

## New fibre mills Growrite India

**Backward integration in order to realise full chain management is one of the themes on which Van der Knaap Group is working intensively. “Our customers demand year-round deliveries that meet the highest standards in the market and are sustainably produced,” says Jelte Veenstra, Managing Director of Coco Substrates.**

When processing coconuts for, among others, the food industry, we are left with the fibrous husk as a residual product. The husk fibres are separated from the coir with a fibre mill. The fibre mills tend to operate mainly to meet the demand for coco fibre. The coir that is generated by this process and used by Van der Knaap for substrates, is considered

a by-product. However, the demand for coco fibre is not constant, which has a direct impact on the quantities of coir available and the price. In addition, demand from China, the largest buyer of coco fibre, has fallen to an all-time low as a result of the global pandemic. This is sufficient reason for Van der Knaap to invest in in-house fibre mills. In this way, we can keep the entire process under our own management, so that we can guarantee quantity and quality.

### Growrite India

Van der Knaap acquired Growrite India in 2008. Situated in the province of Tamil Nadu, this location produces high-quality raw materials that are exported all over the world. By producing at our own locations, we

can guarantee the quality and continuity of the products.

Last year, the site in India was expanded with a fibre mill, and there are plans for further expansion. We can produce year-round because we process the fibre in a new application. This expansion is yet another step towards full chain management.



Coir

## New faces at Van der Knaap Group

**We recently welcomed two new colleagues to our sales team.**

Olaf Meijer is the new sales manager for Coco Substrates. He is responsible for the further development of our coco substrates and manages the international sales team. Olaf: “I am so excited to be part of this company that has a global reach and is focused on developing sustainable, high-quality products and services.”

“Van der Knaap Group offers a huge range of products and services in the field of rooting and cultivation for the (international) horticultural market. With a view to the future, I am really looking forward to working closely with our international growers.

**Edwin van Geest** has joined the sales team as a junior account manager for potting soil and substrate sales.



Olaf Meijer

### Contact

For an appointment, please contact us at +31 (0)174-525050 or email [sales@vanderknaap.info](mailto:sales@vanderknaap.info).



Edwin van Geest

## A customer's story: Griffioen Plants

# Sowing Cyclamen on Obturo®

Earlier this year, Van der Knaap paid a visit to Griffioen Plants in Kudelstaart. Griffioen is one of the main players in the cyclamen market. The family business was founded in 1966. In the late 1980s, the company switched to cultivation of bedding plants and flowering pot plants, with cyclamen as one of their main crops.

### Sowing on Obturo® plugs

Instead of buying their seedlings, Griffioen recently started sowing their own, to increase their grip on the entire process. This step was made possible in part thanks to finding the perfect propagation plug: the Obturo® plug.

Van der Knaap's account manager Sjaak Burgmeijer, who specialises in customised solutions and has a background in cyclamen cultivation, advises his customers about the possibilities. Together with owner Henny Griffioen, he examines solutions and opportunities for the future.

Griffioen is currently very happy about growing on Obturo® plugs. "A switch like this always takes time, of course. Van der Knaap Group gives me excellent advice and they contribute ideas about technical cultivation issues. The cooperation is going really well for both sides," says Henny Griffioen. Quality is of paramount importance at Griffioen Plants: "Our goal is to deliver beautiful plants that make people happy."

### Challenges

One of the biggest challenges for

which a solution needed to be found was the irregular seed of the cyclamen plant. This means that the seed hole in the propagation plug is of crucial importance. Henny: "If it is too shallow, the root will grow up and out, but if it is too deep, the tuber will nestle too deep, which may lead to tuber rot." With the right guidance, the ideal seed hole was created and a germination percentage of approximately 94% was achieved.

This is followed by a crucial phase when the plants emerge from the climate cell after three weeks and are taken into the greenhouse. They are covered with acrylic cloth to keep the seed coat moist. If the seed coat dries out, it will not fall off the germ layer, causing damage to the plant. One of the specific properties of Obturo® plugs is that the plugs absorb a lot of moisture, but always contain enough air. As a result, the plants will develop a good root system.

"Thanks to these properties, we can also grow more precisely during further cultivation with shorter watering times. This creates a level tray field with compact and uniform plants. The sturdy, slightly larger



*Thanks to the perfect seed hole, the tuber is optimally positioned in the pot*

Obturo® plug also offers stability during potting. The plug hardly sticks to the tray and is easy to work with."

The next generation is already being groomed in the business. Henny Griffioen looks to the future, together with his sons Mark and Rick and his daughter Iris. Concepts play a major part in that future. Cyclamen may have a somewhat old-fashioned image, but Griffioen has developed surprising new concepts with new colour combinations. The plants are mainly intended for the foreign market. They are exported all over Europe, with a large proportion going to Germany.

### More information?

If you would like to receive more information about the best solution for the rooting of your crop, please contact Sjaak Burgmeijer via [sales@vanderknaap.info](mailto:sales@vanderknaap.info) or call +31 (0)174-525050.



*Horticultural advisor Sjaak Burgmeijer visits Fred Bijman and Mark Griffioen*

# Growing cucumbers with circular fertiliser

In recent years, the Research & Development department of the Van der Knaap Group has been doing research into circular fertilisers. This has resulted in the development of a bio-reactor that produces an organic nutrient solution. Input for this process consists of residual proteins and amino acids, which bacteria convert into nitrate nitrogen. This sustainable cultivation system enables organic cultivation, separately from the soil. New research is focused on developing a fertiliser that is rich in calcium and potassium nitrate, made from animal manure.

### Circular fertiliser

Karel de Bruijn, Director of Sustainable Growing Systems, was convinced that the bio-reactor could be used for other applications too: "Our organic water system (OWS), gives us a great in house process that can handle multiple raw material flows. We already had that technology."



*Propagation on Forteco Propagation Cubes*

The frenzy surrounding nitrogen emissions and manure surpluses in the livestock industry gave De Bruijn a few ideas. "We took up the challenge to turn slurry into a useful product for horticulture. It worked out really well. We have developed a high-quality, circular and organic fertiliser that mainly consists of calcium and potassium nitrate." The produced nutrient solution can be applied in substrate cultivation.

### Field trials

In order to test the fertiliser with circularly produced calcium and potassium nitrate in practice, two cucumber trials were successively performed last year with the circular

fertiliser. The tests took place in our own innovation centre 'de Kas' on a surface area of 125 m<sup>2</sup>. Wageningen University & Research BU Glastuinbouw (Greenhouse Horticulture) were involved in the research as an objective party. During the trials, the nutrient solution with the circular fertiliser was compared with a mineral fertiliser that is commonly used for cucumber cultivation.

Cultivation was carried out in spring and autumn, both on coco substrate. The aim of the trial was to develop a fertiliser that achieves similar results as conventional fertiliser in terms of crop development and production. The main raw material of the circular fertiliser, pig manure, contains a considerable amount of sodium. Therefore, the sodium content of the mineral fertiliser was set at the same level as the circular fertiliser, to allow for objective comparison. This was important,

because the sodium level may affect the absorption of other nutrients.

### Conclusions

The results of the spring and autumn cultivation show no differences in production between the circular and the mineral fertiliser. The results were virtually the same in terms of yield and fruit quality, as well as height growth and leaf surface area. The uptake of nutrients by the crop showed no difference either between the circular and the mineral fertiliser. The availability of nutrients for the plant was the same for both fertilisers. The higher sodium content of the circular fertiliser is a point of concern. We are working hard to fix this.

### More information?

If you would like to receive more information about our sustainable growing systems, please contact us at [rd@vanderknaap.info](mailto:rd@vanderknaap.info).



*During the cucumber trials, cultivation was done on coco substrate*

## Substrate trials, cultivation research en analysis

# Research in innovation centre 'de Kas'

In Van der Knaap's own innovation center 'de Kas' in Honselersdijk, the expert R&PD team has an extensive laboratory, twelve separate cultivation greenhouses and an outdoor field at its disposal. Various growing conditions can be simulated here and, in addition to our own product research, we also conduct trials for third parties.

### Research

We carry out substrate tests and specific cultivation research in our cultivation areas. In the laboratory, we can perform complete chemical and physical checks of water and soil samples, such as determining the air and water content, pH and EC measurements and WOK analyses.

### State-of-the-art technology

Trials in 'de Kas' are not limited to rooting and growth trials with substrate. Trial set-ups can be adapted to the desired cultivation methods in consultation with the customer. This makes it possible to do research into, for example, optimal fertilisation, watering, climate and lighting. To this end, our test greenhouses are equipped with state-of-the-art horticultural technology. What's more, the innovation centre is also connected to the geothermal heat network 'Aardwarmte Vogelaer'.

Because climate control and reliable measurements are crucial to any research, all our test greenhouses are controlled by the Hoogendoorn Growth Management's latest climate control system: IIVO. We also collect data using our own Forteco scale and Growficient moisture sensors. These sensors provide extremely reliable measurements in both fine and coarse (coco) substrate. You can find out more about this on our website.

Some of our greenhouses are already prepared for trials with specific crops, such as vegetables, soft fruit, (tropical) potted plants – we even have a section with ponds for hydroponics.

### Vegetables

With our line of Forteco products, we have plenty of experience in growing vegetable crops on substrate. One of our vegetable departments is equipped with lighting. The effectiveness of illuminated tomato cultivation has already been established in Europe. And last winter, we have conducted a succesfull trial with illuminated bell pepper cultivation on organic nutrients. We also have a department for open-field trials (under glass), where we mainly conduct trials with vegetable crops grown with organic nutrients.

### Soft Fruit

Several departments are suitable for soft fruit cultivation. There is a department with a hanging gutter system and tubular heating for strawberry cultivation, but also an outdoor field for outdoor trials with blueberries, for example.

### (Tropical) potted plants

We have set up a separate department for the cultivation of

tropical plants (such as orchids).

This department has a double screen cloth, cooling installation, high-pressure misting system, top and bottom heating and lighting. A second department is equipped with lighting and two new screens according to the PARperfect system. This allows the screen level in the greenhouse to be continuously controlled, so that the crop always receives the correct amount of irradiation.

### Other crops

Our trial greenhouses can be set up flexibly for almost any cultivation and trial set-up. Tables, gutters or directly on the floor. Floor or tube heating. Automatic or manual watering. We can imitate almost any cultivation method in 'de Kas'.

### Meer informatie

If you think your crop can be optimised further, but you do not have the facilities to do further research, please contact us at [rd@vanderknaap.info](mailto:rd@vanderknaap.info) or call +31 (0)174-296606.



*We have all the technology in house for experiments with tropical plants.*