

Rooting raspberries in Fibre-Neth®

Van der Knaap Group has successfully used Fibre-Neth® to root raspberry plants. What started as small-scale trials three years ago, is increasingly gaining an excellent reputation.

Fibre-Neth® plugs

Fibre-Neth® plugs have been used for some time now in horticulture to grow plants such as bromeliads, orchids, perennials and tropical plants. The plugs are now, however, starting to



Rooted Fibre-Neth® plugs

gain a reputation as a rooting medium for young raspberry plants. The plugs consist of a homogenous coco peat and a binder. This holds the coco particles together without damaging the structure and therefore retains the physical properties of the coco.

Properties

The high air content of the medium combined with the specific properties of the coco peat offers various advantages when cultivating plants.

The airiness ensures the roots establish quickly in the plug. The plugs can drain freely as no compaction and sealing occurs at the base of the tray. This makes Fibre-Neth® plugs suitable for use to harden off plants outdoors. As the medium dries quickly, nutrients can quickly be used to steer plant growth. The inclusion of coco peat in the substrates used for planting means a smooth transition from the plugs. All these benefits lead to excellent rooting

results in practical situations, as well as labour savings as the plugs can be sorted and planted automatically.

Custom-made plugs

Van der Knaap can fill practically any type of tray and pre-form planting holes. In addition, drill holes ranging from 10 mm to 58 mm in diameter can also be formed in the plugs on a number of trays.

On request, fine structured coco can be applied to the drill holes to create a plug with a soft core. The advantage of this is that the loose coco material at the core of the plug attaches firmly around the cutting after it has been planted and watered.



Blueberry trials in 'de Kas'

The greater consumer demand for soft fruit, and the trend in commercial soft fruit growing of switching from full field systems to growing on substrates, have significantly increased the percentage of soft fruit grown on substrates worldwide.

The trials

In March 2017, Van der Knaap started trials to identify the optimal medium for rooting winter cuttings of blueberries in its trial centre 'de Kas'. Three types of rooting media in combination with one variety of blueberry were tested: paperpots, Obturo® and Fibre-Neth® plugs in an 84-hole tray. Winter cuttings were used in the trials. These cuttings have had a longer period of cold conditions to root well and develop.

Results

The initial results were visible after two weeks; the first shoots emerged and the cuttings grew in length every week. A few weeks later the callus developed on the underground part of the cutting followed by root development. The results showed clear differences in cutting growth and development on the various types of rooting media. The paperpots and Obturo® plug appear to give the most favourable results regarding rooting and plant loss.

Follow up trials

Follow up trials are currently being run in 'de Kas' using the rooted cuttings obtained from the first trials. The aim is to see which final substrate gives the best growth results. Four

substrates are being tested; peat-based, coco-based and a combination of both.



Trial with blueberries

A customer's story: Lemmen Aardbeien

Peter Lemmen from Lemmen Aardbeien has a hectic summer behind him. At its peak, in weeks 24 and 25, some 25 staff were kept busy picking a total of 45 tons of strawberries. The strawberries Lemmen produces are sold at Fruitmasters, the auction in Geldermalsen.

The focus at Lemmen Aardbeien is on growing strawberries on gutters. When the company started in 2001, there were 5,000 m² under glass, 2,000 m² covered by tunnels and gutters extending to a length of five kilometres. Expansion means that as from 2018, the company operates on a site consisting of 1.5 hectares of greenhouses, 2,000 m² of tunnels and 40 kilometres of gutter growing systems.

Own propagation of tray plants

At Lemmen Aardbeien they propagate their own tray plants. The company started this activity in 2008, after



Good rooting of the substrate

experiencing problems with plants propagated elsewhere. They made plans and started with 25,000 small plants. The following year they propagated 100,000 plants and that number continued to rise each year – reaching some 550,000 plants this year! They need 500,000 plants for their own use, so for the first time the remainder was raised for third parties. Propagating the tray plants was a smooth process right from the start. Peter Lemmen: "After the first year, we adapted the mixture used in the trays in consultation with Van der Knaap". He still uses that very mixture of peat and

coco; the tray plants show excellent root development. The cuttings are packaged and frozen in December. They are planted between March and August, and the strawberries are picked between April and December.



Peter Lemmen and Remko Bosch (Van der Knaap) discuss the crop

Substrate

Peter Lemmen cultivated his crops on peat until 2004, before switching 100% to Knaap Elite coco substrate. "And I am still completely satisfied with the results", says Peter. The big advantage of coco is that it always reabsorbs water. Peat has good water retention properties, but if a peat substrate is allowed to dry out, it is almost impossible to resaturate it. But, more importantly; the plants flourish on the coco substrate. The plants root well and establish nicely in the soil. After they have been planted and irrigated, they are already firmly rooted.

Growing strawberries in coco means that paying attention to the irrigation water is important. Water too high in silicon can cause albinism. This can be more problematic if ground water is used for irrigation, as is often the case in autumn. The irrigation water must be completely suitable. In 2004 Lemmen built a water reservoir to monitor water quality properly.

Expansion

Expansion had been a long-held wish of Lemmen Aardbeien, but finding the right location turned out to be complicated. Finally, the ideal spot presented itself just 500 metres away from the original site. As Peter himself says: "There's no reward in business without a risk sometimes".

The new site covers around three hectares with 6,000 m² of greenhouses and a container field of 1.5 hectares. The tray plants are now all propagated on the new site, and all the gutters are located on the original site. The tray field is now organised properly. The plan for this year is to get the gutters in order from March and start growing the plants. The preparations are scheduled to take place during the winter.

More information

Would you like more information about topics in this newsletter?

Please contact one of our horticulture advisors.

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Lemmen Aardbeien grows on 100% Knaap Elite coco substrate