



Designed to grow

2023-24 WHOLESale CATALOG

**Grodan grows with growers** - That means less mess, and more precision. Higher yields, and higher profits.



Our company first sprouted over fifty years ago, in the Netherlands. Soon after, cannabis growers in North America began using our first stone wool products.

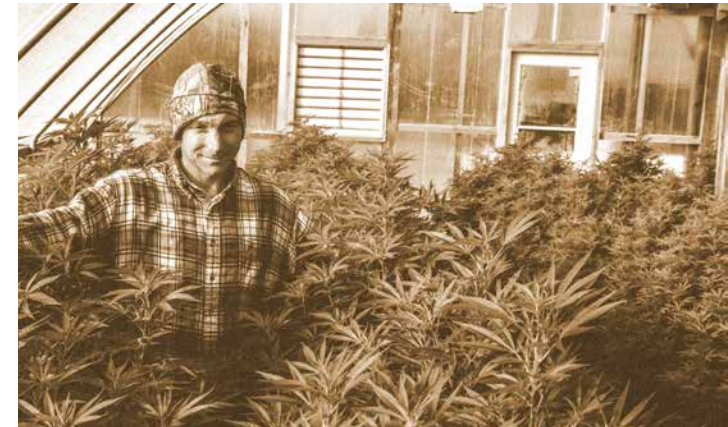
Today, we're revolutionizing indoor cultivation like never before. We continually invest in new science and growing trials to pass on new techniques to improve cannabis grow operations and crop yields.

Our customer and technical support teams partner with you and your growers to dream big and surpass goals.

Grodan remains rock solid. Through times of historic change, and into the brave future. At any scale.

**Designed to grow.  
Grodan.**

The original stone wool, since 1969.



## TABLE OF CONTENTS

Wholesale Distribution and Retailer Support . . . . .	4
Environmental Impact . . . . .	8
Grodan Products. . . . .	10
Pargro Products . . . . .	18
e-Gro Monitoring Solutions . . . . .	20

### **Thank you for your interest in Grodan stone wool services and products.**

Our stone wool is made of molten rock that is spun into fibers and cut to a variety of shapes and sizes to fit your customer’s grow operation. Grodan stone wool is inert, clean, steerable, and made from one of Earth’s most plentiful, sustainable resources.





Are you a retailer or wholesaler?" Learn more here.



## WHOLESALE DISTRIBUTION AND RETAILER SUPPORT

Grodan has built a full-service operation in North America with you in mind.

Our wide-ranging solutions offer your customers high-quality grow media, monitoring systems and expert, technical assistance for optimizing crops



### SALES TEAM SUPPORT

- Experienced, customer-centric field teams you can count on.
- Qualified distributor relations and product training
- Quick response for business support



### QUALITY CONTROL AND OPERATIONS

Since 1969, Grodan has been crafting stone wool products for the North American marketplace.

- Produce and ship product from our factory in Canada
- Daily, drop ship or warehouse deliveries
- Custom order set-ups



### CUSTOMER SERVICE AND TECHNICAL SUPPORT

- Specialized agents
- Dedicated technical crop advisors
- e-Shop online order starts and refills
- Technology support @Zendesk
- Informed, actionable customer service team is available by phone or email requests



### RESEARCH AND DEVELOPMENT

- Five decades of stone wool agriculture learnings
- Continual investment in new science, techniques, and technology
- Trial discoveries lead to new products and best practices for cultivators



## WE SUPPORT SELL-THROUGH

---



### GRODAN BRAND MARKETING SUPPORT

- Online Grodan product menu assets
- Social Media Network
- Giveaways
- Email Marketing Content
- Customer facing materials
- Digital Marketing Campaigns



### RETAIL MERCHANDISING

- Shelf displays – custom and ready-made options
- On-screen video and social content
- Aisle banners
- In-Store signage and collateral



### CUSTOM PROMOTIONS

- Lead generation
- Quarterly sell-in opportunities
- Discounts / Loyalty Credits
- Co-Op program coordination



### SALES EDUCATION

- Store associate / manager training
- In-Person, virtual, and on-demand options
- Employee sales incentives and recognition program
- Sample program



### PRODUCT DEMONSTRATION

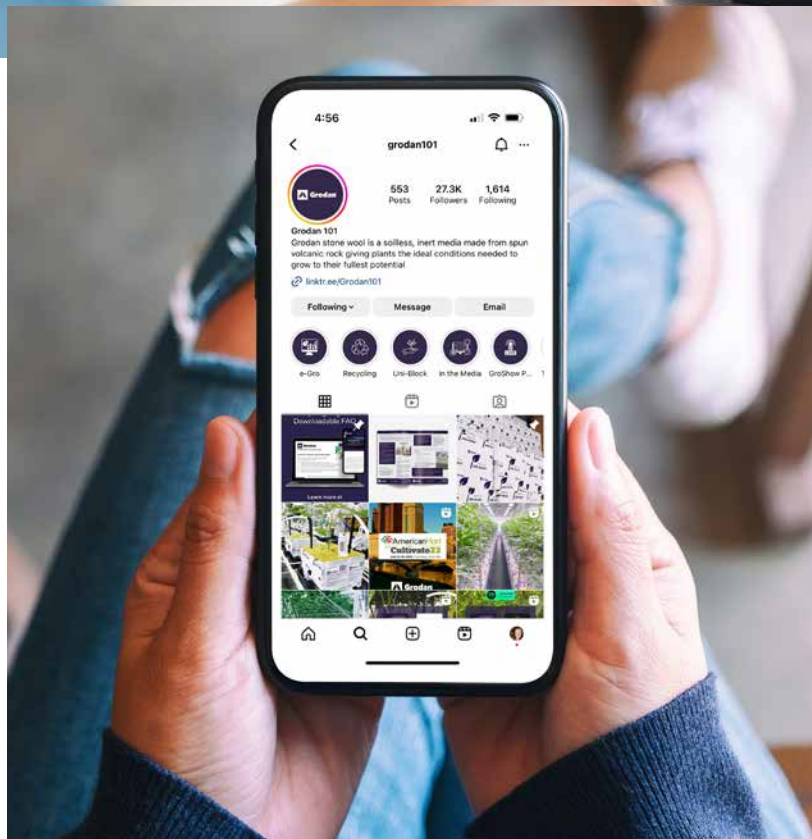
- Store events
- Vendor Day support
- Regional networking events with growers
- Industry trade and buyer shows
- Commercial & Craft grower education



**Download the New Growers Guide Cannabis Edition**



# Grodan® PRODUCT EDUCATION



- Grodan publishes blogs, how-to articles, technical papers, and data sheets on our products
- We share our insight and expertise on the Grodan101.com website, our social channels, and the Grodan Gro-show podcast
- Look for Grodan subject matter experts who share knowledge at industry and regional events
- Wholesale trade and grower trainings virtually, on-demand, or in-person
- Email invite list to special learner events, activities, webinars



Designed to grow  
with less water



## MORE CROPS PER DROP

---

**Today, cultivators are making decisions about the most cost-efficient way to build their grows.**

Cannabis cultivators use a lot of water, but they don't have to.

When you choose Grodan high-quality stone wool and technology solutions, you automatically use less water, fertilizers, and pesticides than with conventional agriculture practices.

For the Cannabis Industry in North America, employing precision growing and crop steering techniques in stone wool are essential to growing more sustainably.

Growing in stone wool also protects existing water supplies by preventing pollution and eutrophication.

Grodan growers can differentiate their crops at market as truly being high-quality, clean, and planet-friendly.

Allow us to help you and your customers cultivate successfully in Grodan stone wool. [info@grodan101.com](mailto:info@grodan101.com)



Grodan stone wool can contain up to 75% recycled content.



Non-toxic



Non-ignitable



Non-reactive



Non-corrosive



**5,000** TONS

In North America, Grodan composts over 5,000 tons of stone wool per year through leading compost facilities.



Used stone wool is 100% recyclable and has several secondary applications. Including, feedstocks for brick manufacturers, compost, potting mix, engineered soils and more.

If your local recycling facility would like to add Grodan stone wool as a beneficial use amendment and has questions, please contact [info@grodan101.com](mailto:info@grodan101.com) to assist in providing guidance

Learn more about our recycling solutions







**Grodan<sup>®</sup>**

**PRODUCTS**

## BENEFITS OF GRODAN STONE WOOL

---



Lightweight, pathogen-free, disease-free, seed-free



Even, rapid water distribution throughout the media



The most uniform growing substrate which results in consistent plant growth



Inert, meaning it will not add or hold back any nutrients or water from the plant



Usable in recirculating systems from first drain, reducing water and fertilizer usage.



Controllable so grower is able to steer plant growth



Excellent buffer and re-saturation capability



Access to Grodan stone wool growing education and learnings



Technical crop advisors offer unparalleled knowledge support







We developed the Grodan Improved product line using scientific methods in conjunction with the world-renowned Wageningen University in the Netherlands.

Grodan Improved was successfully trialed in the field by leading cultivation facilities throughout North America.

## ACHIEVE REAL RESULTS

Grodan Improved is formulated with an advanced wetting agent and optimized wool structure to consistently deliver outstanding results for controlled environment indoor and greenhouse commercial grows.

The family of Grodan Improved products all offer:



**Faster rooting-in**



**More developed root systems**



**Higher yields**



**Improved plant quality**



**Using less water and nutrient usage throughout the entire crop cycle**

# GRODAN AOK, MICRO AND MACRO PLUGS



Ideal for growers who want fast, uniform propagation and plant development.



Suitable for cloning and propagation from seed



Durability minimizes the risk of damage to the roots



Known for their reliability providing predictable and even propagation



Uniform density, firmness, and fibrous structure



The shape and firmness make manual or mechanical processing significantly easier



- 1** | **295573 1" AO Plugs (1x1x1.6)**  
**Carton**  
 Plugs/carton: 6000      Cartons/Pallet: 8  
 Units/Sheet: 200      Sheet/Carton: 30
- 2** | **295572 1.5" AO Plugs (1.4x1.4x1.6)**  
**Carton**  
**295570 1.5" AO Plugs (1.4x1.4x1.6)**  
**Shrinkwrapped Carton**  
 Plugs/carton: 2940      Cartons/Pallet: 8  
 Units/Sheet: 98      Sheet/Carton: 30
- 3** | **343296 1.5"AO Plugs (1.4x1.4x1.6) pre-cut**  
**Loose - Box**  
 Plugs/carton: 2310      Cartons/Pallet: 8
- 4** | **244090 Cress Plate for micropopagation**  
 Plates/carton: 95      Sheet/Carton: 8

- 5** | **31384 2" AO Plugs (2x2x1.6)**  
**Carton**  
 Plugs/carton: 1500      Cartons/Pallet: 8  
 Units/Sheet: 50      Sheet/Carton: 30
- 6** | **31581 Macroplugs (1.5 Roundx1.57)**  
**Carton**  
 Plugs/carton: 1750      Cartons/Pallet: 8  
**70038 Macroplugs (1.5 Roundx1.57)**  
**Bags - Carton**  
 Plugs/carton: 2000      Sheet/Carton: 8
- 7** | **338009 1.5" AO Plugs (1.4x1.4x1.6)**  
**Pre-cut/pre-filled 10x20 insert of 50**  
 Units/Carton: 30      Cartons/Pallet: 8



# GRODAN IMPROVED GROW BLOCK



Provides the greatest steering capabilities available



Provide plants with optimal fiber structure and physical properties for crop uniformity



Blocks offered in multiple sizes



More even WC & EC distribution throughout the entire block



Can be stacked and are designed to fit the facility and crop plan outcomes



- 1 | **294713 Gro-Block Improved Mini Block 1.5" Strip Carton**  
 Blocks/Carton: 2250      Cartons/Pallet: 12  
 Units/Strip: 45      Strips/Carton: 50
  
- 2 | **287055 Gro Block Improved GR4 - Small 3" (3x3x2.6) w/ Hole - Strip Carton**  
 Blocks/Carton: 384      Cartons/Pallet: 12  
 Units/Strip: 12      Strips/Carton: 48
  
- 3 | **286605 Gro-Block Improved GR6,5 - Small 4" (4x4x2.6) w/ Hole - Strip Carton**  
 Blocks/Carton: 216      Cartons/Pallet: 12  
 Units/Strip: 12      Strips/Carton: 36
  
- 290153 Gro-Block Improved GR6,5 - Small 4" (4x4x2.6) w/ Hole - Loose on Pallet**  
 Blocks/Carton: 2448      Cartons/Pallet: 1

- 4 | **286661 Gro-Block Improved GR10 - Large 4" (4x4x4) w/ Hole - Strip Carton**  
 Blocks/Carton: 144      Cartons/Pallet: 12  
 Units/Strip: 12      Strips/Carton: 24
  
- 274993 Gro-Block Improved GR10 - Large 4" (4x4x4) w/ Hole - Loose On Pallet**  
 Blocks/Carton: 1584      Cartons/Pallet: 1
  
- 5 | **286613 Gro-Block Improved Jumbo (6x6x4) w/ Hole - Loose - Carton**  
 Blocks/Carton: 64      Cartons/Pallet: 12
  
- 327710 Gro-Block Improved Jumbo (6x6x4) w/ Hole - Loose on Pallet**  
 Blocks/Carton: 704      Cartons/Pallet: 1





- 1 | **274999 Gro-Block Improved Hugo (6x6x6)**  
w/ Hole - Loose - Carton  
Units/Carton: 64                  Cartons/Pallet: 8
- | **286616 Gro-Block Improved Hugo (6x6x6)**  
w/ Hole - Loose On Pallet  
Units/Carton: 512                Cartons/Pallet: 1
- 2 | **287461 Gro-Block Improved Uni-Block (8x8x4)**  
No hole - Loose - Carton  
Units/Carton: 36                 Cartons/Pallet: 12
- 3 | **286660 Gro-Block Improved Big Mama (8x8x8)**  
No Hole - Loose - Carton  
Units/Carton: 18                 Cartons/Pallet: 12



"I've been growing for 21 years and have always used Grodan. Since switching to the new Improved Gro-Blocks, we've noticed a significant difference. We're getting healthy root acceleration all the way through, even block saturation from top to bottom, and they react great to dry backs."

—Kenny B., Master Grower  
Angel City Farmers

# GRODAN IMPROVED GRO-SLAB AND UNI-SLAB



Vertical Fiber orientation



Operational efficiency



Fast rooting-in



Automated saturation



Vigorous growth and greater yields



1 | **321147 Grodan Improved Unislab - (9.5x8x4)**  
Carton  
Slabs/Bundle: 16      Bundles/Pallet: 18

2 | **320562 Grodan Improved Gro-Slab - (36x6x3)**  
Bag  
Slabs/Bundle: 12      Bundles/Pallet: 10

3 | **320561 Grodan Improved Gro-Slab - (36x6x4)**  
Bag  
Slabs/Bundle: 12      Bundles/Pallet: 8

4 | **320565 Grodan Improved Gro-Slab - (36x8x3)**  
Bag  
Slabs/Bundle: 12      Bundles/Pallet: 8

5 | **320566 Grodan Improved Gro-Slab - (36x12x3)**  
Bag  
Slabs/Bundle: 8      Bundles/Pallet: 8

6 | **324521 Grodan Improved Gro-Slab**  
**(36x6x3 w/ 3-4x4 pre-cut holes) - Bag**  
Slabs/Bundle: 12      Bundles/Pallet: 10

7 | **324517 Grodan Improved Gro-Slab**  
**(36x6x4 w/ 3-4x4 pre-cut holes) - Bag**  
Slabs/Bundle: 12      Bundles/Pallet: 8



8 | **327258 Grodan Improved Gro-Slab**  
 (36x8x3 w/ 3-4x4 pre-cut holes) - Bag  
 Slabs/Bundle: 12 Bundles/Pallet: 8

9 | **325067 Grodan Improved Gro-Slab**  
 (36x8x3 w/ 3-6x6 pre-cut holes) - Bag  
 Slabs/Bundle: 12 Bundles/Pallet: 8

## GRODAN ADDITIONAL PRODUCTS



1 | **30298 Grow-CUBES L**  
 (3 bags/box)  
 Bags/Carton: 3 Cartons/Pallet: 8

**31580 Grow-CUBES**  
 (5.07cu.ft box of loose)  
 Carton: 1 Cartons/Pallet: 8

2 | **70039 Grow-CHUNKS**  
 (3 large bags)  
 Bags/Carton: 3 Cartons/Pallet: 8

3 | **115848 Gro-WOOL Absorbent Granulate**  
 (45 lb. bag)  
 Units/Carton: 1 Cartons/Pallet: 14

4 | **233550 Gro-Smart Tray (78 cells)**  
 Units/Carton: 5 Cartons/Pallet: 64

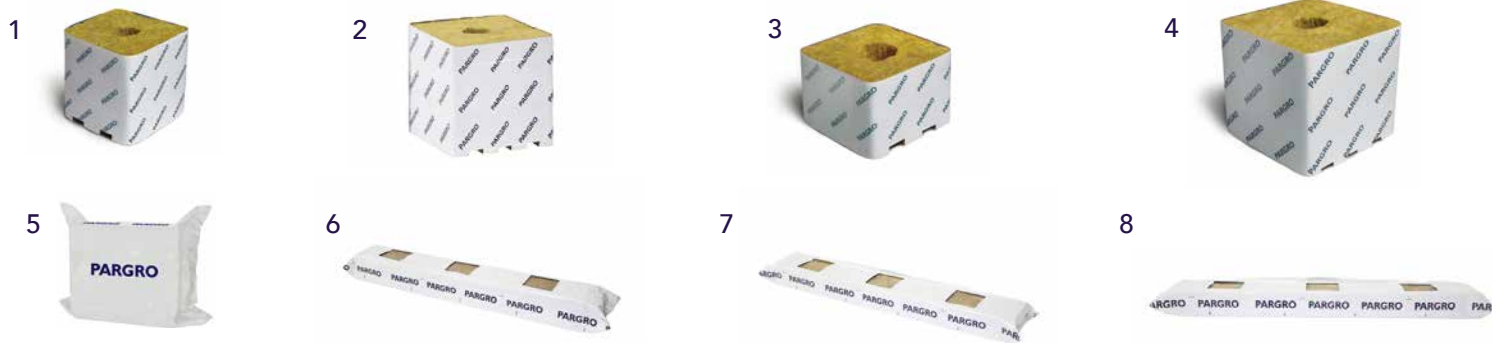


A man with a beard and curly hair, wearing a blue hoodie, is looking towards the camera. He is in a greenhouse filled with cannabis plants. The background is slightly blurred, showing the structure of the greenhouse and more plants. The lighting is soft and natural, coming from the top of the frame.

# PARGRO<sup>®</sup> PRODUCTS

The Pargro family of products are made in the most popular sizes that offer value to many growing situations, such as boutique or craft growers, growers transitioning from coco or soil, and small-scale enthusiasts.

Pargro media is quick draining with rapid water distribution and excellent re-saturation capabilities, making it easy to use.



**1 | 328443 PARGRO - PAR6,5 - Small 4" (4x4x2.6)  
w/ Hole - Strip - Carton**

Blocks/Carton: 216      Cartons/Pallet: 12  
Units/Strip: 12      Strips/Carton: 36

**2 | 328444 PARGRO - PAR10 - Large 4" (4x4x4)  
w/ Hole - Loose On Pallet**

Block/Carton: 1584      Cartons/Pallet: 12

**328446 PARGRO - PAR10 - Large 4" (4x4x4)  
w/ Hole - Strip - Carton**

Units/Carton: 144      Cartons/Pallet: 6  
Units/Strip: 12      Strips/Carton: 24

**3 | 328455 PARGRO - PAR22,5 - Jumbo (6x6x4)  
w/ Hole - Loose on Pallet**

Blocks/Carton: 704      Cartons/Pallet: 12

**328451 PARGRO - PAR22,5 - Jumbo (6x6x4)  
w/ Hole - Loose - Carton**

Blocks/Carton: 64      Cartons/Pallet: 8

**4 | 328458 PARGRO - PAR32 - Biggie (6x6x6)  
w/ Hole - Loose - Carton**

Blocks/Carton: 64      Cartons/Pallet: 8

**328459 PARGRO - PAR32 - Biggie (6x6x6)  
w/ Hole - Loose On Pallet**

Blocks/Carton: 512      Cartons/Pallet: 1

**5 | 328731 PARGRO Slab - (9.5x8x4)  
Carton**

Slabs/Carton: 16      Cartons/Pallet: 18

**6 | 328463 PARGRO Slab (36x6x4)  
w/ 3-10x10 pre-cut holes - Bag**

Slabs/Bundle: 12      Cartons/Pallet: 8

**7 | 328467 PARGRO Slab (36x8x3)  
w/ 3-10x10 pre-cut holes - Bag**

Slabs/Bundle: 12      Cartons/Pallet: 8

**8 | 328465 PARGRO Slab (36x6x3)  
w/ 3-10x10 pre-cut holes - Bag**

Slabs/Bundle: 12      Cartons/Pallet: 10





## **DATA DRIVES PRECISION**

Precision growing is the practice of providing plants precise and optimal growing conditions.

Maximize growth, productivity, and resource efficiency by using e-Gro systems.

Monitor from propagation through to harvest and processing, including mother plants.

Optimize a room, section, or your entire grow facility. e-Gro collects data and uses powerful algorithms based on Grodan's 50+ years of cultivation knowledge to deliver a complete overview of the cultivation process.

Replace your tedious spreadsheets with the power of e-Gro, the automated, powerful platform. e-Gro helps you optimize your entire growing facility from propagation through to harvest and processing, including the mother plants.



## GRODAN e-Gro

---

e-Gro gives you the power to view sensor data from all grow rooms in your facility as well as key KPIs such as overnight dryback, time since last irrigation, room temperatures and relative humidity. You can track every batch from mother plants through to harvest. You can even create custom alerts so you are notified the second something goes outside your preferred range.

Growers can view and compare batch performance, conduct automatic calculations, set alerts, compare key growing information, tagging colleagues, and share data by adding notes and pictures.

## SERVICE AND SUPPORT

---



### Grodan Crop Advisors

When you invest in your cultivation business with e-Gro, you get priority access to Grodan's expert Crop Advisors. They help you get the maximum benefit from e-Gro's powerful platform.



### Dedicated e-Gro Support Team

They are like your own personal e-Gro concierge who will personally set you up on the platform, so you can quickly get value from your investment in data. A dedicated Zendesk helpline is available for quick response.



### Data Security

Your data security is of paramount importance. We use state-of-the-art encryption and security protocols that meet and exceed all North American, European, and local laws and regulations.



→ MY GRO OP

→ CONDITIONS

→ GROWTH TRACKER



## MY GROW OP MODULE

My Grow Op module provides a complete high-level dashboard where you can check the status of your entire growing facility from mother plants through to processing that you can access 24/7. In My Grow Op, you can view important details about your facility's climate and rootzone information per room:



WC



Temperature



VPD



EC



Room Temperature



Number of Batches



Relative Humidity



CO2



Lights On/Off

Instant alerts notify you of any parameters going out of range so you can better control your growing strategy.



## CONDITIONS MODULE

---

The Conditions Module gives you the power to analyze the rootzone and climate together so you can optimize your irrigation and crop steering strategies. It helps you to maximize input cost savings, yield, and crop performance.



**Rootzone Data** – get real-time data from the GroSens Rootzone Sensor including WC, EC, temperature



**Climate Data** – get real-time data from the GroSens Climate Sensor including humidity, temperature, VPD, and CO<sub>2</sub>



**Compare Performance in Different Rooms** – You have the flexibility to add a second graph and compare data from other rooms to better understand performance between the two grow rooms



**View Multiple Sensors at One Time** - you choose the sensors and zones you want to see. Data cards let you see up to 7 data sources to analyze together



**Time Slider** – easily see your crop's full history in 30-day intervals

## GROWTH TRACKER MODULE

---

The Growth Tracker module allows you to easily input and track key parameters throughout the various stages of a batch's life cycle from propagation, veg, harvest, and mothers culminating in cultivar specific insights. In Growth Tracker, you can view historical climate and rootzone information on each batch to further optimize crop steering and genetics.



### Strain-Specific Strategies

Gather and analyze all crucial strain-specific information throughout the entire growing cycle, by batch



### Crop Steering

Compare the performance of individual batches to desired average performance to really dial in your irrigation and crop steering strategy



### Crop Data

Get a comprehensive view of your data and plants with the option to add pictures and notes



### Standard Operating Procedures (SOPs)

Use captured data to improve SOPs and train all team members on the operational parameters

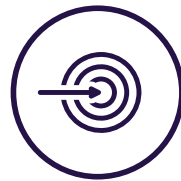
## Alerts

Proactively address suboptimal growing conditions with immediate notifications in the app and via SMS when your crop's climate or rootzone settings go out of your customized range.

## GroSens SENSORS HARDWARE

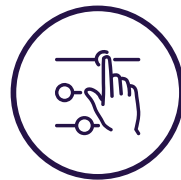
---

The Grodan GroSens Rootzone sensor is one of the most widely used and trusted sensors in the cannabis industry for both indoor and greenhouse crops. We have expanded the system to include GroSens Rootzone and GroSens Climate Sensors. The GroSens Sensor family integrates with the e-Gro software to provide precision data for analysis. All of our GroSens Sensors are built to the highest standards, and are rigorously tested at scientific institutes, including the world-renowned Wageningen University in Holland.



### ACCURACY

All GroSens Sensors have been proven in comparative trials to provide precise measurements of all parameters. The more accurate the measurements, the better you can dial in your crops and achieve optimal crop steering



### CUSTOM CONFIGURATIONS

GroSens Sensors are modular, so you can scale it to meet your operational needs



## GroSens ROOTZONE SENSOR

GroSens Rootzone sensors have pinpoint accuracy and give you 24/7 access to real-time, accurate measurements of water content (WC), electrical conductivity (EC), and temperature levels in the stone wool substrate.



**Data logging** – easy access to all previous measurements, up to 2,300 historical data points to be precise

## GroSens CLIMATE SENSOR

Climate is a key aspect for crop optimization. Measure humidity, temperature, VPD, and CO<sub>2</sub> with high degree of accuracy and a wide range.



# Growing Legends



**"In Grodan stone wool, cultivators can maximize yield and quality while simultaneously reducing their overall environmental footprint."**

*–Desiree Orozco, Grower*

**"I love using the new Gro-Blocks because of how beautifully they drain, support root development, prevent pathogens from multiplying, are compostable and inert, and allow for easy root penetration; my favorite! There are a lot of upsides to using Grodan stone wool."**

*–Mel Gutierrez, Clone Manager at Flora Terra Farms*

**"It's the cleanliness. You come to our facility, if we were using any other medium, it would be everywhere. It wouldn't be as clean."**

*–Nicholas Sosiak, CFO of Cannara Biotech*

**"Consistency in the industry is one of the biggest challenges everyone faces, and if I can be consistent, I'm going to gain a lot of respect for that."**

*–Jeff Aubin, Founder of Smoker Farms*

**"Love the Uni's! Fat trunks developing, stronger branches-healthier girls, nicer flowers! Can't wait to watch them develop!"**

*–Smoke and Mirrors, Cannabis Consultant on e-Gro*

"One of the keys to MSIKU consistency is monitoring and controlling the moisture and nutrient levels in our Grodan stone wool blocks. The e-Gro software gives us the capability to monitor our grow rooms every step of the way. We can drive our crop's irrigation by fine-tuning plant dry backs and feed strengths. The chart shows our plants actively feeding during the daylight period. This flower room data helps ensure the crop is on track for harvest!"

*–Msiku Craft Cannabis*

"If you can't control what's going on at your rootzone, then you have the potential for large-scale failure. The Grodan GroSens sensors give us real-time data that I'm able to translate into all of my plants. It's allowing me to dictate irrigations, as well as EC and PPM at my reservoirs and really maximize final product. We're seeing greater yields, higher terpene profiles and higher potency levels. One of the benefits of a quality grow from start to finish is trimming. It's one of those parts of cultivation that's the most tedious, but if you have a healthy plant from start to finish, and you have a nice productivity, trimming is that much easier. The better-quality flower also makes it much quicker to package."

*–Chad McCoy, Co-owner/Lead Grower at The Real McCoy*

Interested in how and why worldwide cultivators are helping feed the world in Grodan stone wool? Visit our sister brand, ***Grodan.com***



**grodan101.com**



info@grodan101.com  
1-800-872-2476

North America  
Grodan (ROXUL Inc.)  
8024 Esquesing Line  
Milton, ON L9T 6W3  
Canada