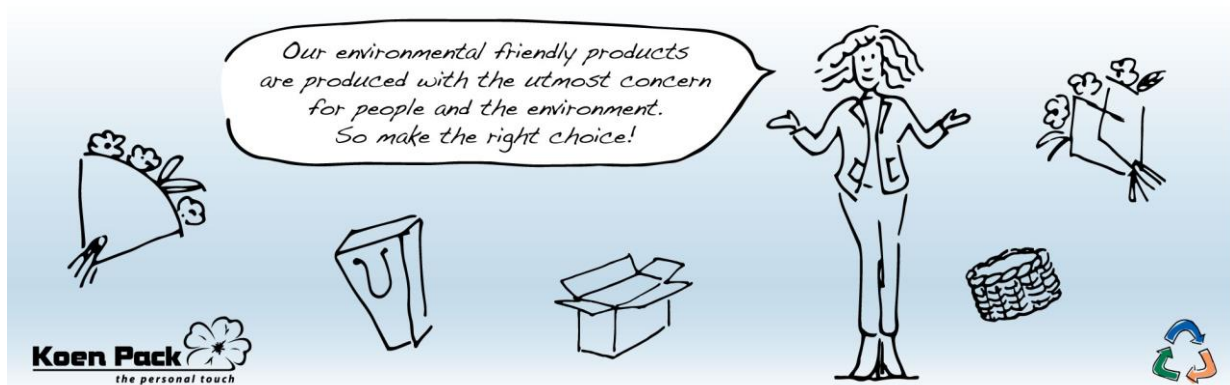




Whitepaper

Sustainable packing in Horticulture and Floriculture



Contents

Introduction	2
Koen Pack's Go Green Campaign	3
What does Koen Pack do itself?.....	3
LED-lighting	3
Solar panels.....	3
Many things are happening in the world, sustainability is becoming increasingly important	4
Affiliation with organizations.....	4
BSCI	5
ETI.....	5
Sedex.....	5
CSR Corporate Social Responsibility	5
Seedling logo	6
FSC®.....	6
ISO-14001.....	6
Lansink's Ladder.....	6
The Five Directions for Improvement	7
How does retail deal with sustainability and recycling?.....	8
Sample Book	8
Good packaging = sustainable packaging; 7 tips from the KIDV	10
Conclusion.....	11

Introduction

Koen Pack is consciously creating packaging to make flowers and plants more beautiful. In doing so, we look at the wishes of the customer and the possibilities in materials and designs.

We provide information to companies by giving Knowledge Sessions. An explanation of the different materials and their properties is given on the basis of the Sample Book. To make the right choice, several considerations are necessary, this differs per company and market. The point is that we strive for a circular economy in which recycling is important.

Koen Pack's Go Green Campaign

Our joint ambition is to properly inform our employees, suppliers and customers about the possibilities in packaging. What is available and what are the alternatives?

The reason why Koen Pack developed the Go Green campaign in 2019 is to provide customers, growers, wholesalers, exporters, and other buyers with information and to offer added value in making the right choice with regard to flower or plant packaging. Ultimately, the entire chain must cooperate to inform consumers. That is why our motto is: "Improve the world, start it yourself".

The website has a number of pages devoted to sustainability. Here you can read more about, among other things, plastic and paper and about the environmental impact. The website contains a lot of information, including a handy dictionary.



What does Koen Pack do itself?

LED-lighting

At the end of 2018, LED lighting has been installed throughout the warehouse and in the office in Amstelveen. Dynamic dimming is used where the light output is 10% when not in use and 100% when driving in. The lighting in the offices has also been replaced by the more economical version.

Due to the latest developments, we have also been working to upgrade the building for a higher environmental label. We now have Label A++ due to the construction of the new office and the new showroom in the Netherlands. LED lamps with motion sensors have also been installed in our warehouses and offices in Canada, USA and Colombia.

Sustainability starts in the office. So, when building a new office in Canada, Koen Pack designed sustainability into the structure and its operations from the ground up. Most flooring materials are made of PVC that is hard to recycle, so instead Koen Pack installed polished concrete floors. Even the showroom furniture is sustainable; it is 90 percent made from reclaimed materials.

And printers are moved to separate printing room which physically discourage printing, this probably saves us 30 percent on printing paper. Better yet, instead of printing, go digital.

Solar panels

At the end of 2019, more than 1,000 solar panels were installed on the roof of Koen Pack's main business premises in Amstelveen. From 2020 we will switch to green electricity with this sustainable investment. This is in line with our intention to do business in a socially responsible manner and contributes to reducing CO² emissions. We can take all the energy we need to keep Koen Pack running from our panels during the day. At night we purchase about 10%, but during the day we deliver back again.

Also in Colombia solar panels were installed on the roof of our business premises in 2020. With our environmental team, we are constantly looking for new materials (recycled materials, or a mix thereof). For example, we are now working on planting Bamboo around our premises to realize a reduction in CO².

Our fleet will also be converted to Hybrid or fully electric in the foreseeable future. Amstelveen has three charging stations where you can charge solar power during the day. Preparations are being made to have all electric vehicles in the near future.

Many things are happening in the world, sustainability is becoming increasingly important

Although we do not have all the answers, we feel it is our duty to answer as many questions as possible and to keep up with the times in our offer, with an eye for price/quality.

The press talks about an economic development aimed at reducing the depletion of natural resources, such as the use of fossil fuels. In practice, this comes down to CO² reduction, the energy transition from gas to electricity and the tightening of waste policies. Doing so, waste becomes a raw material again and can be reused.

The demand for further sustainability of the product and packaging circle is increasing from various channels. Just like improving the system of collection and recycling and reducing litter on land and in the sea. In addition, there is the aim to become less dependent on non-renewable raw materials. Like corn or sugar cane.



1 The latest development Bamboo paper sleeves

Affiliation with organizations

Since 2020, Koen Pack has also been affiliated with Greenport West-Holland, where we sit around the table with various parties from the market to connect chains. Knowledge cafes are organized and cooperation is sought with, among others, the KIDV (Knowledge Institute for Sustainable Packaging), Universities and Ministries, also at European level. It is important that governments set clear guidelines for the collection of packaging materials to promote recycling.



BSCI

Partly due to questions from the market, it was decided to join amfori BSCI.



BSCI is committed to worldwide improvement of working conditions in the production chain according to eleven principles. This includes ensuring equal opportunities for employees, assessing risks, socially responsible policy, freedom of association, special protection for young employees, combating child and forced labor and paying reasonable compensation. Environmental protection and facilities for a safe and healthy workplace are also part of this. Audits are held at our suppliers to check whether they are adhering to the agreements.

If you want to know more about this, you can read what the Code of Conduct entails on the website. <https://koenpack.com/en-gb/certificates>

ETI

We have been working with our producers for years according to the rules of ETI (the Ethical Trade Organization), the agreements are recorded in a document that is signed by the suppliers.

Sedex

Since 2013, we have been working with Sedex, a non-profit organization dedicated to improving accountability and ethical business practices in supply chains worldwide. The goal is to build an online database that allows members to share information in four key areas: labor standards, health & safety, the environment and business ethics.



CSR Corporate Social Responsibility

We check with our suppliers whether they have ETI, FSC, Sedex and/or BSCI certificates. If this is the case, priority is given to other suppliers who do not have this. We have been registered as a Corporate Social Responsibility with MVO Nederland since 2017. We take our responsibility for social issues and make agreements about waste processing, working conditions and the environment. At Koen Pack we treat our employees in a pleasant way and we think it is important that we can contribute to society together with MVO Nederland. Every year we sponsor many regional charities, foundations and sports associations.

BSCI

ETI

Sedex

MVO

NVGP

Kiemlogo

FSC



In addition to separating the various waste streams, we have made agreements with refuse processors for recycling materials. We have started a project with our cardboard supplier to make new boxes from our collected cardboard and paper.

Seedling logo

In our product policy we look at materials, including biodegradable materials such as PLA. We have the Seedling logo certificate for this. Unlike traditional plastics, this material is not made from fossil fuels. It is made from renewable resources such as sugar cane or corn. Because these sleeves are biodegradable, it can be composted after use, because it is 100% industrially compostable in professional composting installations. In practice, however, these installations have a two-week lead time in the Netherlands. PLA needs at least 12 weeks to be fully composted. Because the composition of PLA is not suitable for reuse of plastic, it is currently recommended to dispose of PLA with the residual waste.

FSC®

We purchase the paper and wood products in our range with the FSC quality mark, where possible. By using FSC, we contribute to the protection of our global forests and a healthy living environment for humans and animals. To ensure that products with this quality mark actually come from a responsibly managed forest, all links in the product's supply chain must be certified. Only when, for example, a forest manager, paper mill, paper wholesaler and printer can demonstrate that they comply with the rules of FSC, a product can be sold as FSC and the FSC logo is allowed to be placed on it.



ISO-14001

In Colombia, Koen Pack has an ISO-14001 certification. With the help of an environmental management system according to the ISO 14001 standard, the environmental risks of business operations can be controlled and if possible reduced.

Koen Pack Sucursal has been awarded an AA category of the Sello de Sostenibilidad by Corantioquia. This recognition has been given for the commitment and extra efforts in all processes, which are not only sustainable but also environmentally friendly.



Lansink's Ladder

By looking at Lansink's Ladder, you can see how the hierarchy of waste is arranged. The waste policy is aimed at giving priority to the most environmentally friendly processing methods. These are at the top of the 'ladder'.



A - Prevention: quantitative and qualitative prevention

Quantitative prevention: the generation of waste is prevented or limited, so using less packaging is the first choice.

Qualitative prevention: when making products, materials are used that cause no or as little as possible negative consequences for the environment in the waste. An example of this is compostable packaging.

B - Reuse

The materials or parts are reused as such after use. For example, the collection of PET bottles that are washed and reused as a bottle.

C - Sorting and recycling

The materials that make up a product are reused after the product has been used to make a new product. This is, for example, the collection of plastics to make granulate for the production of new plastic articles.

D - Energy: useful application as fuel

Waste materials are used with a primary use as fuel or for another method of energy generation. This is the incineration of household waste in municipal incinerators for district heating, in Amsterdam Hemhaven in The Netherlands for example.

E - Burn

Incinerate waste materials according to legal guidelines.

F - Deposit

Finally, the last step, the waste materials are dumped. This is the worst option.

The Five Directions for Improvement

The current collection and recycling system means that more and more plastic packaging is collected from companies and consumers every year. It is now important to improve the quality of the collected and sorted product, in addition to controlling costs and increasing the applicability of the recycle. At Koen Pack, the plastic and paper are collected and offered to a recycling company. Agreements are made about other materials such as wood and iron.

When developing a new packaging, look at:

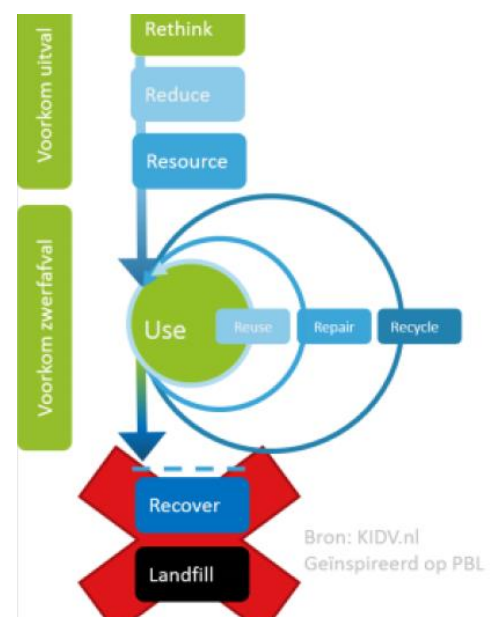
RE-duce: thickness reduction; less material use

RE-use: design packaging so that it can be used many times

RE-cycle: design packaging from recycled raw materials

RE-design: design packaging so that it is suitable for recycling after use (mono-material in one packaging)

RE-new: use biobased raw materials as much as possible.



So; use recycled material as much as possible, minimize the number of packaging you use and use biodegradable material when it can be processed in digesters in the Netherlands.

How does retail deal with sustainability and recycling?

There is a lot of difference between the different retailers in how they handle packaging. You can distinguish different schools of thought:

4 Very different visions and approaches – examples of initiatives of different brands



Companies that want to recycle or reuse;
 Companies that want to reduce plastic;
 Companies committed to using recycled materials; or
 Companies that go to bio-degradable packaging.

We see that more companies are taking it in different ways, it is not all that bad, as long as we know how it really works and you choose consciously and not on the basis of hype.

Ultimately, it is the consumer who disposes of the packaging. The first step has been taken if he / she knows through information which bin it should be placed in.

It is important to clearly communicate to the consumer what to do with it after use. And that can be on the packaging itself with the indication of symbols or text.

Sample Book

We have created a Sample Book to tell you which materials are commercially available. After research, it was decided to make a distinction according to origin (fossil or bio-based) and processing, i.e. in which waste bin the material belongs.



Based on this principle, the materials currently used in the flower and plant packaging sector have been mapped out. So what is the origin and how is it processed. With a handy table with properties and an A4 sheet with the material itself. The arrows indicate what to do with it after use.

Eigenschappen: verschillen en overeenkomsten

	FOSSIEL PETROBASED						PLANTAARDIG BIOBASED			
	MDPP	Non-woven	BOPP	OPP	LDPE	HDPE	Die folie	Kruid papier	Hydro papier	PLA
Niet biologisch afbreekbaar	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Biologisch afbreekbaar							✗	✗	✗	✗
Composteerbaar							✗	✗	✗	✗
Recyclebaar			✗	✗	✗	✗	✗	✗	✗	✗
Transparant			✗	✗	✗	✗	✗	✗	✗	✗
In/geluid (te verknijgen)	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Mat (te verknijgen)	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Te bedrukken	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Hard materiaal	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Zacht materiaal		✗	✗	✗	✗	✗	✗	✗	✗	✗
Reikbaar			✗	✗	✗	✗	✗	✗	✗	✗
Watervast	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Verwerkingstijd hoog										✗
Verwerkingstijd middelmatig	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Verwerkingstijd zacht		✗		✗						



BOPP = Biaxiaal Oriënte Polypropyleen

Material gemaakt uit fossiele grondstoffen als aardolie
Kenmerken gladde, sterke, en ruwe zijden maten en in een harde folie
Recyclebaar ja
Composteerbaar nee

Wanneer polypropyleen wordt gebruikt in uitgerust in zowel de kelder als de brandstof, wordt de biobased geïntegreerd polypropyleen genoemd. Biobased oriëntatie verhoogt de sterkte en het draagvermogen. BOPP wordt veel gebruikt als verpakkingsmateriaal voor het verpakken van producten zoals snacks, vers fruit, zoals het kan worden gebruikt. Het is gemakkelijk om te snijden, bedrukken en te versieren met het gewenste ontwerp en de eigenschappen te geven voor gebruik als verpakkingsmateriaal.

	BOPP
Niet biologisch afbreekbaar	✗
Biologisch afbreekbaar	
Composteerbaar	
Recyclebaar	✗
Transparant	✗
In/geluid (te verknijgen)	✗
Mat (te verknijgen)	✗
Te bedrukken	✗
Hard materiaal	✗
Zacht materiaal	
Reikbaar	
Watervast	✗
Verwerkingstijd hoog	
Verwerkingstijd middelmatig	✗
Verwerkingstijd zacht	



Folie is goed te recyclen als grondstof. De folie is namelijk een afvalmateriaal met uitstekende recycleerbaarheid. De folie wordt gescheiden en gereinigd. Het resultaat is een gereinigde, voor een nieuwe kunststofruimte.

Koen Pack
the personal touch



With the Sample Book we explain the different materials and what you should do with it afterwards. Which packaging do you choose?

Good packaging = sustainable packaging; 7 tips from the KIDV

1). Always put the functionality of the packaging first	<p>The product almost always has a greater impact on the environment than the packaging itself. Good packaging protects the product against damage and deterioration and helps consumers to dose correctly, so that they get the maximum return from the product.</p> <p>Intended effect: the valuable product is not lost</p>
2). Avoid the use of harmful substances in packaging.	<p>For example, make sure you avoid using inks with mineral oils and other harmful substances.</p> <p>Intended effect: prevent hazardous substances from ending up in the living environment and (recycled) materials.</p>
3). Go economical with material	<p>Use as little material as possible or make sure that the packaging can be reused. And make sure that as little material as possible is lost during production.</p> <p>Intended effect: more efficient use of raw materials to limit the amount of waste.</p>
4). Ensure a clean material flow that can be properly recycled.	<p>Where possible, use one material type per packaging component and ensure that consumers can easily separate the different components from each other. Also ensure that consumers can empty the packaging properly, so that no product residues remain in the packaging after use.</p> <p>Intended effect: good separation and recycling of packaging waste so that it yields raw materials for new packaging and products.</p>
5). Use recycled or renewable raw materials where possible.	<p>This ensures that materials can be used for as long as possible and that fewer virgin materials are needed.</p> <p>Intended effect: further closing the material chain.</p>
6). When developing the packaging, take efficient logistics into account	<p>Provide as little empty space in the transport units as possible, so that transport costs as little energy as possible per product. Design packaging that minimizes the risk of product damage.</p> <p>Intended effect: less energy consumption, pollution and product loss during transport.</p>
7). Clearly communicate on the packaging how consumers can dispose of it.	<p>Make sure consumers know how to properly dispose of their packaging waste. You can use a disposal guide from internet for this.</p> <p>Intended effect: good waste separation by consumers makes it easier to reuse and/or recycle packaging waste.</p>



Conclusion

In horticulture or floriculture, there are endless possibilities for the use of packaging. There is no right or wrong packaging, because everything depends on the purpose for which you use it. Throwing away the product itself is often more expensive than the packaging around it. Be informed about the possibilities and keep an eye on the guidelines. Ultimately, it is important that the chain is closed and that we will have a circular system in a number of years where recycling of all materials is possible.

If you have more questions about packaging, materials or other packaging options, check out our website www.koenpack.com/sustainability or contact us!

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