

Grodan Plantop NG2.0 Blocks

The substrate block for optimal steerability and crop control

Steerable



**Now also available in a
vermiculite-free version.**



Optimal control due to optimal steerability

Want to control your crop with precision? And significantly improve growth, yield and quality at the same time? It's all possible with Grodan's Plantop block. Plantop offers propagators and growers the optimal level of steerability and controllability. Equipped with NG2.0 technology, you can significantly improve both the growth and health of your crop - starting with healthy roots. So from the very first moment you can steer vegetable plants throughout the entire process.

Thanks to the optimal steerability that Plantop NG2.0 offers, you benefit from an optimal level of crop control from start to finish. Together with consistent block uniformity and compatibility with vermiculite-free propagation, Plantop NG2.0 sets the benchmark for reliable, clean and optimal plant development in high-tech horticulture.

It's time to take steerability to the next level.
It's time for Plantop.

Designed to Grow Why choose Grodan Plantop NG2.0 Blocks?

Grodan stone wool blocks are designed to promote fast germination and root development for various vegetable crops, using the unique qualities of Grodan stone wool:

Consistent high quality, rooted in science

- Designed and produced in Grodan's controlled, high-tech manufacturing environment.
- Automated production ensures consistent, uniform quality at scale.
- Available in various types, dimensions and quantities to ensure a matching solution.
- Backed by over 50 years of continuous innovation, proven performance and cultivation experience.

Clean start, full control

- Clean and uniform by design: Made from basalt rock, heated to 1500 °C / 2750 °F and precisely spun into

fibres, resulting in a lightweight, homogeneous and clean stonewool substrate ideal for high-tech cultivation of plants.

- Structurally sound: firm yet flexible, ideal for automation, sowing and transplanting. Easy to handle and supports seamless transition from plug to block to slab.
- Root growth through the entire block: the unique hydrophilic fibers ensure rapid, even water distribution and strong buffer/re-saturation capabilities. And the vertical fiber structure provide equal resistance for root growth and, as a result, roots fill the entire volume of the block.
- Supports precision growing: high control of WC and EC, nutrients and water are fully available to the plant.
- Measurable and steerable: Adaptable to variable climate conditions, as well as different nutrition and irrigation regimes. Compatible with GroSens suite for real-time, data-drive rootzone management.



Advancing sustainable practices

- Made from natural basalt: Earth produces 38,000× more than we use.
- Recyclable: Stone wool growing media are perfectly recyclable. Depending on the region, Grodan recycles growing media for remanufacturing and brick additive.
- Factories are close to customers to reduce transport emissions.
- Electrifying our factories with sustainable energy sources and evolving our production methods.
- Grodan products support closed-loop water circulation.

Backed by service and expertise

- Grodan understands that it is crucial to provide professional propagators with the right tools and technical support to further optimise the process. Our advisors also support you in transitioning to the vermiculite-free solution.
- Supported by Grodan's global network of dedicated Crop Technical Advisors.

NG2.0 Technology: Precision rootzone management

Grodan's NG2.0 is the next evolution in Precision Growing, it enables:

- Faster and more uniform initial saturation.
- Improved EC refreshment and better rootzone response.
- Optimal steering at lower WC and higher EC without compromising plant health.
- Strong, finely branched root development and a larger active root zone.
- NG2.0 blocks result in compact, generative plants with stronger flower development, controlled fruit set, and better overall crop performance throughout the season.



Benefits for propagators

Besides the general benefits, Plantop also provides specific benefits for propagators.



Optimal steerability of water content and EC

- Improved uniformity within block and between different blocks enabling more accurate steering of WC and EC.
- Fast and effective distribution of water and nutrients.
- Possibility of postponing irrigation (generative steering).
- More uniform batches of plants for delivery to growers.



Strong, controlled plant development

- Thanks to more balanced steering of water and nutrients, more control over plant development.
- Because of better usage functionalities of substrate volume and larger uniformity within blocks.



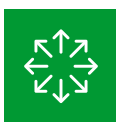
Root development through the entire block

- Quicker and secured initial saturation thanks to consistently uniform moisture throughout the block.
- Stimulates optimal root penetration through full column height of the block.
- Better developed root system results in more healthy and vigorous plant.



Benefits for growers

Plantop is also very interesting for growers, as it has a very positive impact on the entire growing process.



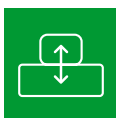
Outstanding uniformity

- Improved uniformity within block and between blocks enables more accurate steering of WC and EC.
- Better distribution of fine, branched roots inside the block, ensures more balanced uptake of water and nutrients.
- Quick EC refreshment for optimal control of EC level during changing climate conditions.



Higher yield and better fruit quality

- More optimal, finely branched root system stimulates ongoing vigor of the crop.
- This makes a more early and higher total production possible of fruits of a better quality.
- More vigorous crop with active root system also strengthens crop resilience.



Optimal block-slab interaction

- Quick rooting in and rooting through when block is being positioned on slab.
- Continuous new root development from the stem into the block and slab securing second half year yield.



Plantop

Plantop is the standard in stone wool blocks for the propagation of vegetable crops and is renowned for its steerability. The NG2.0 technology provides rapid, effective water and nutrient distribution in the blocks. This guarantees maximum utilisation of the substrate volume and promotes fast, healthy development of young plants. Now also available in a vermiculite-free version, Grodan's Plantop blocks meet the latest expectations for clean, consistent, and sustainable propagation.

Grodan Plantop is extremely versatile and designed for optimal results in crops as tomatoes, sweet peppers, cucumbers and eggplants. The result: the substrate volume is used in an optimal way and plants develop faster, better and healthier. This translates into higher yields, improved quality, more growing power throughout the year and reduces the sensitivity of the crop to diseases. This makes Plantop the perfect foundation for a top propagation and growing performance where you benefit from optimal crop control.

Vermiculite-free solutions now available for tomatoes, peppers and cucumbers

Our patented vermiculite-free solutions for high-tech propagators of tomatoes, peppers and cucumbers improve the sowing process while maintaining optimal germination rates and top-performing plant quality in both the propagation and cultivation phase. These innovative, industry-first vermiculite-free products are aligned with the growing needs of propagators – and their customers – for a cleaner greenhouse environment and more homogeneous crop, without having to compromise on sowing speed, germination success and plant quality.

While vermiculite is a reliable solution for ensuring effective germination in professional propagation, the granular nature of vermiculite means that the particles disperse easily. They regularly find their way into water filters, irrigation systems and other technical equipment, not to mention into gutters and even onto the floor.

As the industry has continued to advance, scale up and automate over the years, some propagators have started to look for ways to avoid these challenges. To meet this need, in close collaboration with some of our clients in large-scale trials, we have invented a unique vermiculite-free plug and block.

Key benefits of a vermiculite-free approach

- Less time and money spent on cleaning, maintenance and repairs: A vermiculite-free approach supports a cleaner, safer and more efficient production environment, both for propagators and high-tech growers using young plants raised from seedlings.
- Savings on labour and materials: No vermiculite means no need to cover the plugs with foil after sowing. As a result, a vermiculite-free approach saves propagators valuable time and money.
- Improved sowing process: Eliminating the need to apply vermiculite simplifies and speeds up the sowing process, improving the propagator's efficiency.
- Equally high germination rate: Extensive trials have demonstrated no difference in germination rate between our vermiculite-free solutions and the traditional approach.

- Reduced risk of overwatering: There is no vermiculite to form clumps and 'suffocate' the seeds if too much water is given. Therefore, propagators using vermiculite-free plugs can be more generous in their watering strategy in the germination phase, without fear of harming the crop.
- Uniform and robust plant development: Vermiculite is difficult to spread uniformly over a batch of seeds. In contrast, vermiculite-free plugs assure propagators of a more homogeneous crop right from the start. Moreover, in trials, plants on vermiculite-free blocks have developed outstanding stem stability, improving their robustness to cope in automated setups.

Smooth and low-risk transition to vermiculite-free

Our solutions have been carefully designed for quick and accurate automated sowing using most of today's sowing machines. This makes the switch to vermiculite-free propagation relatively straightforward and risk-free. In fact, many of the clients involved in our trials have already made the transition.

Try it for yourself

Are you interested in taking a cleaner, more efficient and more cost-effective approach to propagation, without having to compromise on sowing speed, germination success, homogeneity and plant quality? Contact your Grodan representative to request a vermiculite-free trial today.

Designed to grow

Grodan is the global leader in supplying [soilless rootzone management solutions](#) for Controlled Environment Agriculture. These solutions are applied to the cultivation of vegetables, medicinal crops and flowers such as tomatoes, cucumbers, sweet peppers, eggplants, roses and gerberas.

At Grodan, we aim to help feed and treat the world's growing population by innovating solutions from our stone wool growing media to enable 'more-with-less' growing. Through the method known as out-of-soil, our [stone wool substrates](#), [sensor systems](#), [software](#) and [expertise](#) support the reliable, informed growing of healthy, fresh, high quality produce. Our material is 100% recyclable, and supports growing methods that use up to 50% less water, 20% less chemical plant protection products and 75% less land. Sustainability plays a prominent role within Grodan, from manufacturing stone wool substrates to [recycling solutions and services](#).

Grodan has more than 50 years of cultivation experience. We pioneered the development of hydroponic growing methods in the 1960s, and today, our soilless rootzone management solutions are used in large-scale commercial greenhouses and indoor facilities in over 70 countries across the globe. The head office is located in Roermond, the Netherlands.

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