

## Antalya Substrat in operation

**The new potting soil factory of the Van der Knaap Group in Antalya, Turkey, has been taken into operation.**

Although the production hall was completed in the spring of 2011, it took until February 2012 to get all the machines and installations in working order. The factory is



Antalya Substrat's factory hall

equipped with entirely revised equipment. As Turkish legislation does not contain any definition of used substrate production and packaging machines, the import of such machines was banned. After six months' delay, the machines could be transported after all, thanks to a special licence from Ankara.

Antalya Substrat is unique in Turkey. The company produces paper pots (with five different diameters), cutting propagation media and substrates. The basic raw materials are peat, coco peat and perlite. The substrates can be supplied packed in 70-litre bags and 3 m<sup>3</sup> big bags, or loose, in crates, containers or trays. Forteco coco slabs in

small orders can also be supplied. The new factory focuses on the (greenhouse) horticulture sector in



Paperpot machines

Turkey. It also expects to supply cutting propagation media to the arboricultural and citrus sectors. On top of that, the factory will play a key role in the production of bagged products for export to the Middle East.

## Van der Knaap-Braam started up in Spain

**The Van der Knaap Group has been active abroad for quite some time now, in the fields of both production and export of our products.**

The past few years we have seen more and more of our customers moving their business to south



Factory hall

Europe, in particular Spain. Those customers preferably want to continue to use the same products they had grown accustomed to in the Netherlands. Increasing transport costs were however making it difficult to supply the products at competitive prices.

This prompted us to establish a production site at El Ejido, near Almeria, together with our Spanish agent, Ejiturbas S.L.U. In the surroundings of Almeria, an area of around 35.000 hectares is used for horticultural purposes. Most of the cultivation is done in soil, but more and more growers are switching to substrate cultivation. As from 1 May we will be able to supply paper pots in four diame-

ters, filled pots and filled trays to this region. We will also be able to wash pots and trays there.



Paperpot machines

Horticultural businesses in and around Almeria are very enthusiastic. Before our arrival there were no such companies in Spain, so we have great faith in the future.

Orchid trial in 'de Kas'

# Phalaenopsis on coco peat

Our 'de Kas' research facility has completed its third trial growing *Phalaenopsis* in coco peat. In this trial, which was started on 6 June 2011, coco peat was found to be a suitable alternative substrate for growing *Phalaenopsis*. The trial plants became available in week 17 of 2012, and the results are very positive.

We used two different substrates in the trial - the traditional *Phalaenopsis* mixture based on bark and sphagnum, and the Knaap Orchid Substrate (KOS) based on processed coco peat and containing a small percentage of coarse clay granules.

### Trial

In total we grew almost 1.400 plants of two different cultivars: Sion's 'White Wonder' and Floricultura's 'Queen of Hearts'. All operations and observations were recorded throughout the cultivation period. That resulted in an extensive database.

### Data

At the end of the trial we recorded the following data of each individual plant:

- the number of roots;
- the number of leaf pairs;
- the width of the leaves;
- the length of the leaves;
- the number of flower stems;
- the length of the flower stems;
- the number of branches;
- the number of buds.

### Conclusions

After we had processed all the data our conclusion was that the two mixtures were evenly matched. The most prominent differences were stronger root growth in coco peat and the observation that the leaves of the *Phalaenopsis* plants grown in coco peat were both shorter and narrower than those of the plants grown in the traditional substrate. No other significant differences were observed in regards to the other aspects. The numbers of flower stems were also more or less the same in the two mixtures. Around 10% of the plants had one stem, 85% had two stems and 5% had three stems.

In practice, more and more light and water are being used in *Phalaenopsis* cultivation. So it is a matter of developing a substrate that is suitable for those conditions. Coco peat meets those requirements: it quickly absorbs water and nutrients and dries uniformly. In the case of traditional substrates based on bark, more frequent watering exponentially



*Phalaenopsis* trial

increases the risk of potworm, whereas so far, that risk seems to be non-existent in coco peat. So coco peat is in several respects far more suitable for the new cultivation methods than traditional substrates.

### Information meeting

During the trial we frequently invited growers to inspect the plants. On 5 April we organised an information meeting for interested growers and representatives of information services together with Relab den Haan. The two key issues discussed at the meeting were the measurement of urea in nutrient water and drain water and the trial in 'de Kas' using KOS. It was found that urea measurement may be a good new way of monitoring and controlling cultivation conditions. The conversion of urea via urease is dependent on many factors, such as the temperature and pH. If the aim is to reuse more water in the future, it is for fertilisation purposes important to know how and when that conversion takes place.



*Phalaenopsis* trial in 'de Kas'

The importance of the right temperature in a substrate

# Forteco Open Day in Turkey

Tuesday 13 March saw the first Forteco Open Day in the Antalya region (Turkey). The Hatipoglu Seracilik production company then opened its doors to Turkish (tomato) growers and representatives of information services. Whereas some of the visitors were already familiar with Forteco coco slabs, there were also many growers who were interested in switching to cultivation on coco slabs.

The Open Day gave growers an opportunity to see in practice how Hatipoglu Seracilik uses Forteco substrate slabs, and to discuss experiences with other growers. Forteco also gave a presentation



Tomatoes on Forteco substrate slabs

to demonstrate the importance of air in substrates. Other issues covered in the presentation were vegetative and generative steering of the plant, control based on

pH and EC, the root system, the uptake of nutrients and soil life. A lot of attention was also paid to the importance of the right temperature in substrates.

The tomato cultivation season in the Turkish Antalya region is from September until June. So there are separate summer and winter situations there. In winter it is important to have a substrate that can be effectively controlled. Generative development can be promoted via the water content and EC in the substrate slab. In summer the substrate acts as a water buffer. It is of course essential for plants to have sufficient water at high temperatures and high insolation levels.

So in summer, the substrate has a different function than in winter. In the summer plants must have sufficient water, whereas the key concern in winter is the ability to control the plants' development.

In Turkey a lot of use is made



Forteco demonstration

of wet, voluminous substrates. This leads to problems in winter because it is difficult to control the plants' development on such wet substrates. Forteco coco slabs are very airy, enabling good air and water management. The coco slabs drain well, and the plants' generative growth can be effectively controlled. With their air values of 25 and 30 volume percent at total saturation, Forteco Power and Forteco Profit in particular are ideal for obtaining good cultivation conditions in both summer and winter.

In winter and summer the amount of water in a substrate partly determines the substrate's temperature. At a low greenhouse temperature and little insolation a substrate will have a higher temperature at a small water volume than at a high water volume. In summer things are the other way round, and a substrate will have a lower temperature at a small water volume than at a large water volume. So cultivation on airy substrates involves many advantages over cultivation on wet substrates.



Forteco Open Day

# Hortifloorexpo Beijing

From 11 until 14 April the Hortifloorexpo took place in Beijing, China. The Van der Knaap Group was among the exhibitors. Ludo van Boxem and Kwaisum Chan of the Van der Knaap Group explain why. "The main reason for us to participate in the fair was that China has a market of 1.3 billion people with great demands that must be met. The Chinese government moreover supports substrate projects, which implies great advantages for us. We also wanted to gain a better understanding of the types of products needed for Chinese horticulture, and of the Chinese growers' expectations concerning the quality and prices of substrates." We got all the information we needed. "We now know what the growers expect from us as a

So far, almost all cultivation has taken place in soil or in low-quality substrates of local soil. That often led to poor crops and low profits."

So it's not surprising that our



Van der Knaap Group at Hortifloorexpo



Hortifloorexpo in Beijing

substrate supplier, and we'll be able to use that knowledge to meet their requirements. We also established some very promising contacts – in China itself, but also in various surrounding countries such as Korea, Japan and Thailand." Generally speaking, Chinese horticulture is quite behind that in the West. "Substrate cultivation is a very recent development over there.

products attracted a lot of interest, especially our coco peat substrates. "The Chinese are familiar with coco peat as a cultivation medium, but the fair's visitors were not aware of its many possibilities. That's why we offer the Chinese growers Forteco coco slabs that are specially adapted to the country's watering capacities, climate conditions and cultivation possibilities."

## AGENDA 2012

### COLLECTIONZ & TRENDZ

Sunday 10 -

Tuesday 12 June

In June, Van der Knaap Retail will be represented in the Evenementenhal in Venray, at the CollectionZ & TrendZ, which focuses on outdoor living and home & decoration.

### OFA SHORT COURSE

Saturday 14 - Tuesday 17 July

Ohio, United States

### GPEC

Wednesday 25 - Friday 27 July

Tokyo, Japan

### PLANTARIUM

Wednesday 22 -

Saturday 25 August

In August the Van der Knaap Group will be represented at the international arboricultural trade fair Plantarium.

### HORTI FAIR

Tuesday 30 October -

Friday 2 November

As in previous years, the Van der Knaap Group will once again be represented at this major international fair in the RAI Exhibition Centre in Amsterdam.

### TECHNICAL TRIALS

As usual, Technical Trials will this year once again be organised to coincide with the Horti Fair. Leading technical producers will then open their doors to entrepreneurs active in horticulture all over the world. The Van der Knaap Group will also be participating in the trials.

For more information go to

[www.technicaltrials.nl](http://www.technicaltrials.nl).

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