every moment. For them, data is exceptionally valuable as this is how they constantly optimize their horticulture strategy. They measure everything: the weight of plants and how they react to water content, drainage, EC, PH levels, temperature, humidity, radiation and more. These conditions have a crucial effect on health and crop. If your greenhouse operation is not optimal, you will learn it only when it's too late – and it's a risk too large to take.





## SELECT YOUR TRUTINA SYSTEM

Trutina is available with 3 standard packages and you can build your own custom system as well, according to your requirements:

### Irrigation & Drain Edition

### Plant Energy & Biomass Ed.

### Professional EC Edition

<ul style="list-style-type: none"> <li>✓ Trutina main unit</li> <li>✗ Biomass module</li> <li>✓ Irrigation / drain module</li> <li>✗ Pyranometer</li> <li>✗ EBOX</li> <li>✗ Slab EC/WVC/TEMP sensor</li> <li>✗ Water EC sensor</li> <li>✓ Cube scale (optional)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Trutina main unit</li> <li>✓ Biomass module</li> <li>✓ Irrigation / drain module</li> <li>✓ Pyranometer</li> <li>✗ EBOX</li> <li>✗ Slab EC/WVC/TEMP sensor</li> <li>✗ Water EC sensor</li> <li>✓ Cube scale (optional)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Trutina main unit</li> <li>✓ Biomass module</li> <li>✓ Irrigation / drain module</li> <li>✓ Pyranometer</li> <li>✓ EBOX</li> <li>✓ Slab EC/WVC/TEMP sensor</li> <li>✓ Water EC sensor</li> <li>✓ Cube scale (optional)</li> </ul>

Find more information on Trutina at the website: [gremonsystems.com](https://gremonsystems.com)

To get an offer or further information, contact our sales team:

[sales@gremonsystems.com](mailto:sales@gremonsystems.com)

