# GreenPligs

#### Distinctly consistent, like a fine cigar

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IBN Kwekerijen was looking for a better way to root its conifer cuttings. Preferably one that would also immediately prevent the growth of liverwort.

GreenPl

# GREENPLUGS PRODUCED LIKE FINE CIGARS

We manufacture GreenPlugs the same way fine cigars are made, giving them unmatched consistency. Using unique technology from the tobacco industry, we first separate the peat particles. With great precision, these particles are layered to create a foundation for growth. Then the fleece is wrapped around the cylinder of soil. This optimizes the spaces between the soil particles for the perfect distribution of soil and air, which enables optimal drainage. The uniformity in shape, density, and moisture content, results in even growth.

### ADVARGED PAPERPLUGS FOR EFFICIENT GROWTH

Premium paperplugs with customized homogeneous substrates. For the most optimal, rapid and equal growth of young plants. With GreenPlugs, you choose a complete and reliable propagation system that consistently delivers, requires less work and saves space. Throughout the entire cultivation process - from planning to deliverable young plants - our specialists are there to advise and assist you. GreenPlugs, advanced paperplugs for efficient growth!

# WHY GREENPLUGS?

#### TAILORED MIXTURES

We tailor our RHP-certified mixtures (peat, coco, and perlite) entirely to the type of crop, desired airiness and growing method.



#### **OPEN STRUCTURE**

The plug mesh consists of permeable paper, which repels unwanted fungi. Due to the open structure, roots are given complete freedom to grow.



GreenPlugs consist of 70% moisture. This prevents dehydration and preserves capillary action at all times.

#### **CONSISTENT FILLING**

Our plugs are crafted for durability. Drawing on precise techniques from the tobacco industry, GreenPlugs feature a highly homogeneous structure that remains intact longer.

#### **SIZES TO FIT YOUR NEEDS**

GreenPlugs are available with diameters from 13 to 29 mm (0.51" to 1.14") and lengths from 22 to 120 mm with dibble holes if desired.

# **BRONGS**'

GreenPlexgs

How do we attain the most homogeneous paperplugs with optimal substrates? And how do we ensure that propagators of young plants achieve their full potential? These fundamental questions led to the philosophy of Green Products and its GreenPlugs. In this inspiration magazine, you will read all about it, but you will also find out about the experiences of the propagators themselves. In short, plug into the world of GreenPlugs!

#### THE BEGINNING: UNIQUE CULTIVATION CIGARS

Green Products was first established in 1991. Inspired by use in the tobacco industry, Tembo Group applied this innovative production machinery to a new, sustainable product. It resulted in GreenPlugs: paperplugs with the same, highly consistent composition as cigars. Instead of the traditional cigar paper, these paperplugs featured high-quality substrates with a self-developed, extremely permeable mesh.

#### MORE THAN HALF A BILLION GREENPLUGS ANNUALLY

From then on, Green Products crafted its unique 'cultivation cigars' using the same kind of machinery that cigar manufacturer, De Olifant, used to produce A-label cigars. In the

0%

DUST IN OUR GREENPLUGS following 30+ years, the Kampenbased company grew to become one of the largest suppliers of paperplugs. With an annual production of over half a billion GreenPlugs (80,000 plugs per hour), we serve professional propagators and growers around the world.

#### **HIGH MOISTURE CONTENT**

Green Products' paperplugs are distinguished, in part, by their high moisture content. "We deliberately keep our GreenPlugs moist (70%)," explains Director, Jan Dons. "This is important for water absorption. Due to capillary action, the soil quickly reaches an optimal moisture level. On top of that, once peat is too dry, it becomes irreversible. Every grower knows from experience that peat doesn't get wet again once it's dried out."

The way our peat is harvested is key. "When you harvest peat with

GERBEN VAN VUGT (L) OF ANTHURA AND MATTHIJS VAN DEN BERG OF GREEN PRODUCTS INSPECT AND DISCUSS A TRAY OF ANTHURIUMS.

GreenPlugs consist of fractions of block-cut peat instead of vacuumed peat. As a result, our paperplugs are 100% dust-free. This prevents clogs and aids capillary action.

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#### UP TO 15% FASTER ROOT DEVELOPMENT

Early root initiation is faster than the competition because of our consistent, uniform plugs and mixtures which are fully tailored to the plant and tray.

vacuum harvesters, dust particles in the substrate cause the soil to shrink or collapse. The peat we use is cut into blocks and delivered to us in large pieces. This way we carefully preserve the structure in the soil from day one, creating an open structure that allows young plants to have enough air and absorb water evenly. At the same time, roots are given all the space they need to grow. We do this with tailor-made mixtures, which we customize together with our customers to suit the type of crop and growing method."

#### THE RIGHT TRAY

The use of a unique type of paper (refer to page 14 for details) and

tray plays a crucial role in the cultivation process. "We like to work in a triangle of: customer, tray supplier, and our contribution as plug specialists," says Sales Director, Matthijs van den Berg. "Together, we develop the best tray for the crop; where the plug is firmly fixed with enough air surrounding it. This allows the root to sprout from

#### "As a producer, consultant and partner, we guide our clients to excellent results"

#### **100%** DISTRIBUTION OF ROOTS THROUGHOUT THE PAPERPLUG

Our paperplugs have an exclusive plug mesh, featuring a high pore volume for an optimal balance between water and air. Roots can grow throughout the plug and branch out more.

#### 1:14 TIMES MORE **SOIL IN OUR PLUGS**

anywhere in the cup. The plug can

mechanically, without disturbing the

root system. The tray also prevents

the plug from filling up completely

with water; the tray retains just

enough for sprouts to enter full

easily be removed, manually or

We produce GreenPlugs with machinery used in the tobacco industry. This allows us to insert more soil into our paperplugs than the volume of water. by a ratio of 1:1.4. Water stays in place, and the capillaries are guaranteed to remain open.

#### **PROACTIVE INPUT THROUGHOUT** THE PROCESS

This sharing of ideas with the customer occurs throughout the entire cultivation process, in a resultsdriven and down-to-earth manner. Like you, we know a top product leads to excellent results when all the





pieces of the puzzle fall into place. Thanks to decades of knowledge and experience, Green Products -as a provider of expertise in cultivationknows the conditions for optimal results. "As a producer, consultant, and partner, we like to guide our customers to excellent results."

#### DIRECTOR **Jan Dons**

growth mode."

Was brought up working in horticulture. "I like serving a global market with a dedicated team; finding challenges and solutions with the customer in a collaborative and approachable way is very rewarding for me."



#### COMMERCIAL CONSULTANT Anna Leenheer

She has been around nurseries from a young age through her father's business. "I enjoy helping both plants and companies achieve optimal growth and working practically with growers to elevate their

cultivation to higher levels." In addition, looking into new opportunities within the market is something that interests me, in order to achieve optimal growth for both plant and company.



#### SALES DIRECTOR MATTHIJS VAN DEN BERG

Grew up in the horticultural world through his parents'

business. "I get the most energy from a customer who is happy with our plug and the organization behind it. Ensuring the customer doesn't have to worry about the first part of the process; making sure our plugs are in their greenhouse on time."



#### CONSULTANT onno Boeren

Active in horticulture for 35 years and immensely interested in plant physiology and soil. "I advise customers on our product and their entire cultivation process. When I walk through a greenhouse, I read plants. I understand how they grow and what they need. I get a kick from working with the customer to achieve the best possible growth."



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## UNDUE FILING METHOD FOR HOMOGENEOUS PAPERPLUGS'



Anthura specializes in growing Anthurium and Orchids. Based in Bleiswijk, The Netherlands, Anthura is known for its highquality young plants which are loved by growers worldwide. To offer these plants the best possible growth start, Anthura chose GreenPlugs in 2017.

efore choosing GreenPlugs, the company went through a lengthy testing period, trying out paperplugs and other soil plugs from different companies. "It is very important," says Cultivation Specialist, Gerben van Vugt. "It concerns the cultivation of many Anthurium plants every week. So we have to make sure that we use a

good, reliable plug for this. That is the case with GreenPlugs."

#### UNIQUE FILLING METHOD OF Paperplugs

Van Vugt believes there are two main reasons for GreenPlugs' superior performance: "The first is the unique filling method of our 19 mm diameter paperplugs, with

#### **WHY GREENPLUGS?**

- Y Consistency of plugs
- Contribution of ideas throughout the growing process
- Y Eye for quality and valuable expertise
- Y Accessible organization

machines from the cigar industry. The GreenPlugs are filled evenly, resulting in a homogeneous structure. The airiness of GreenPlugs works well for an epiphyte like the Anthurium and watering is perfectly adaptable to that."

#### THINKING ALONG THROUGHOUT THE Entire process

The second reason, Van Vugt points out, is the input from Green Products. "They developed a custom plug for us and continue to make the



conditions as optimal as possible –Green Products is strong in that. Consultant, Onno Boeren, regularly visits to see what can be improved and provide technical advice."

The same goes for the paper used on the plug. "For example, we are looking at a different color of paper, together with Green Products," says Van Vugt. "So that it will be more visible to the cameras of our machinery."

#### ACCESSIBLE ORGANIZATION

Anthura is pleased to collaborate with Green Products. "It is an accessible and highly-specialized "Green Products has valuable expertise, an eye for quality, and contributes throughout the process."

organization," says Van Vugt. "At first we were a bit skeptical about this, but this has turned out to be an advantage. They have valuable expertise, an eye for quality, and take the time to contribute ideas on how to make improvements."

# PRODUCTS

GreenPlugs are available in all diameters from 13 to 29 mm, with or without dibble. The mixtures are customized to the type of plant and growing method used. To ensure your growing success, we can help develop a suitable tray to best accommodate your plant varieties.

#### **GREENPLUG 1300**



#### GREENPLUG 1500

**MOSTLY USED** 











#### GREENPLUG 1900



#### GREENPLUGS ARE AVAILABLE WITH OR WITHOUT DIBBLE



#### **GREENPLUG 2200**



#### MIXTURES TAILORED TO PLANT and growing environments

We tailor the mixtures in our GreenPlugs entirely to the type of plant, growing environment, and requirements of our clients. The RHP-certified substrates consist of various types of premium peat (including Swedish), coco, perlite, and/or vermiculite.



#### **GREENPLUG 2300**









#### ASSISTANCE THROUGHOUT THE CULTIVATION PROCESS

We advise you on choosing the right paperplugs and how to optimize your growing process. Thanks to years of experience, we understand how plants grow and what they need. Guided by the best cultivation strategies, we consult closely with our clients to develop customized GreenPlugs.



#### **GREENPLUG 2500**



GreenPlexgs

#### **GREENPLUG 2800**



#### **GREENPLUG 2900**

MOSTLY USED II







# WITH THE CUSTOMIZED CUSTOMICO CUSTOM

A YOUNG THUJA FROM IBN KWEKERIJEN IN OUR SPECIALLY DEVELOPED COMBI GREENPLUG. IBN Kwekerijen was looking for a better way to root its conifer cuttings; preferably one that would also immediately prevent the growth of liverwort. The answer lay in a unique concept, which the company devised with their soil supplier and Green Products. "With the customized GreenPlug, we target two objectives" says Frank van den Bergh, Director of Kwekerijen at IBN.

BN employs people who are at a disadvantage in the labor market. With over a quarter century of experience in propagating hardy garden plants, the nursery has become a major player in the market.

#### A MEDIUM FOR EFFECTIVE WATER Drainage

IBN first set about improving and cleaning up its water system itself. "But with an assortment of over 1,000 crops, you can't water too selectively," Frank explains. "We would especially benefit from a medium that could drain water effectively. We already know the benefits of the paper plug, but in conifers, its use is less common."

However, the many benefits of GreenPlugs won IBN over. "Air and water are crucial for rooting," says Frank. "The cutting must not petrify nor drown; you can prevent this with a paper plug. I think our rooting success rate improved by about 10%."

#### UNIQUE COMBINATION

Green Products added another vital advantage: the combination of a topdress layer and an ideal, homogeneous plug composition. This makes the Combi GreenPlug perfect for conifer cuttings, as well as other crops. The unique topdress material actually prevents moss formation. At the same time, the material sinks down the GreenPlug, creating a natural bridge on the tray edges – this significantly reduces cell to cell

"The composition is ideal for rooting, and thanks to the top layer, there is hardly any moss formation or excessive rooting." FRANK VAN DEN BERGH, DIRECTEUR KWEKERIJEN BIJ IBN

#### BENEFITS OF Combi greenplug

Y Significantly less moss formation

- Y Strong reduction in root hopping
- Transplanting can be done sooner and faster
- Y Far less failure while transplanting
- Y Better quality of young plant

root hopping, resulting in plugs that are easier to handle and faster to transplant, both in manual potting and with potting robots.

To this day, Green Products continues to be an active participant in improving IBN's cultivation process. "All in all, we're getting a better, fuller plug," Frank says. "Moreover, we can better control PH and EC. An investment has to pay for itself, and with all these factors combined, that's absolutely the case."

## **Reliable Delivery and Close comunication WITH OUR GROWERS'**

Dümmen Orange really needs no introduction. This leading propagator of plants and flowers has been active in the ornamental plant sector for over 100 years. On an annual basis, Green Products supplies millions of GreenPlugs to the Rheinberg (D) site.

jümmen orange

ümmen Orange primarily uses GreenPlugs to grow annual garden plants and potted plants. The mother plants are located on farms in Africa and southern Spain, from which the cuttings are rooted at Dümmen sites in Germany and

the Netherlands. The company uses different types of GreenPlugs with diameters between 19 and 29 mm. "The cultivation process of our fastest crops takes 3 weeks and the slowest about 7 weeks," Sonneveld explains.

"Green Products provides reliable delivery, the quality is always consistent, and they are constantly sharing ideas with our growers" Heleen sonneveld. OPerations manager



#### close communcation

Dümmen Orange then supplies the plants to some 1,500 growers throughout Europe, Africa, and the Middle East. "Cultivation success, of course, depends heavily on how stable the plugs are," Sonneveld says. "We choose Green Products because, in quantity and quality, they always deliver what they promise. In addition, Green Products' consultant and our grower work closely together."

Green Products regularly

visits Dümmen Orange. "The technical expert then examines how the growing process is going," Sonneveld explains. "He consults with our grower to see if everything is as required. Suppose the rooting is not optimal; they think of a solution together. For example, how can we make the

plug more aerated? Should we adjust the composition? Or should we choose a different type of tray? They also conduct trials to test this."

#### **FINGER ON THE PULSE**

According to the Operations Manager, Green Products keeps "a constant finger on the pulse". Sonneveld: "We never find ourselves thinking,



'Hey, we haven't heard from them in a while.' They are very reliable with delivery as well as communication. The GreenPlugs are always delivered on time, and we are very satisfied with the quality. If there is a problem, they always find a solution. This

> communication is simply enjoyable. This is also reflected in the number of plugs we purchase, which over the years has only increased."

#### **WHY GREENPLUGS?**

- m Y Very reliable delivery and plug quality
- Y Close communication with our grower
- Y Constantly keep a finger on the pulse
- Y If something goes wrong, a solution always follows

SCHNBIDER YOUNGPLANTS

A LOOK INSIDE THE GREENHOUSES OF SCHNEIDER YOUNGPLANTS

# Dependable People'

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Schneider Youngplants is a renowned grower of young plants, such as the popular Petunia and Bacopa. Based in North Brabant, The Netherlands, Green Products assists this company with the best possible cultivation process. ntil a few years ago, Schneider rooted its cuttings in trays of loose soil. In 2020, the company made the switch to GreenPlugs. "With paperplugs, you can get the cuttings out of the tray much easier," Den Toom explains. "It allows us to sort more easily and our customers can easily transfer them to hanging baskets or pots. If a cutting in loose soil is not well-rooted, you can never remove the complete root system. This will immediately put you at a disadvantage."

#### **Reliable and Uniform**

Schneider Youngplants finds that its cuttings root quickly in the 22 mm GreenPlugs. "As a result, we can get them out from under the cover sooner," their Process Manager clarifies. "This reduces imperfections and helps ensure reliable delivery. Every tray and plant now matters. We know where we stand and can count on reliability and uniformity."



#### PERSONAL APPROACH

Throughout their production, Schneider experiences "smooth collaboration." Den Toom: "It's 'you ask, we answer' at Green Products. I issue a schedule; they make sure it is followed through. And if something doesn't go right, you can always fall back on them. They will think of solutions or alternatives. They drop by regularly to check how everything is going –a very personal approach." "The people at Green Products sincerely want to help and respond quickly," "If you need anything, you can contact them right away. In doing so, you're truly dealing with individuals, not a distant company." PETER DEN TOOM QUALITYMANAGER

#### Perennial advancements

According to Den Toom, much more is in the works in terms of collaboration with Green Products. "In annuals, we have really proven ourselves as a company. Now we want to make our mark in the field of perennials. Together with Green Products, we will continuously develop in this field, using the best substrate mixture and trays." Den Toom laughingly says: "We are true nerds when it comes to that at Schneider. We believe, together with Green Products, we can make a difference with our perennials."

#### WHY GREENPLUGS?

- Y Smooth collaboration with dependable people
- Y Fast and effective rooting of cuttings
- Y Reliable and uniform delivery
- Y Personal and quick contact

# THEY EXCEL IN SERVICE AND UNFORM PLUGS'

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Global leader, Syngenta, aims to get the best out of plants. The Young Plant Production Center is located in De Lier, South Holland. Every year, Syngenta Flowers (part of Syngenta Seeds) supplies tens of millions of young potted and bedding plants to growers throughout Europe. GreenPlugs play an essential role.

yngenta Flowers uses GreenPlugs primarily for the propagation of Pelargoniums and Mandevillas. Young Plant Production receives the cuttings from farms in Ethiopia and Kenya. These are then manually inserted into 25 mm pre-dibbled GreenPlugs. After 4 weeks (for Pelargoniums) and 6 to 8 weeks (for Mandevillas), the young plants are distributed to hundreds of growers throughout Europe.

#### Research

Syngenta Flowers has been working with our GreenPlugs for about 3 years now. "We are constantly looking for improvements in our cultivation process," Vreugdenhil explains. "Our research department is also continually advancing this, alongside the Green Products team. They have the knowledge to assist us in our search for the optimal medium."

#### A HIGH DEGREE OF CONSISTENCY

Syngenta Flowers is delighted with the consistency of GreenPlugs.

"Both in the plugs themselves and between the different paperplugs and batches," Vreugdenhil explains. "That's very important in our process. You're always dealing with many variables that can affect the process. We, of course, structure the process so that these are minimized. A plug of consistent quality, such as GreenPlugs, contributes to that."

#### LIMITING FAILURE

The consistent quality also ensures that failure is kept to a minimum. "We want a media that allows us to work as efficiently as possible, at the lowest possible cost," Vreugdenhil said. "So smooth rooting and low failure rates

#### **WHY GREENPLUGS?**

Y Highly consistent plugs reduce failure

- Y Efficient and effective rooting
- Y Dedicated technical support
- **Y** Research focused on continuous improvement

ALL CONDITIONS ARE IN PLACE FOR OPTIMAL GROWTH OF THE ZONAL GERANIUM.

ARIE VREUGDENHIL (R) IN DISCUSSION WITH ONNO BOEREN OF GREEN PRODUCTS.

are very important. We source our cuttings from Africa and put a lot of energy into the cultivation. A failure rate of, say, 10 to 15 percent is far too high. Since GreenPlugs are very homogeneous, it is now possible to limit that to just a few percent. We are thrilled with that."

#### **TECHNICAL SUPPORT**

The company is also very pleased with Green Products' technical support. "They excel in that," says Vreugdenhil. "Their Technical Consultant, Onno, visits us every 2 weeks during the season. If we collectively see deviations or "Green Products continuously delivers an excellent and uniform product, which allows us to root quickly and have far less failure," PRODUCTSPECIALIST ARIE VREUGDENHIL

reasons for improvement, we discuss them. It's a process of continuous, progressive insight. In this process, we do regular tests to arrive at the most optimal plug composition and conditions. They also support us in multiple areas of research."

#### OUR CORE VALUES

# PROPOGATE THE GREENPLUGS ИНЧ



With our roots in young plant expertise, we offer plugs crafted for premium performance. We go the extra mile with high-quality plugs and tailored support for our customers.

# commitm

Green Products stands for respect and commitment: for you as a customer. our employees, and the environment. We never pretend to be something we are not and always tell you the truth. In short: what you see is what you get!



We work with a down-to-earth, solutionsbased attitude. This enables us to respond quickly and effectively to your needs. We always think in terms of opportunities rather than problems.

# **GreenPlexgs** Distinctly consistent, like a fine cigar

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