



Sustainable Packaging Alternatives: A Lightning Learning Webinar

July 20, 2020

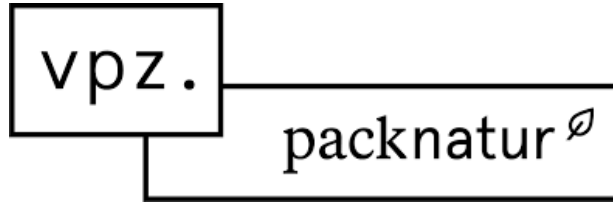
Housekeeping Items

Today's webinar is being **recorded**. The recording and contact information for all presenters will be available on pma.com soon.

Due to the fast-paced nature of the webinar, **there will be no live questions**. Presenter contact information will be available for follow-up questions.

All participants will be muted, and screens will be turned off for the duration of today's webinar.

Today's Presenters



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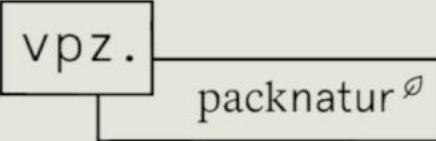
Packnatur[®]

Biogenic packaging solutions made from wood!

Ecology. Economy. Aesthetics.

It's not that difficult.

PACKNATUR® - Cellulose Netting Products



Organic potatoes in a plastic bag? Not a good combination, in our opinion. This is why we have looked for partners with whom we can drive research and development forwards. One of these partnerships has resulted in the development of the PACKNATUR® cellulose tube netting made from FSC® and PEFC certified beechwood.

The sustainable packaging solution for fruit and veggies!

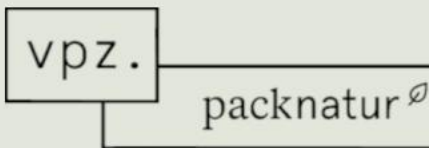
100%
BIO-B
BIO-D
COM

0%
WASTAGE
TECHNICAL PROBLEMS
PLASTIC WASTE



PRODUCED LOCALLY

Packnatur® Cellulose Net Tube:



Packnatur® Cellulose Net Tube:

vpz.

packnatur[®]



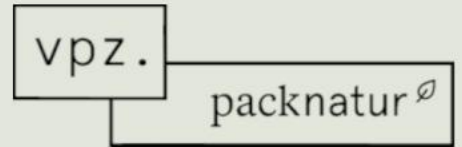
Packnatur® Cellulose Net Tube:

vpz.

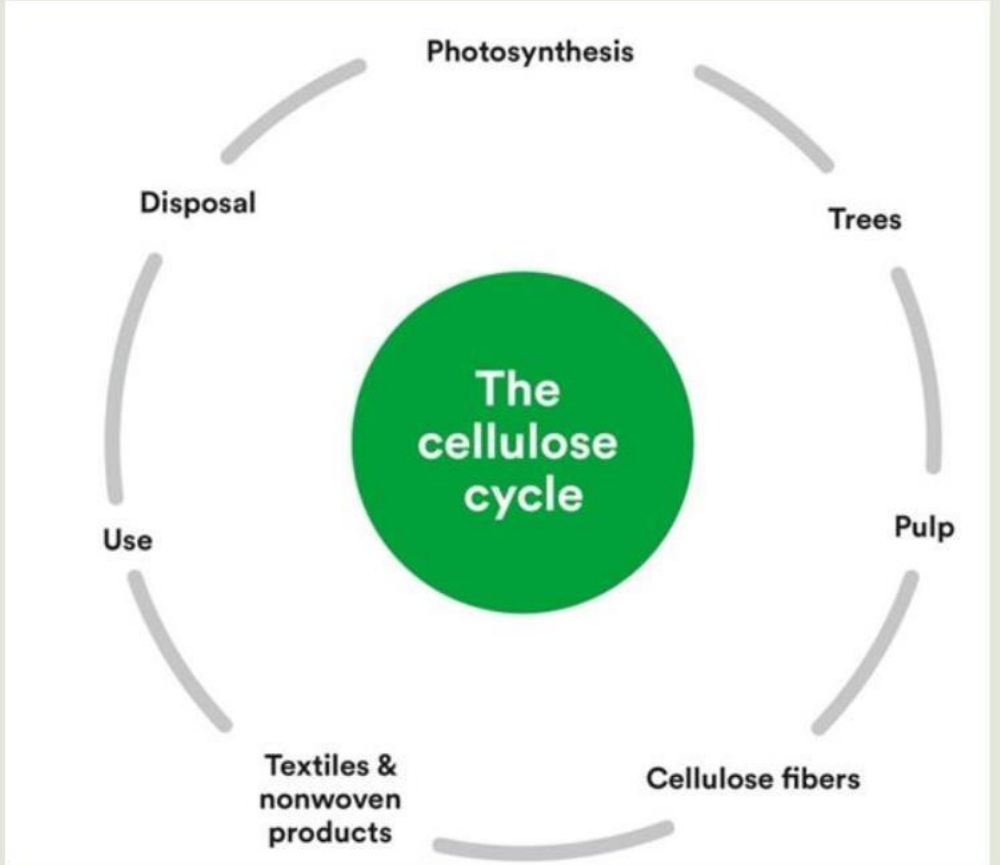
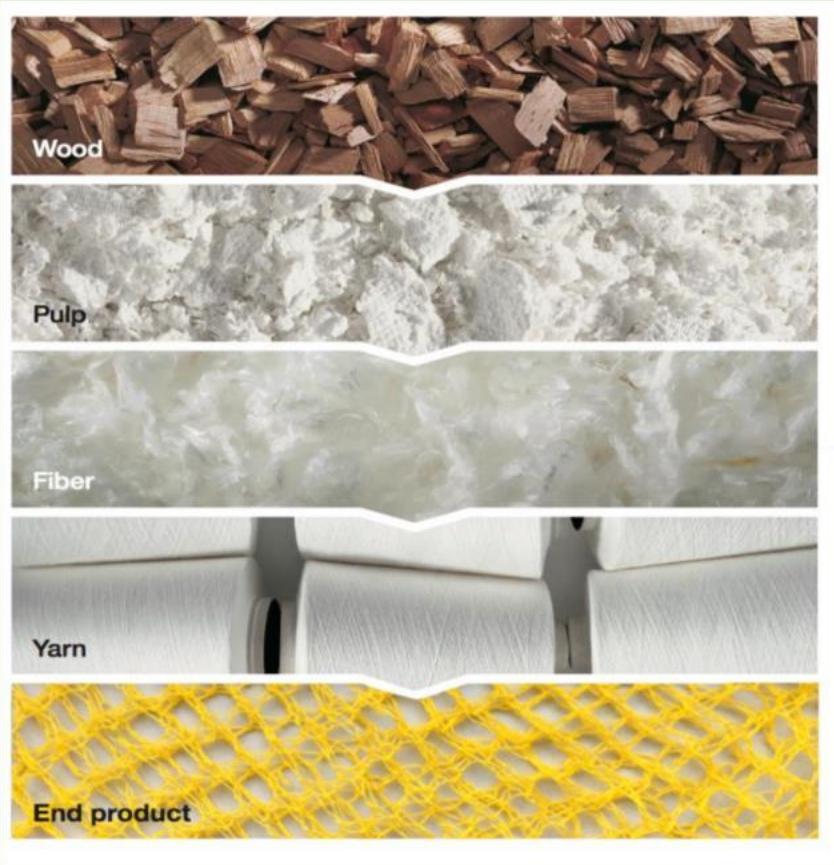
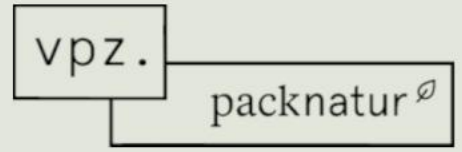
packnatur[®]



Packnatur® Cellulose Net Tube:

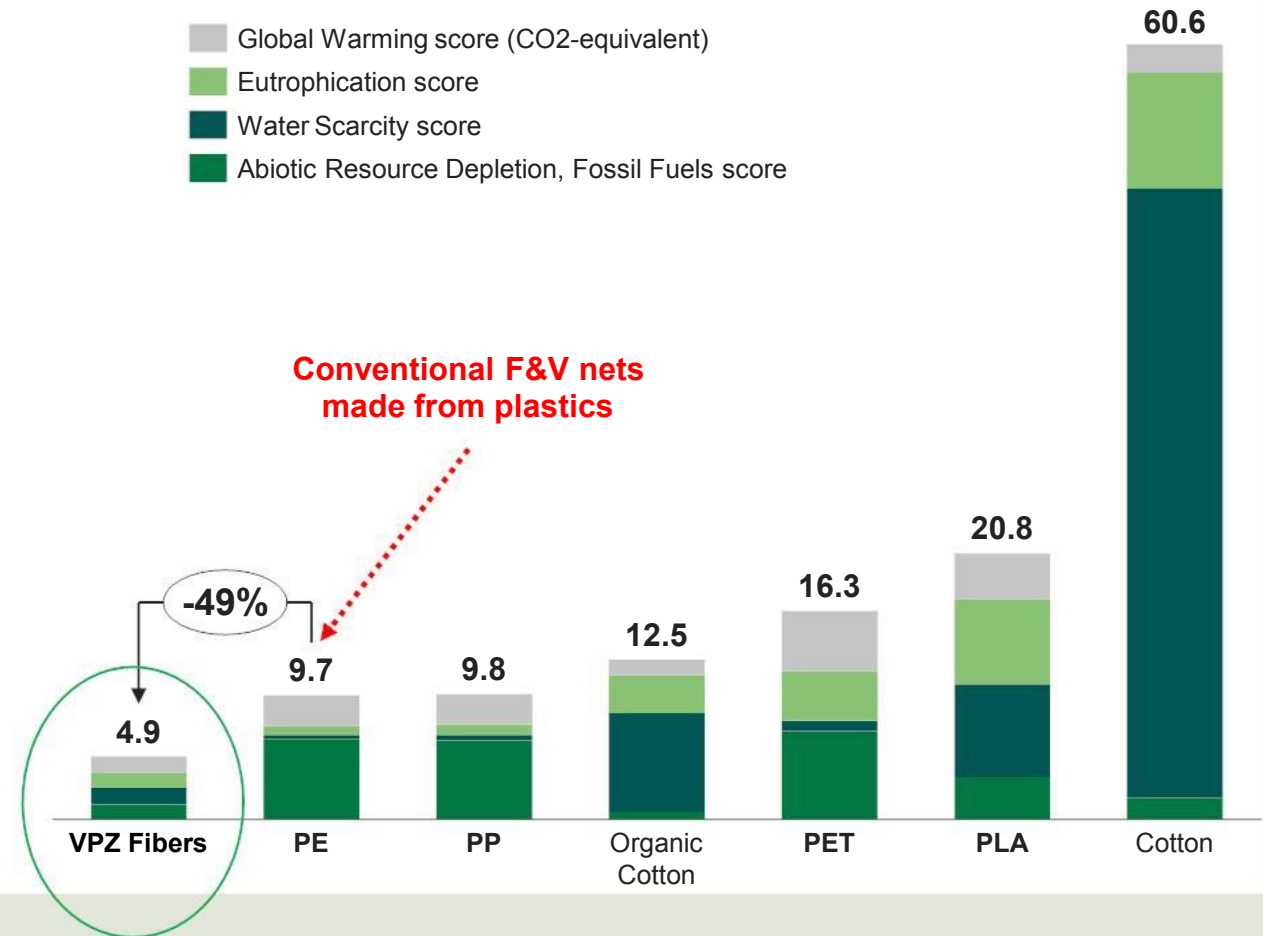


Packnatur® - From Wood to Netting



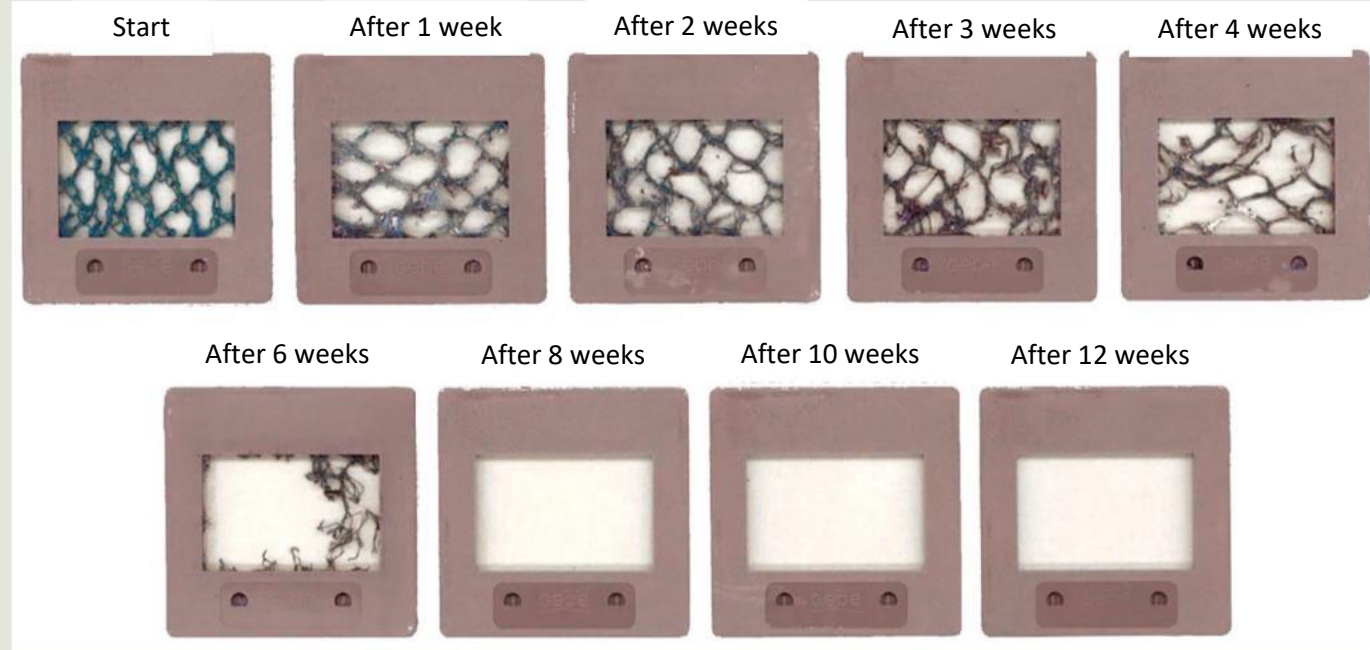
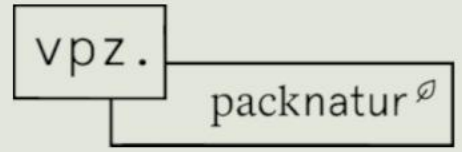
Comparison to plastics

- The Higg Materials Sustainability Index (MSI) compares the footprint of material production
- Lower score = smaller environmental footprint
- VPZ fibers have a far smaller environmental footprint than plastic and cotton



Packnatur® Cellulose Netting

100% bio-degradable



Awards:

vpz.

packnatur[®]

24 national and international Awards for Packnatur[®] net packaging and organic wineglass labels (a random selection):

- WorldStar Packaging Award 2020 for Packnatur[®] Pick Pack net bag
- Smart Packaging State Price for Packaging 2018 (AT)
- WorldStar Packaging Award 2018, Categories "Food Packaging", Sustainable Award in silver, Presidential Award in bronze, Lifetime Achievement
- Energy Globe Styria Award 2018
- Green Packaging Star Award 2017
- Green Product Award 2016
- Top 3 at the International Green Tec Award 2015, Category Production
- Green Packaging Star Award 2014
- Internationaler A´ Design Award 2014 in Silber, Kategorie Sustainable Products and Projects / Green Design Award
- Fast Forward Award 2013 (AT)
- Energy Globe Styria Award 2013



Ecology. Economy. Aesthetics.
It's not that difficult.

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+43 660 6699 479



Flexible Packaging Delivered



Bristol Farms

Publix



SHOP'n SAVE
just right.



Winn-Dixie



Hornbacher's
Freshness & quality since 1951.



Plastic is the most widely used raw material for flexible packaging accounting for 78.3% of the total revenue share in 2016.



GLOBAL MARKET

Projected to reach 131.65 Billion by 2022 at a CAGR of 5.2%

MARKET DRIVERS

- Cost-effectiveness
- Increased Shelf-Life
- Downsizing
- Consumer Demand
- Automation



Packaging with Benefits



Fox Fresh Mesh



Fox Fresh Mesh Wicketed



Fox Fresh Mesh Combo



Fox Combo Ultra Shield



Fox Stand-Up Combo



Leno

Streamlining your packaging operations



FSPB2 Pouch Bagger



FSWB3 Wicketed Bagger



NEWTEC



IN-TEC
Logispack



Kwik Lok

Haith
group



Like-Minded Partners

61% of consumers say that they will change their behavior as a result of the How2Recycle label



Member of
SUSTAINABLE PACKAGING
COALITION®

Sustainable Packaging should result in less packaging and less food in our landfills.

Your packaging partners.

Victoria Lopez

Marketing

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(956) 252-2507

Connect on LinkedIn

COLLABORATIVE LEADERSHIP.



Sustainable Packaging Alternatives

A webinar by

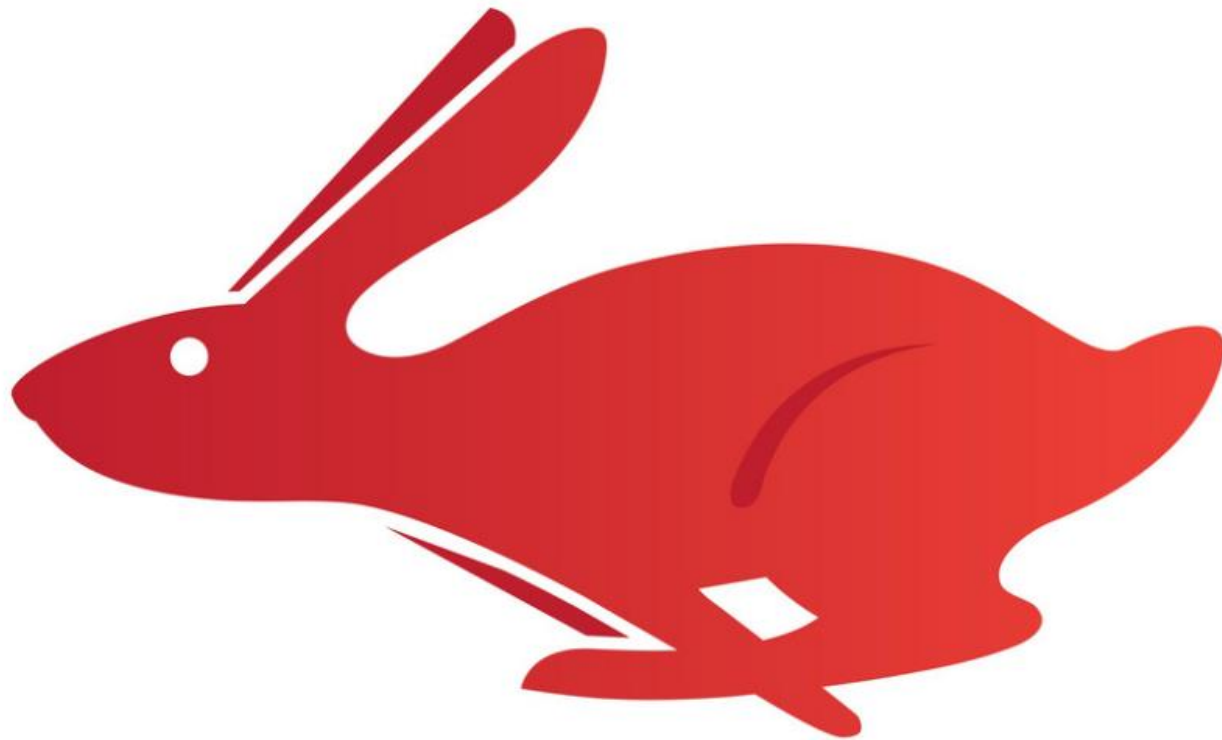


Some of our Partners

We're working with everyone from leading organizations to smallholder farmers in order to improve product quality, shelf life and distribution range. Longer lasting produce means less food waste and a more efficient use of our earth.



SPEED & SERVICE



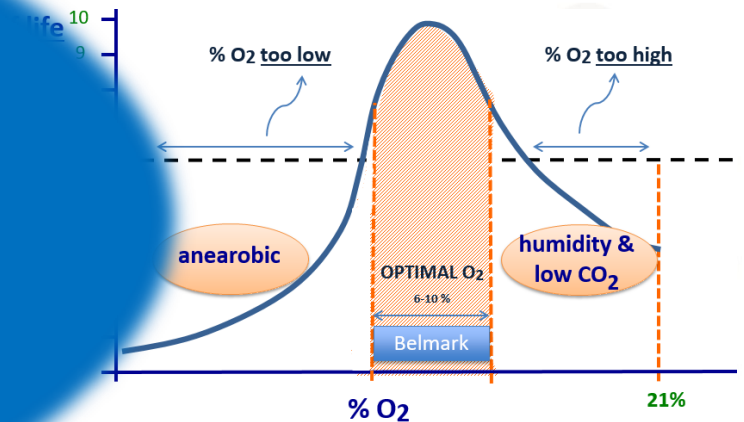
- Belmark's no minimum order quantities minimizes risk of obsolescence and disposal of unused packaging while freeing up cash rather than having it locked up in packaging inventory.
- Ability to respond rapidly to shifting demand or harvest schedule with three week or less packaging lead times.

QUALITY

WASTING FOOD HAS ENVIRONMENTAL REPERCUSSIONS...

While the food waste movement across America is gaining speed to help tackle one of the globe's most pressing issues, food waste has irreversible environmental consequences. It takes energy to produce it, and generates greenhouse gases like methane, carbon dioxide and chlorofluorocarbons. Food that sits decaying in landfills also produces toxic gases and dead zones. According to the World Resources Institute, the United States is equivalent to the greenhouse gas emissions of 100 million cars if we continue on the same path of food loss, the environmental impact is

Belmark Fresh Technology is exclusive in North America with our technology partner Perfo Tec. Our analytical capabilities will test your specific product for determining optimal respiration and our closed loop, in-process control provides the quality assurance of a consistent and accurate package.



The average American family of four throws out **\$1,600** a year in **produce**.¹⁰



PACKAGING INNOVATION

WASH AWAY LABELS ON PET CLAMSHELLS

Recyclers are challenged with pressure sensitive labels compromising the purity of the recycle stream due to the adhesive contamination.

Belmark has developed an **APR approved** label solution that will cleanly release from the container during the sink/float process at the recycler.



PACKAGING INNOVATION

MINDFUL SOLUTIONS™



Recyclable flexible packaging displaying the How2Recycle® label



Belmark has created tru-IMPACT® eco-friendly flexible packaging. With tru-IMPACT®, you can offer your products in sustainable flexible packaging that's made with a minimum of 20% post-consumer waste recycled content.

PACKAGING INNOVATION



ENVIRONMENTAL IMPACT

- Annually prevent the use of 180,000 pounds of plastic
Equivalent to 8,500,000 water bottles each year
- Annually save 6.2 billion BTUs of energy
Enough to power 40 US homes each year
- Annually prevent 460,000 pounds of Green House Gas Emissions from entering our atmosphere
Equivalent to taking 45 cars of the road each year

**EAU of 8mm Packages*

SEALutions™



SEALutions™

PACKAGING INNOVATION



		RESEAL	EASY OPEN	HERMETIC SEALS	ENGINEERED BARRIER	TAMPER PROOF	ANTIFOG	SEALS TO:
<u>top</u> seal re <u>seal</u>		★★★★★	✓	✓	✓	✓	✓	1 PET
<u>simple</u> re <u>seal</u>		★★★★☆	✓	✓	✓			1 PET 2 HDPE 4 LDPE
<u>simple</u> seal		★★★★★ <i>ONE TIME EASY PEEL</i>	✓	✓	✓	✓		1 PET 2 HDPE 4 LDPE 5 PP
<u>smart</u> seal		★★★★★ <i>ONE TIME EASY PEEL</i>	✓	✓	✓	✓	✓	1 PET
<u>lock</u> seal		★★★★★ <i>LOCK UP WELD SEAL</i>		✓	✓	✓	✓	1 PET 2 HDPE 4 LDPE 5 PP

MARKETS SERVED:



FRESH PRODUCE



CHEESE



MEAT / MEAT SNACKS



SEAFOOD



CONFECTIONS



SNACKS



BAKERY



PREPARED MEALS



DIPS / SAUCES



PASTA

PACKAGING INNOVATION

COMPOSTABLE C+ FRESH

Plant based **transparent** film with **ideal HMVTR and CO₂TR** for fresh produce. The result is **extended freshness and shelf life**, when combined with laser perforation.

Features & benefits

<ul style="list-style-type: none">• Maximizes the shelf life of Fresh Produce	<ul style="list-style-type: none">• Suitable for flowpacking
<ul style="list-style-type: none">• Balanced O₂ and CO₂ transmission level	<ul style="list-style-type: none">• Printable
<ul style="list-style-type: none">• High Water Vapour Transmission Rate (WVTR)	<ul style="list-style-type: none">• Plasticizer free
<ul style="list-style-type: none">• Produce weight loss is virtually zero	<ul style="list-style-type: none">• GMO free
<ul style="list-style-type: none">• Certified Home Compostable material, by TÜV AUSTRIA	<ul style="list-style-type: none">• Food Contact compliance approved



Belmark C+ FRESH

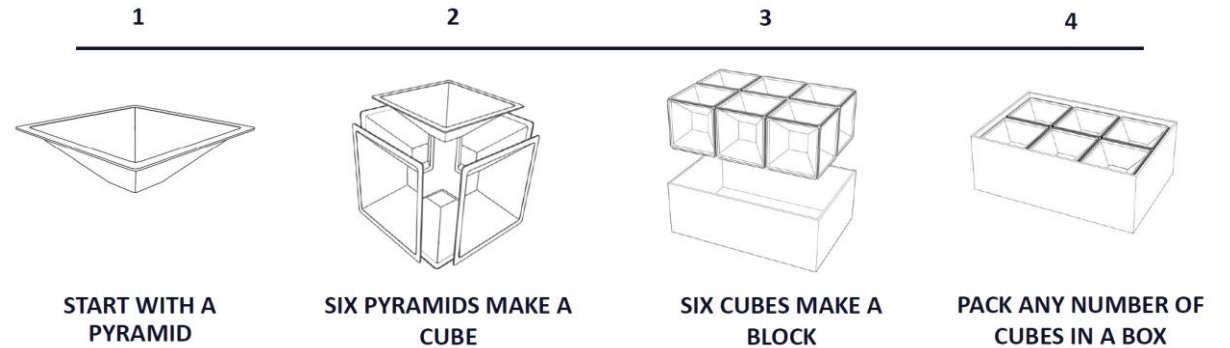
- Available for Retail and Food Service
- Excellent for high value produce types
- Available in Medium and High MVTR
- Available with Belmark Fresh Technology for additional shelf life extension
- Good for Home and Industrial Compost

PACKAGING INNOVATION

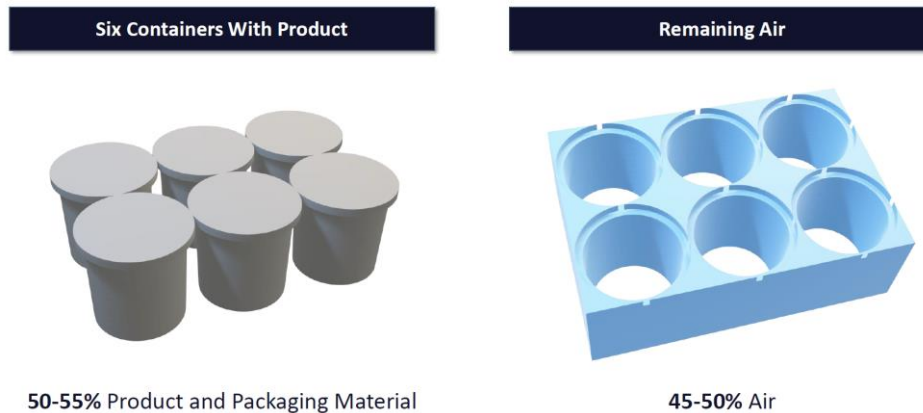


SHIP LESS AIR

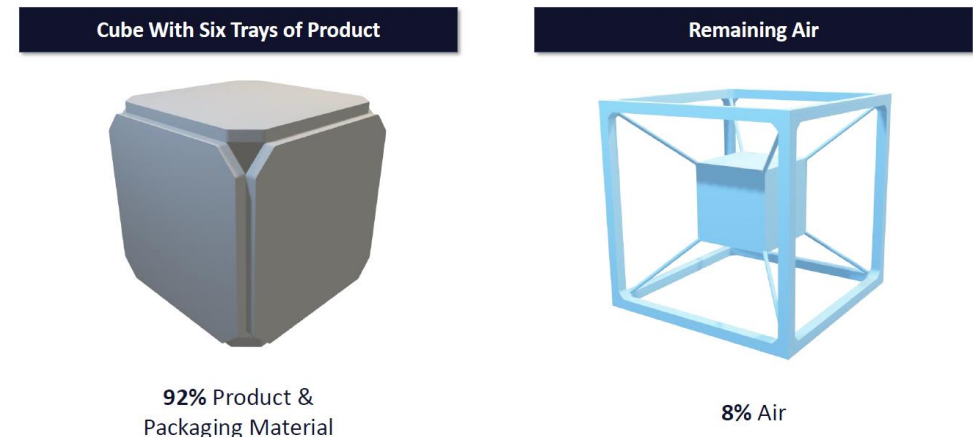
REDUCE CARBON EMISSIONS & LOGISTICAL COSTS



Traditional Packaging Includes Excessive Air



The Q-Bic Cube Contains Less Than 10% Air



PACKAGING INNOVATION



1 Dry Pint Tomato Tray – 35-40% Reduction in Total Volume

Clamshells - 40% Reduction in Total Volume

Standard 1 Dry Pint Tomato Tray



5.9 litres =
Volume of six 1 Dry Pint Tomato Trays



Belmark & Q-Bic

- Unique efficient Q-Bic package design
- SEALutions lidding films for PET containers
- Any style paperboard cartons, tray and sleeves available

Q-Bic Blueberry Trays



16.2 litres =
Volume of 36 4.4oz Q-Bic Clamshells in a Box



CONTACT INFO

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cell 920.412.6018





Sustainable Packaging Alternatives

Kevin Kelly, CEO
Emerald Packaging

July 20, 2020



Emerald Packaging at a Glance

Founded in 1963, Emerald Packaging is a manufacturer of flexible packaging products, delivering highly customized long and short run packaging solutions.

Background: Family based company, 57 year operating history.

Annual Sales: \$85 million, with 90% in Fresh Produce.

Customers: Mix of large and small regional, national, international customers: Fresh Express, Taylor Farms and Grimmway Farms to name a few.



Certified California Green Business:

One of only a few manufacturers to earn the honor



Our Packaging Portfolio



Standard

- Using standard/conventional hydrocarbon-based packaging materials
- Manufactured in our facility using sustainable practices and advanced technology
- Focus on right sizing packaging, down gauging films
- Application formats: Rollstock, Bags, SUPs



Recyclable

- 100% recyclable, surface and reverse printed polyethylene SUPs
- Substitutes for a PET/PE laminated structure
- Application formats: Rollstock, SUPs
- Post Consumer Recycled (PCR) Resin



Renewable

- Use of resin from a renewable, bio-based source such as corn starch, potato starch, sugar cane and/or other cellulose-based bio-films
- Application formats: Rollstock, SUPs



Compostable

- Using certified compostable films and materials (including adhesives)
- Accordance with ASTM D6400 standards of compostability
- Application formats: Rollstock, SUPs



Sustainable Printing Alternative:

- Short Runs
- Variable data
- Eliminates the use of printing plates
- Environmentally friendly inks



Industry Wide Challenges



Recycling systems



End-users unwilling to pay 2x for compostable films



PCR resin scarce



False claims around Compostability/ adhesives and Bio-Resins



Many films can't be effectively recycled



Influencing Packaging Legislation



Food Waste

is responsible for 6% of global greenhouse gas emissions, and yet there is a call to ban packaging that extends shelf-life.

Working to reshape legislation requiring single use packaging to be recycled by 2030

- **Helping to write the amendments** for the produce industry that would grant Field-Pack Produce and Salad Packaging exemptions from proposed California SB-54 anti-plastics bill.
- **Lobbying to increase funding** to upgrade recycling systems. We're one of the few packaging manufactures to join the Association of Plastics Recyclers.
- **Working with state and local agencies** to create laws to reduce plastic litter.



The Path to Circularity



Select solutions that meet the **Circular Economy** criteria. So far, only recyclable product do.

- Work with us to create your **Recyclable Packaging**. Recyclable is the most scalable solution into the future.
- Rely on our expertise to achieve **Source Reduction** by designing and manufacturing materials that reduce the mass, volume and toxicity of products throughout your product's life cycle. (e.g. lidding, in clamshells or resizing a package.)
- Innovate using **Intelligent Packages**, which help provide real-time 'use- by- date' expiry data along with temperature change notifications, thus preventing food spoilage.
- **Get involved**. We're writing the amendments to carve out more time for produce packaging. Join this effort.
- **Advocate** for and help underwrite recycling system upgrades by accepting a bag fee of \$1 per m bags. Join APR.





The sustainable plastic packaging landscape is changing quickly.

Let us help guide you in your transition to more sustainable packaging for your brand.

sales@empack.com

www.empack.com



EMERALD PACKAGING

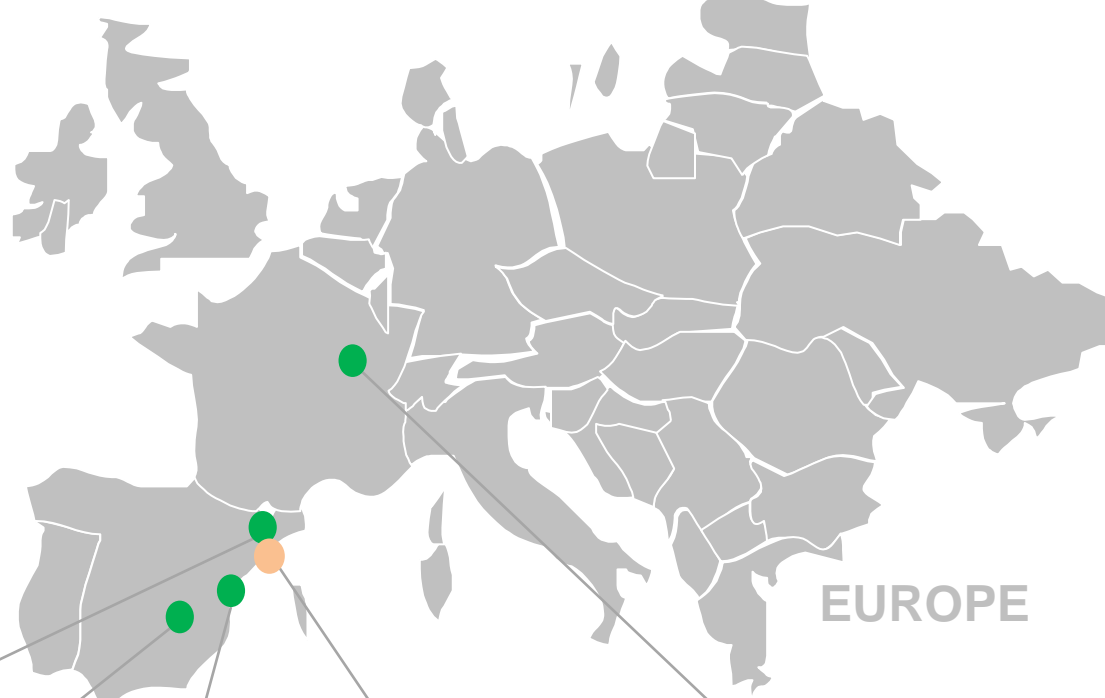
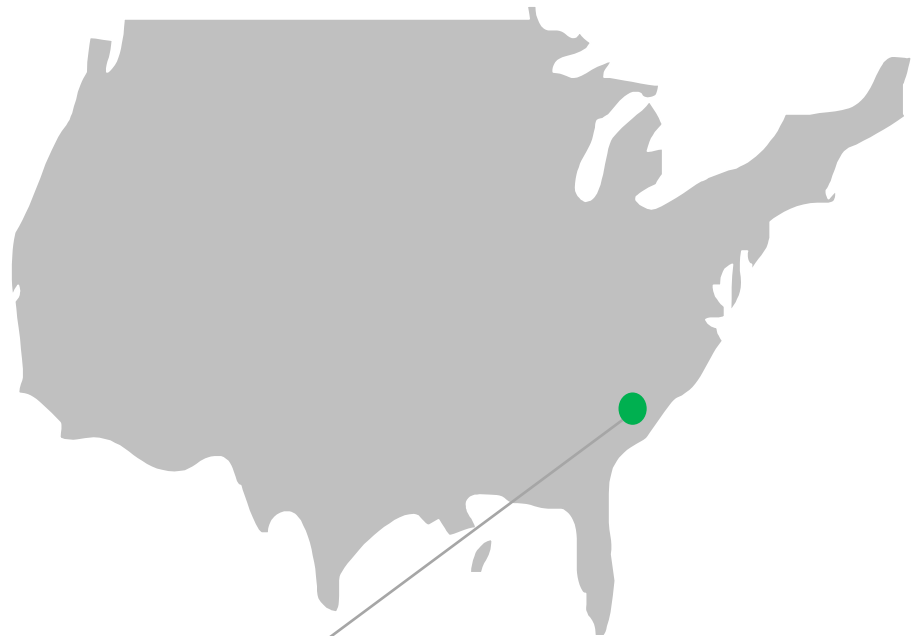
GIRO

SUSTAINABLE
PACKAGING

GIRO



USA



EUROPE

- ▲ Extrusion
- Knitting
- ◆ Printing
- ⬡ Machinery



Vidalia Plant (USA)



Ripoll Plant (SP)



Teruel Plant (SP)



Alzira Plant (SP)



2 Badalona Plants (SP)



PhP Plant (FR)





GIRÓ NET PACKAGES

The most sustainable on the supermarket



*Giró net bags
are the most efficient
and sustainable packaging solution*

This chart shows the weight of different types of packaging needed to contain 1 kg of product. In each type the usual range of values is indicated, taking into account that the packaging size and possible variants can significantly affect the weight of the pack to contain 1 kg of product.

ecogiró

EcoGiró is the brand through which Giró expresses its commitment to the environment and sustainable development
How?

100% recyclable packages



100% compostable packages



ecogiró

100% recyclable



GIRO's 100% recyclable packages allow us to:

OPTIMIZE the amount of plastic used in each package; reducing the environmental impact.

RECYCLE the package once used to transform them back into raw materials; promoting a circular economy.



ecogiró

100% compostable

GIRO's 100% compostable packages allow us to transform these materials into organic matter (compost) once used, thus promoting the circular model.





Sustainable Packaging Systems

Jennifer Doxey

M: 559.474.5694

E: jdoxey@giropack.com

www.giropack.com



Creating a world that never uses trees to make paper and packaging



Sugar Sheet Paper & CanePak Paperboard Packaging

Supporting the environmental stewardship of many of Canada's leading organizations





Sugar Sheet Paper & CanePak Packaging versus traditional paper

- Did you know that *everyday* in North America **3 million trees** are cut down to make paper and packaging. That's approx. **1.1 billion trees per year** for paper and packaging.
- Trees are vital to absorb carbon dioxide and other gases, replenish the atmosphere with oxygen and are a vital part of a surrounding eco-eco-system supporting wildlife and plant bio-diversity.
- An acre of trees produces enough oxygen for 18 people each day. An acre of trees absorbs enough co2 over a year to equal the amount produced driving a car 26,000 miles



- Sugar Sheet Paper and CanePak Paperboard are tree free and produced using **100% agricultural fibre**
- Sugar Sheet Paper and CanePak Paperboard **look feel and perform to the same quality standards as wood fibre paper and packaging**
- Sugar Sheet Paper and CanePak Paperboard are **fully recyclable and compostable** and help to advance a circular economy
- Sugar Sheet Paper and CanePak Paperboard measurably reduce green house gas emissions and minimize deforestation

Sugar Sheet Paper and CanePak Paperboard support the growing demand for sustainable packaging solutions

- Sugar Sheet Paper and CanePak Paperboard provide the value of sustainability without sacrificing paper & packaging quality, performance or paying a premium
- Food and product packaging, take-out containers, and boxes with or without grease resistant coatings, coffee bags, java jackets, cake and pastry boxes, tray-liners and a wide variety of custom bag solutions
- SugarSheet Paper and CanePak Paperboard will work with your existing packaging converter to ensure minimal change and disruption to your existing supply chain
- Sugar Sheet Paper and CanePak Paperboard help companies leverage the value of sustainability to support key business functions, brand awareness, customer engagement and revenue growth

Sugar Sheet Paper and CanePak Paperboard

Creating a world that never uses trees to make paper

- Head office located Vancouver, British Columbia, Canada
- Tree-Free Sugar Sheet Paper launched in 2015
- Tree Free CanePak Paperboard launched in 2018
- Awarded Canada Clean50 Award for Emerging Sustainability Leadership
- Keynote Presentation at 2016 / 2018 Globe Series Conferences & 2018 / 2019 Sustainable Brands Conferences. An organizational commitment to share ideas and best practices that support sustainable innovation and leverage the value of sustainability as a competitive business advantage.
- CanePak Paperboard & Sugar Sheet Paper are **ISO 9001, 14001 & 18001** Certified, ensuring global compliance and standards for quality, environmental healthy & safety protocols and fair employment practices
- [2016 & 2018 Life Cycle Assessments conducted on CanPak Paperboard & Sugar Sheet Paper](#) conducted by TruCost www.trucost.com

[Contact us to discuss your sustainable packaging or paper requirements](#)

email: minto@socialprint.com Phone: 604 783 9942

www.socialprint.com



SAMBRAILO®
PACKAGING



2020



1960's



1980's



Packaging Solutions from Our Hands to Your Farm Since 1923

Watsonville, CA



sustainable packaging and alternative to single use plastic



No Wax, No Labels, No Plastic

Full branding real estate to tell your story



100% Recyclable



 **READYCYCLE®**

Thank you!

Sara Lozano

Manager of Marketing + Product Development

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@sabrailopackaging

@readycycle



SAMBRAILO[®]
PACKAGING

DISRUPTIVE

PACKAGING

We have Invented a New Sustainable Packaging Solution “Uniqcor” to
Replace Waxed Cartons, Styrofoam and Plastic Boxes

We are disrupting the market
with innovative packaging that is
Better, Stronger and Greener



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Our Journey to Date
UNIQCOR



4 Years R&D to date



World First Corrugated Paperless Formulation, Process and Design (Patent Pending)



Commercialised October 2018 in Sunraya Region for Table Grapes



Initial 50+ Brands Trialed
Over 1 Million Boxes in Australian and Sea/Air Freight Supply Chain to 6 Asian Countries



100% Success Rate
Endorsements from Both Growers and Produce Sellers



Enjoying Success in several Fresh Produce and Seafood Sectors and Construction



Launched and Trialed October 2019 in USA for Corn and Asparagus with Instant Success and Orders



Collaborating With APCO and others on Designing a National Closed Loop Recycling Program to include all Relevant Stakeholders, Industry, Government and Environmental Organisations



Our Innovation is helping reduce and solve some global environmental problems through;

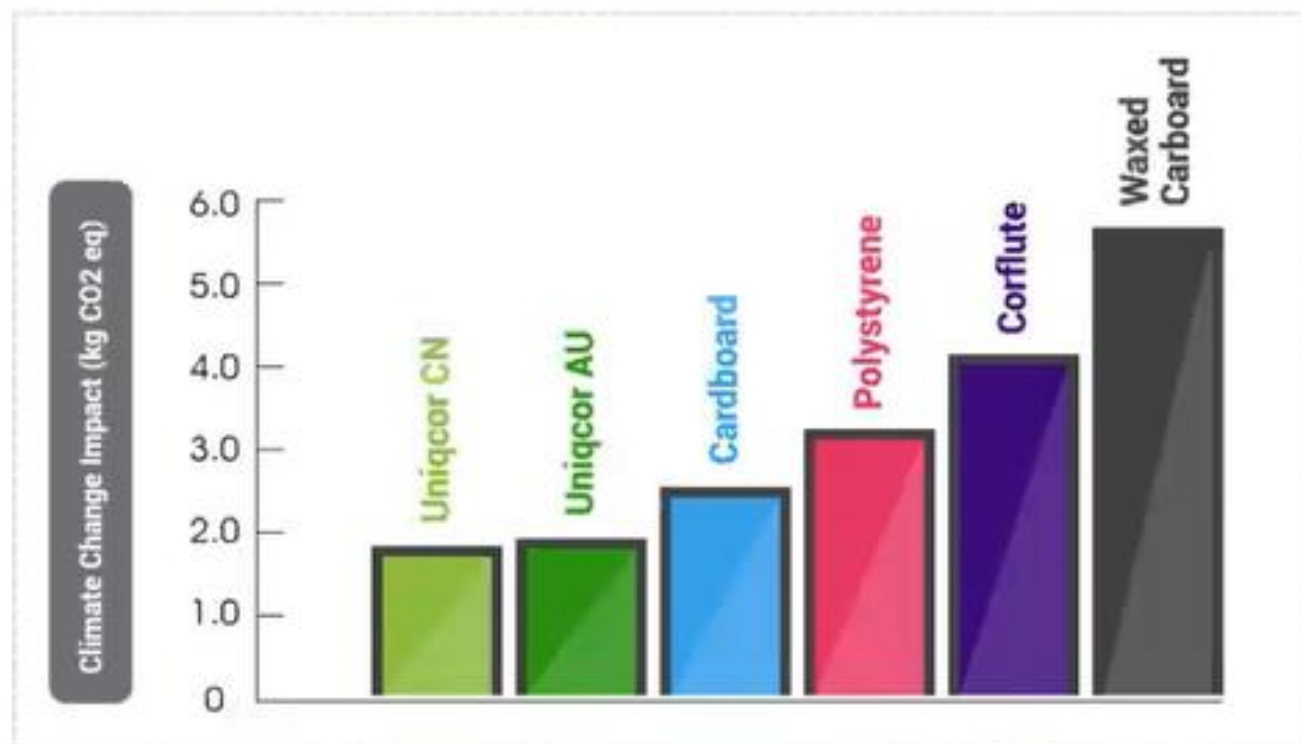
Reusability and 100% Recyclability in a Circular Economy model. Collection sites in Brisbane, Sydney, Melbourne and more coming online

Up to 70% Lower Carbon Footprint in the Manufacturing and Recycling Process versus alternative incumbent technologies

Uniqcor production uses zero water resources and much less energy in comparison to alternatives



Net climate change impact of Uniqcor® in comparison to Polystyrene, waxed cardboard, Corflute and cardboard; cradle to grave, per 100L*



*The comparison whitepaper was prepared by Dr Helen Lewis from Helen Lewis Research. It incorporates the results of a **Life Cycle Assessment (LCA)** undertaken for Uniqcor® by Tim Grant from Life Cycle Strategies.



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Our Target is to Solve this Massive Global Environmental Disaster, one box at a time

The **goal** of our innovation is to **Replace** non-recyclable or difficult to recycle Waxed Cardboard, Styrene that inevitably end up in landfill, rivers or oceans

In Australia alone:

- **Polystyrene** 180,000 tons (360,000 cubic meters in 2015) is sent to landfill in Australia every year (or worse – end up in our rivers and oceans)
- **Waxed Cardboard** is non recyclable – over 500,000 tons(2015) are sent to landfill in Australia every year
- **Plastic or Poly Lined Cardboard** is only recyclable in certain areas of Australia – Thousands of tons are sent to landfill in Australia every year but currently are not captured in waste sites



Closed Loop Recycling – Started and gaining Momentum

We have designed corner angles that hang on pallets and are 100% waterproof and get stronger in a cold supply chain. Our aim is develop manufacturing of corner angles initially in Australia from majority recycled material.



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Pallet solutions, bulk bins, logistics efficiency, cold chain strength is performing very well



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PRODUCE RANGE-

The biggest challenge for environmentally friendly solutions is to provide a product that is as good or better compared with what's currently available and at the same time



SEAFOOD RANGE — We can produce leakproof boxes that can hold ice, water and



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Thank you for the opportunity

Email:

nathan.hall@disruptivepackaging.com.au

Phone: +61 488 220 513



Sustainable
Packaging solutions



BAMA Packaging is owned by the **BAMA Group**, Norway's leading marketer of fruits, vegetables and flowers.

BAMA Packaging was established in 2018 as a competence and resource hub to develop and implement new sustainable packaging solutions across product categories and in collaboration with our approximately 200 suppliers from around the world. The main focus was to find solutions that reduce the use of single-use-plastics, replace with documented sustainability solutions and improve the solutions with more efficient packaging and handling throughout the value chain.

BEFORE



AFTER



WORLDSTAR WINNER 2020



Patent pending

FACTS ON EFFECTS

Plastic ÷ 308.000 kg.*
Footprint ÷ 48,2%
Increased capacity +58,2%*

* On an annual volume

NEW SHAKER FOR BERRIES

- New fiber based shaker for berries - in various formats and sizes
- Can be recycled as paper in Norway
- Optimization for better and more efficient transport/logistics
- Improved shelf life for the products







BEFORE



AFTER



Patent pending

FACTS ON EFFECTS
Plastic ÷ 402 tonns.*
Footprint ÷ 6,8 %

* On an annual volume



NEW PACKAGING FOR GRAPES

- Pure, strong and sustainable fiber sourced from Nordic forests
- Designed for optimal ventilation for increased quality and shelf life
- Recycled as paper in Norway
- Manual and automatic versions available

BEFORE



AFTER



Patent pending

FACTS ON EFFECTS

Plastic: 33% reduction
Footprint ÷ 18%
Increased capacity +20%*

* On an annual volume

NEW 'FLOW-FREE' PAKACING SOLUTION

- 100% plastic-free solution
- Automatic high-speed packaging
- The lid is automatically tightened individually according to the size of the contents each packaging.
- Easy open / close mechanism
- Large surfaces for communication and ensures good in-store exposure



BEFORE



AFTER



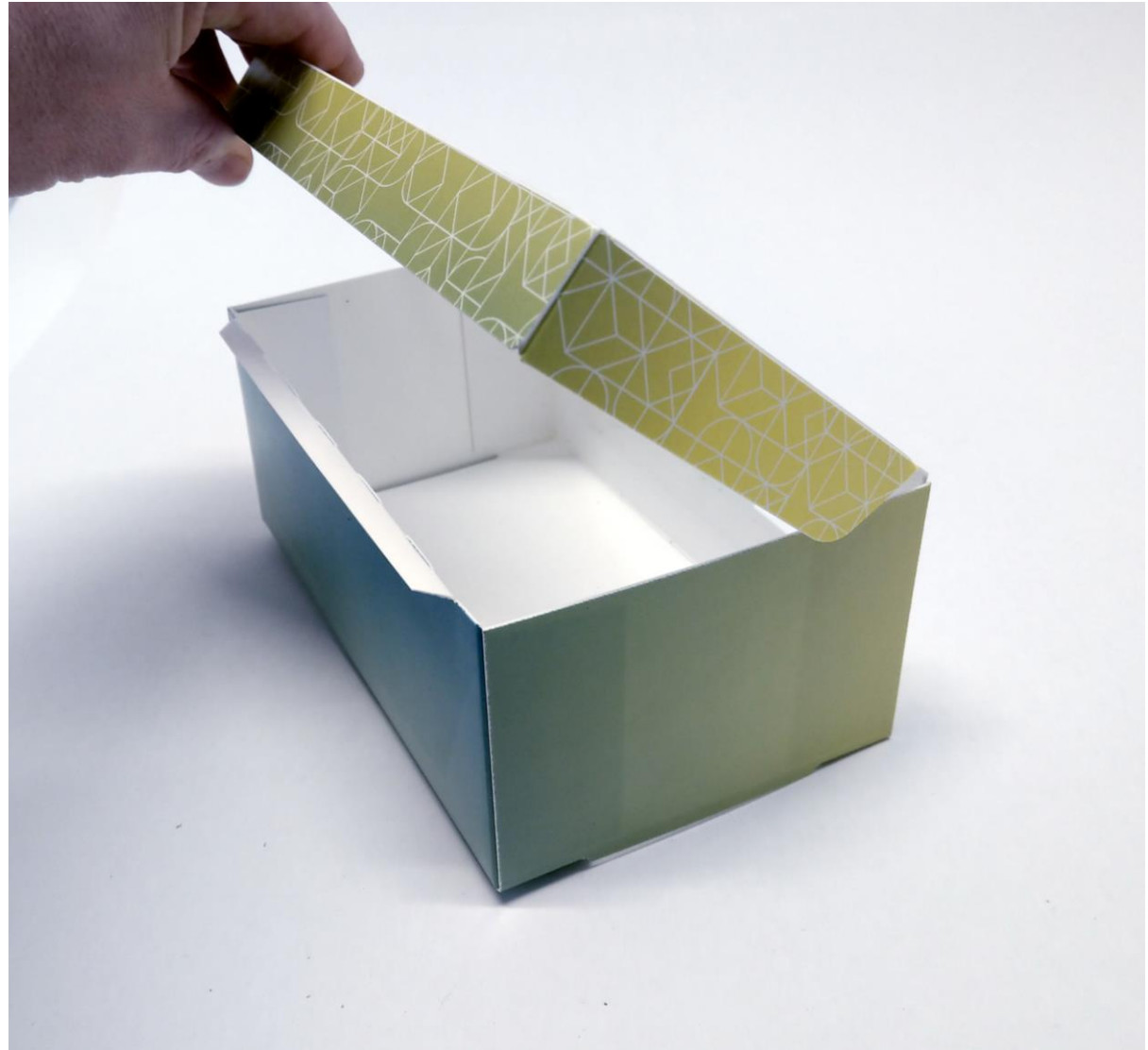
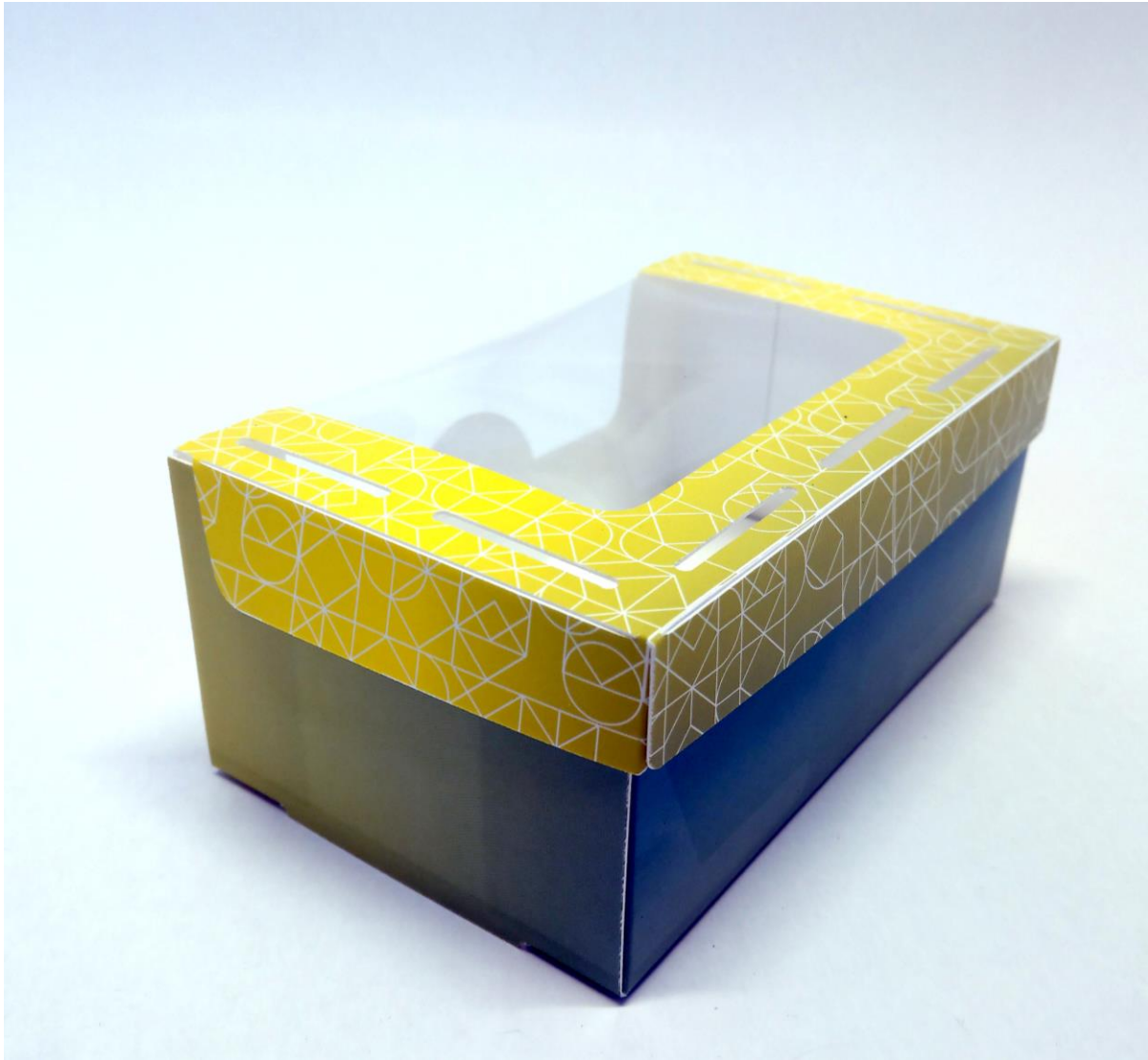
Patent pending



The solution and concept can easily be adapted for different sizes, formats and types of products. Available in both solution for fully manual packing and automatic packing. Machine available for high speed packing.







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PACKAGING

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Thank You