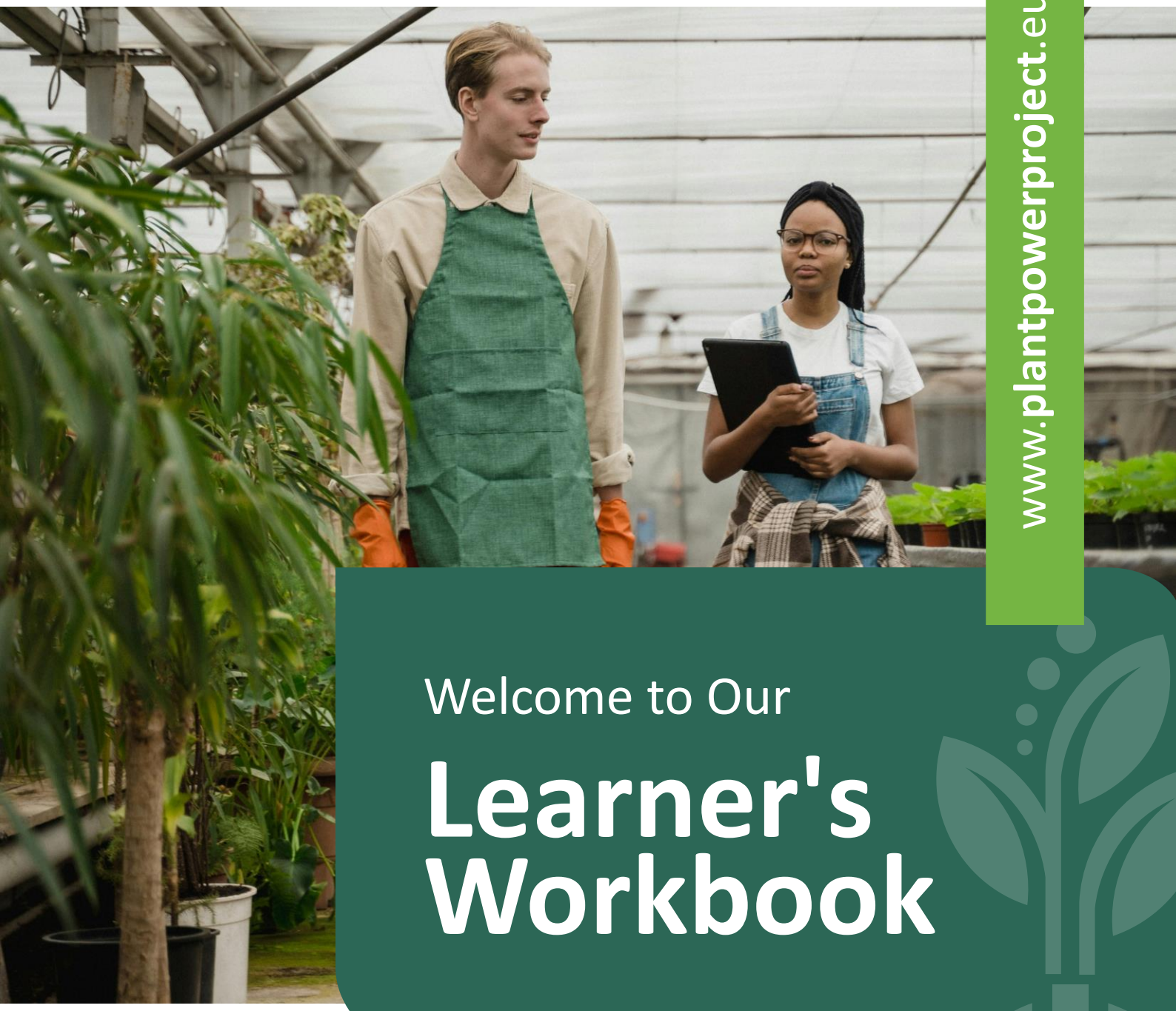
plant power

Boosting Innovation for Food SMEs



www.plantpowerproject.eu

Welcome to Our

Learner's Workbook

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Welcome to our Learner's Workbook

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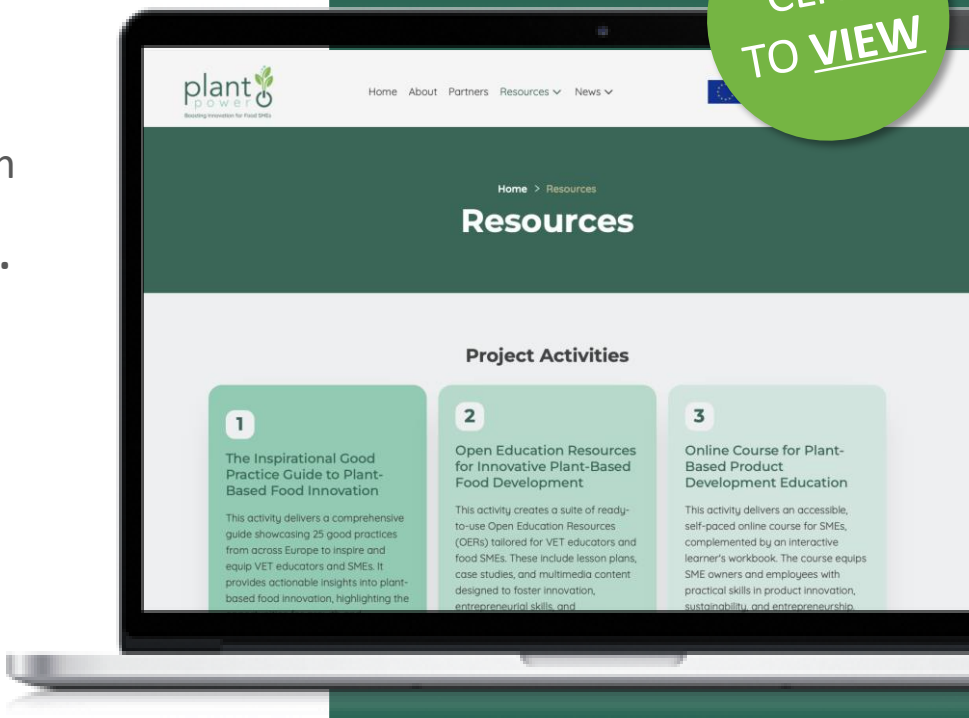

Use this workbook to learn the key topics from our **Plant Power online course.**

View our free Online Course here

The **Plant Power Project is** dedicated to transforming **Europe's food sector through innovation and sustainability**. Our mission is to empower food SMEs, VET providers, and policymakers with the skills, resources, and strategies needed to embrace plant-based products and contribute to a greener future

READY SET GO!

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contents

The **Plant Power Learners Workbook** follows our **6 modules online course** in sequence.

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Be Inspired to Learn

We invite you to **explore how** plant-based **innovation** can help create healthier communities, stronger businesses, and a more **sustainable** future.

Through practical activities, inspiring examples, and real-world insights, you will discover new opportunities to **rethink food**, embrace innovation, and become part of the **growing movement** towards resilient and **sustainable food systems.**

Your learning journey starts here!

"A shift to healthier, more sustainable and balanced diets is essential for a successful transition to a more sustainable food system, and plant-based foods are part of the solution."

European Environmental Bureau

Module 1

Using Innovation & Digital Tools to Grow Your Plant-Based Food Business

This module explores how **digitalisation and digital transformation can be used interchangeably** but clarifies how they represent different stages of technological adoption. Digitalisation focuses on converting traditional processes into digital formats to improve efficiency, reduce errors, and simplify daily operations.

Examples include digital record keeping, cloud-based document management, digital accounting software, and online communication platforms Digital transformation goes beyond efficiency improvements and involves rethinking how a business creates value. In food SMEs, digital transformation may include the use of artificial intelligence for market analysis, blockchain for traceability, sensors for monitoring production conditions, or e-commerce platforms that enable direct communication with consumers. These technologies help businesses become more competitive, transparent, and sustainable.

For plant-based food enterprises, digital transformation offers opportunities to optimise production, reduce waste, strengthen customer relationships, and access new markets. At the same time, it supports sustainability goals by improving resource efficiency and enabling data-driven decision-making. Understanding the difference between digitalisation and digital transformation helps SMEs identify practical innovation opportunities that match their size, resources, and business objectives.

Learning Action!..

Digital Innovation Mapping for SMEs

Learners work individually, in small groups or in a classroom setting to **analyse a real food SME or their own organisation**

Estimated Duration Time:
30–45 minutes

Step 1

Identify at least three digital tools currently used by the business.

Step 2

Categorise each tool as either:
- Digitalisation
- Digital Transformation

Step 3

Identify one additional technology that could improve business performance, sustainability, customer engagement, or efficiency.

Step 4

Prepare a short action plan describing:
- Expected benefits
- Required resources
- Possible implementation challenges

The learning objective is to help learners distinguish between digitalisation and digital transformation. Also, to identify practical innovation opportunities for food SMEs.

Case Study

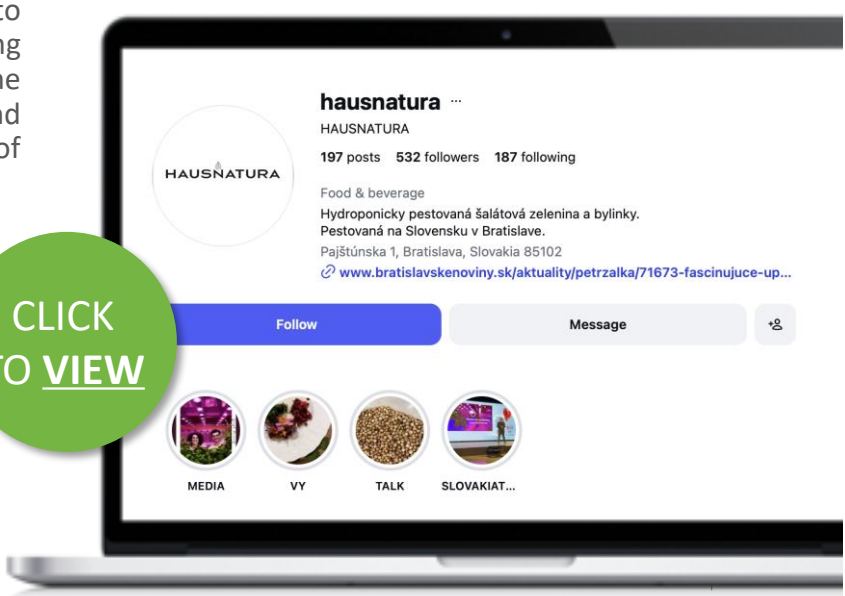
Hausnatura

Vertical Farming Innovation

Country
Slovakia

Hausnatura is one of Slovakia's pioneering indoor vertical farming companies, located in Bratislava. The company produces fresh leafy greens and herbs using hydroponic cultivation systems within a controlled indoor environment. By integrating digital monitoring technologies, environmental sensors, and automated production management, Hausnatura can optimise growing conditions while minimising resource consumption. The company demonstrates how innovation and digital technologies can support sustainable food production in urban environments. Compared to conventional agriculture, vertical farming significantly reduces water use, eliminates the need for long-distance transportation, and provides year-round production regardless of weather conditions.

Hausnatura represents a strong example of plant-based entrepreneurship because it combines technological innovation, environmental sustainability, and local food production. The company illustrates how SMEs can use digital solutions to address food security challenges while creating high-quality products for modern consumers. Its business model aligns closely with European sustainability goals and demonstrates practical pathways for innovation within the plant-based food sector.



HAUSNATURA

Reflection Exercise

Take a moment to reflect on how digital tools and innovation intersect within the SME landscape. Use the following questions to guide your thinking.

01 What is the difference between digitalisation and digital transformation, and why is this distinction important for SMEs?

02 Which digital technology could have the greatest impact on sustainability in food businesses and why?

03 What barriers might prevent SMEs from adopting innovative technologies, and how could these barriers be overcome?

Learning Materials

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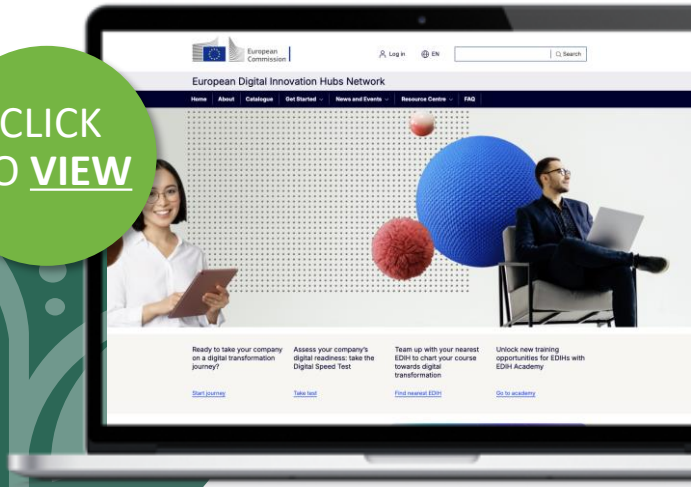
Digital Europe Programme

European Digital Innovation Hubs Network



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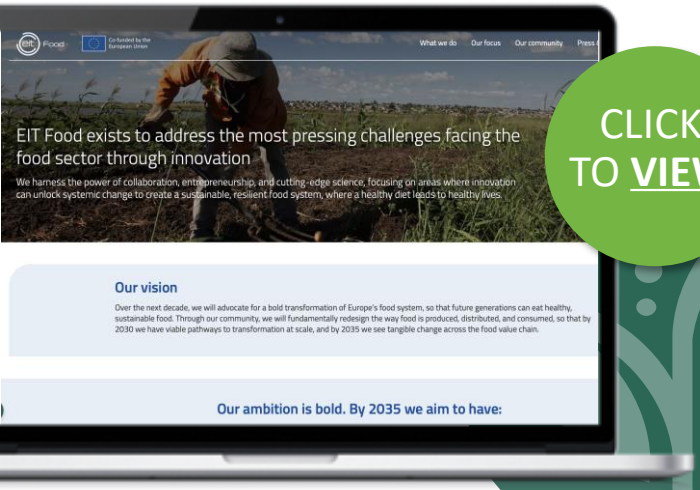

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EIT Foods

See more on the next slide

European Green Deal

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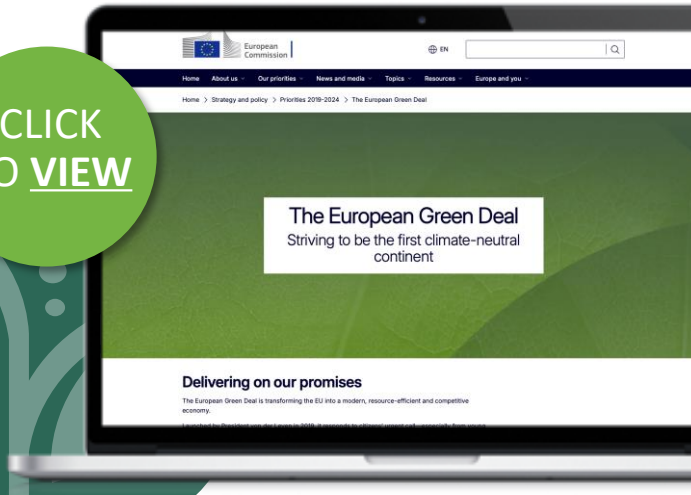

IBM Food Trust

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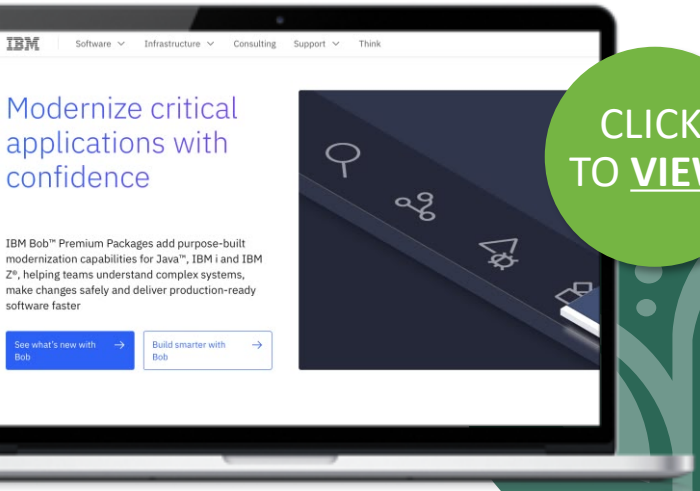

FAO Digital Agriculture Resources

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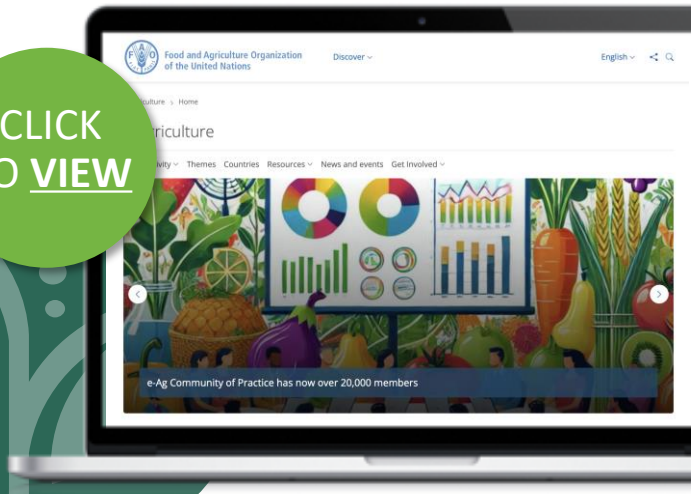

“The way we produce and consume food needs to become more sustainable for the benefit of our health, our environment and our climate.”

European Commission Farm to Fork Strategy

Module 2

Adding Value to Plant-Based Products for Your Food Business

This module explores **how modern technologies and traditional methods enhance plant-based foods**. Learners will understand the main drivers and opportunities associated to technology that can contribute to produce better and safer plant-based foods.

Learners will be able to determine how plant-based products can provide essential flavours, taste, nutrients, and bioactive compounds that can contribute to the health benefits of plant-based foods; technologies enhance their nutritional quality, bioavailability, and functionality. In addition, they will discover how specific food technology works and can help to preserve and transform plant-based products.

Learn to explore real-life uses for these technologies, already used in making drinks, snacks, and meat alternatives. Finally, learners will know about the use of technologies to meet the nutritional needs of

Try this!

"From Seed to Shelf" - Designing a Value-Added Plant-Based Product

This a product development activity. It can be done individually, in a small group, as a classroom discussion or an online session. Your challenge is to take one affordable plant-based ingredient and design a market-ready value-added product that applies at least one technology from the module.

Follow the steps below:

01 **Choose your base ingredient from this list:** lentils, chickpeas, mung beans, oats, peas, sunflower seeds, or barley. Briefly note its nutritional strengths and any known anti-nutrients or limitations.

02 **Select one processing:** technology (HHP, sprouting, fermentation, or extrusion) and explain specifically what it does to your ingredient — nutritionally, in terms of safety, and sensorially.

03 **Define your product:** its form (drink, flour, spread, snack, purée, etc.), target consumer, main health benefit, and at least one claim you would like to make on the label.

04 **Draft a label outline:** name the product legally (respecting EU naming rules), list the mandatory label elements required under Regulation 1169/2011, and decide whether your health or nutrition claim is authorised under Regulation 1924/2006.

05 **Identify one sustainability angle:** how does your product choice (ingredient, processing method, or packaging concept) contribute to reducing waste, lowering carbon footprint, or supporting local agriculture?

06 **Present your product in a 3-minute pitch to the group**. Give and receive structured feedback using a simple yes/no/improve format.

Estimated Duration Time:
90-120 minutes

Learners will apply knowledge of plant-based processing technologies, nutritional science, and EU labelling regulations to design a realistic value-added product. They will practise critical thinking about trade-offs between cost, quality, sustainability, and consumer communication — and connect those decisions to real market and clinical contexts.

Case Study

NatureSnack

Reducing Food Waste through dehydration in Plant-Based snacks

Country
Spain

They produce **100% natural dehydrated fruit snacks and kale chips (Healthy Snacks)**. Their slow, low-temperature process helps preserve the natural properties of the ingredients, resulting in healthy snacks with no added sugar, preservatives, or additives. Straight from the Farm.

They are committed to using locally sourced ingredients and work directly with nearby farmers to ensure fair trade and guarantee excellent-quality fruits and vegetables. By making use of surplus produce and reducing food waste, they actively contribute to sustainability. Made to Take Care of You. Their main goal is to make it easy to enjoy seasonal fruits and vegetables anytime, anywhere. They carefully oversee every step of the process to offer customers a healthy, high-quality product with the authentic taste people know and love. Natursnacks has a strong focus on both sustainability and innovation. The company works directly with local farmers and prioritizes nationally sourced ingredients, helping to support fair trade, reduce food miles, and minimize food waste by using surplus or imperfect produce that would otherwise not be commercialized. Their artisanal low-temperature dehydration process also helps preserve the natural properties of fruits and vegetables while avoiding additives, preservatives, and added sugars. Innovation is at the core of their business model. Natursnacks develops healthy and convenient alternatives to traditional snacks, such as dehydrated fruit products and kale chips, while continuously working on new product development in collaboration with research centers. Their goal is to combine health, quality, sustainability, and food innovation to create natural snacks adapted to modern lifestyles.

Natursnacks is highly relevant to **plant-based entrepreneurship and sustainable food systems** because the company develops 100% plant-based snacks made exclusively from fruits and vegetables, without additives or animal-derived ingredients. Their products promote healthier and more sustainable consumption habits by offering natural alternatives to conventional processed snacks.

The company also contributes to more resilient food systems through its commitment to local sourcing, collaboration with nearby farmers, and the use of surplus agricultural produce to reduce food waste. Natursnacks methods support the transition toward a more environmentally responsible and circular food economy.

Through its low-temperature dehydration process, the company is able to extend the shelf life of fruits and vegetables while maintaining their nutritional value, helping to improve food preservation and reduce unnecessary waste across the supply chain.

Natursnacks is a strong good-practice because it successfully combines plant-based innovation, sustainability, and healthy nutrition in a practical and scalable business model. They're making plant-based eating more accessible and attractive to consumers. It also demonstrates how food businesses can contribute to more sustainable food systems by working directly with local farmers, supporting fair trade, and reducing food waste through the use of surplus produce. Their low-temperature dehydration process preserves nutritional value without the need for additives, preservatives, or added sugars, reinforcing their commitment to clean-label and minimally processed foods.

Natursnacks shows how entrepreneurship can create value across the entire supply chain while promoting environmental responsibility and innovation in the plant-based sector.

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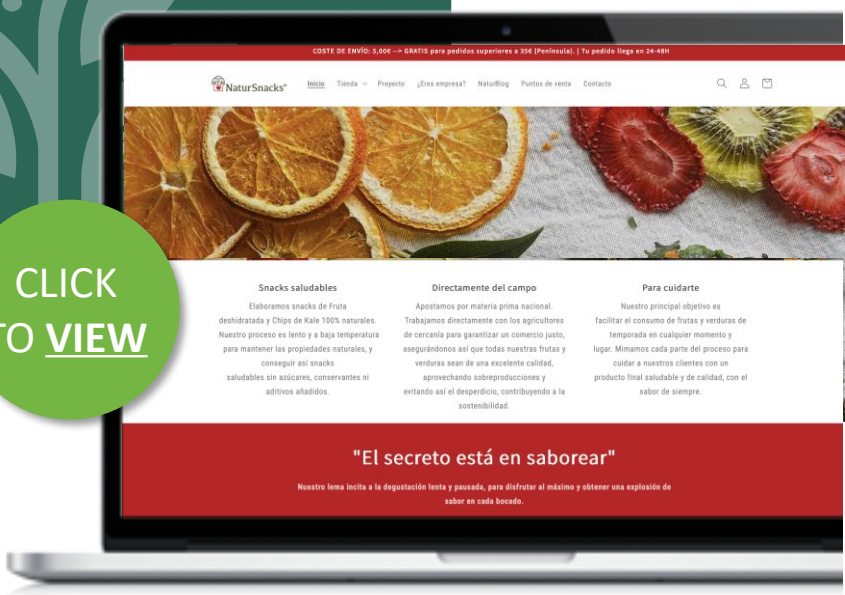


NaturSnacks®

Reflection Exercise

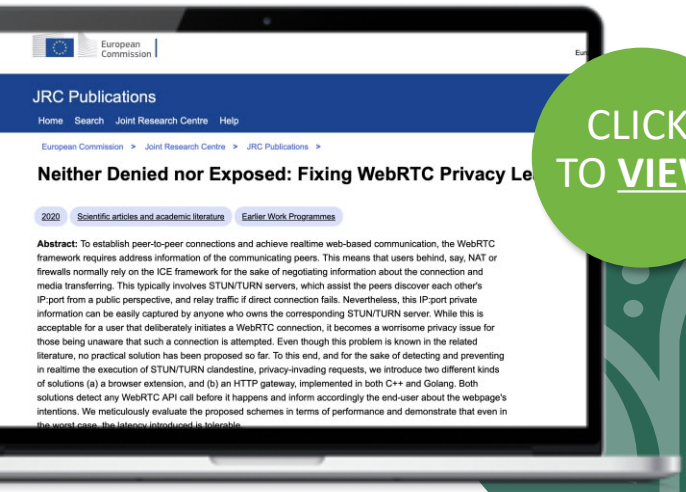
Take a moment to reflect on how technology and traditional practices can work together in a SME setting. Use the following questions to guide your thinking.

01 In what ways can technology contribute to reducing food waste?

02 What environmental benefits are associated with producing snacks from surplus vegetables?

03 Identify the possible disadvantages or limitations of introducing technology.

Learning Materials



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European Commission Report: Neither Denied nor Exposed: Fixing WebRTC Privacy Leaks

Hiperbaric Website:

HHP Technology for the Food Industry

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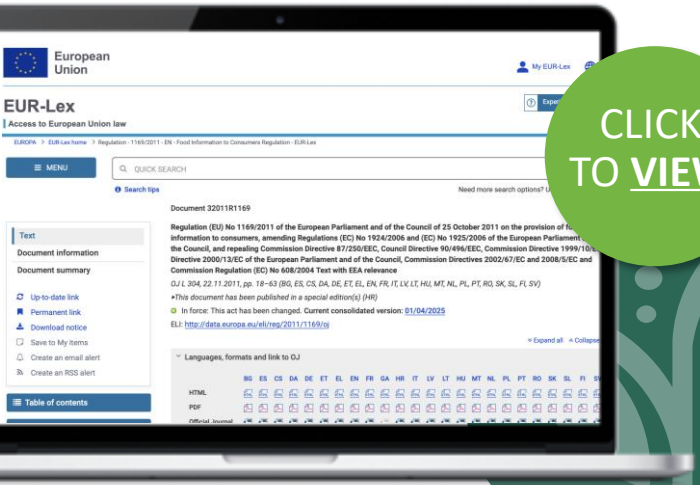

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Regulation (EU) No 1169/2011

Food Information to Consumers

See more on the next slide

FAO — Sustainable Healthy Diets: Guiding Principles

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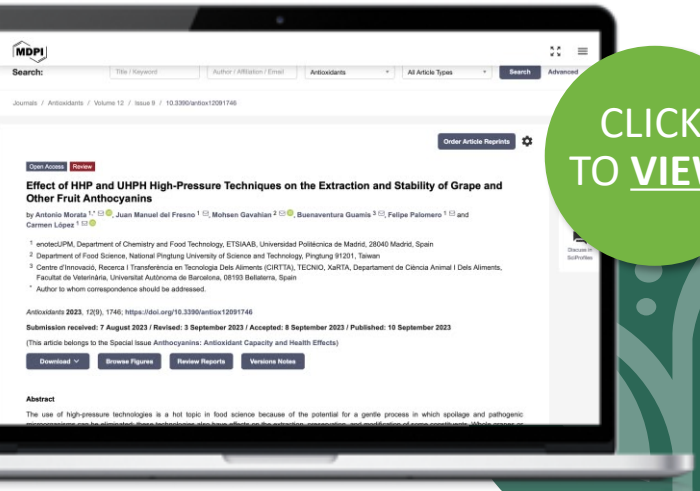

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Morata et al. — HHP to Increase Phenolic Compounds in Food: A Review

Module 3

Creating Plant-based Innovations for Retail Prepared Consumer Foods

This module aims to provide learners with a comprehensive understanding of the consumer trends and market demand for plant-based ready-to-eat (RTE) and retail products.

It explores innovative strategies for developing plant-based products that appeal to diverse consumer segments, while analysing challenges and solutions related to formulation, shelf life, packaging, and distribution.

Additionally, the module highlights how to integrate sustainability, nutrition, and convenience into retail product design and offers insights into effective branding, labelling, and consumer communication for plant-based foods.

By the end of the module, learners will be able to:

01 Identify the key drivers of innovation in plant-based retail foods.

02 Design new plant-based products aligned with current trends and health requirements.

03 Evaluate packaging and logistics options to extend shelf life and maintain quality.

04 Develop marketing and communication strategies that build consumer trust.

Estimated Duration Time:
45 minutes

Exercise: The Retail Challenge: Redesigning a traditional favourite into a Clean-Label Plant-Based RTE product

Exercise

Learners in pairs or as a small group, will act as a product development team for a food SME, looking to launch a new plant-based, Ready-to-Eat (RTE) retail meal. They must transform a conventional supermarket favorite**, "Creamy Chicken & Mushroom Pasta with Herbs"** into a plant-based alternative. Teams must complete the following two operational tasks using the knowledge gained throughout Module 3.

Teams must complete the following two operational tasks using the knowledge gained throughout Module 3.

01

Task 1: Formulation & Preservation Selection

Review the technical matrix below and select the most appropriate option to replace the animal-based elements. Provide a brief justification focusing on texture, flavor, and clean-label compliance.

- **Ingredient 1: Chicken (Texture):**
  - Option A: Textured Pea Protein (via extrusion technology) OR
  - Option B: Unprocessed Chopped Tofu.
- **Ingredient 2: Vegan creamy Sauce:**
  - Option A: Sunflower oil with synthetic emulsifiers OR
  - Option B: Cashew & Oat milk blend (Clean Label approach).
- **Ingredient 3: Flavor Boost (Umami):**
  - Option A: Monosodium Glutamate (MSG) OR
  - Option B: Yeast extract and Porcini mushroom powder.
- **Ingredient 4: Food Preservation:**
  - Option A: Ultra-high thermal pasteurization OR
  - Option B: Modified Atmosphere Packaging (MAP) paired with Cold Chain logistics.

02 Task 2: Marketing & Retail Positioning Strategy

Instructions: Answer the following three operational questions for your new product based on the consumer insights and marketing guidelines.

- **The Front-of-Pack Claim:** Marketing should focus on indulgence and taste experience rather than just what the product "lacks." Draft a brief, appealing sentence for your packaging targeted specifically at Flexitarians to make this plant-based meal sound delicious.

Your Answer:

- **Visual Clues & Storytelling:** According to the module, brands must align their "Storytelling" and "Visual Clues" to build consumer trust. Describe what kind of story or visual style (e.g., minimalist/clean label style vs. a traditional rustic meal style) your packaging will communicate to show that this product is both premium and sustainable.

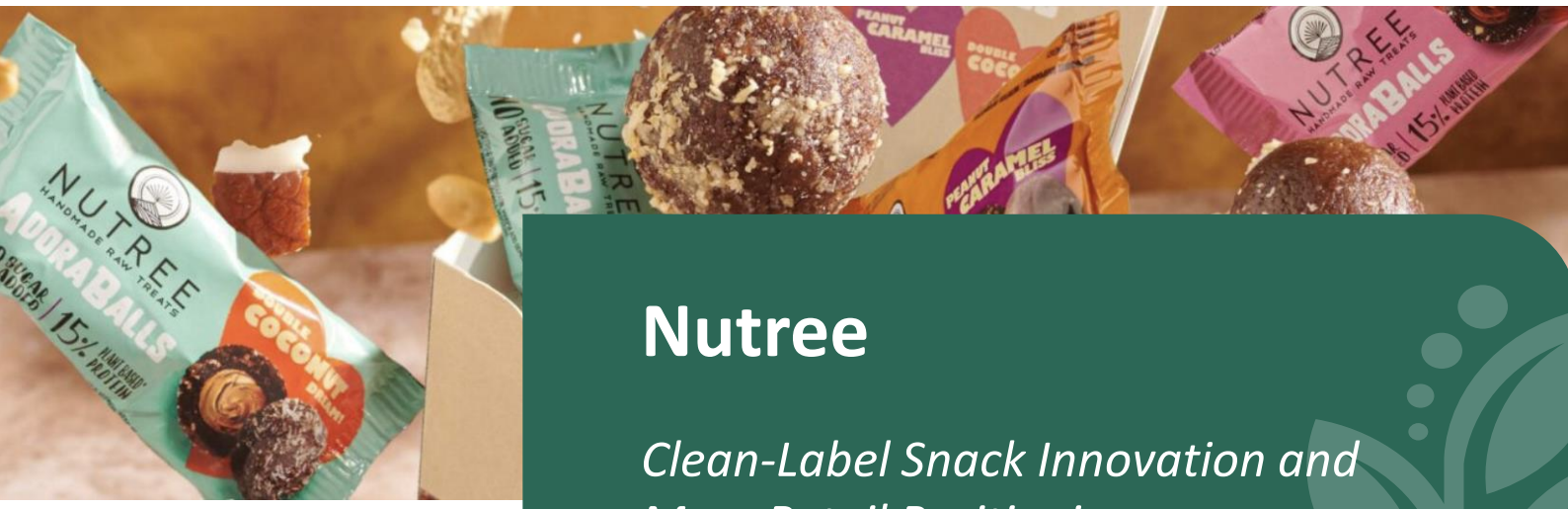
Your Answer:

- **In-Store Retail Placement:** Based on flexitarian shopping behaviors and market trends, will you instruct supermarkets to place your product in the isolated "Vegan/Diet Food Aisle" or directly in the mainstream "Chilled Ready-Meals" section next to conventional pasta meals? Justify your decision.

Learning Objective (What skill or knowledge should learners gain?)

By completing this exercise, learners will gain the practical skills needed to apply texturizing technologies, implement natural clean-label ingredients, select commercial shelf-life extension methods (MAP), and formulate sensory-driven marketing strategies to successfully position a plant-based product in mass retail environments.

Case Study



Nutree

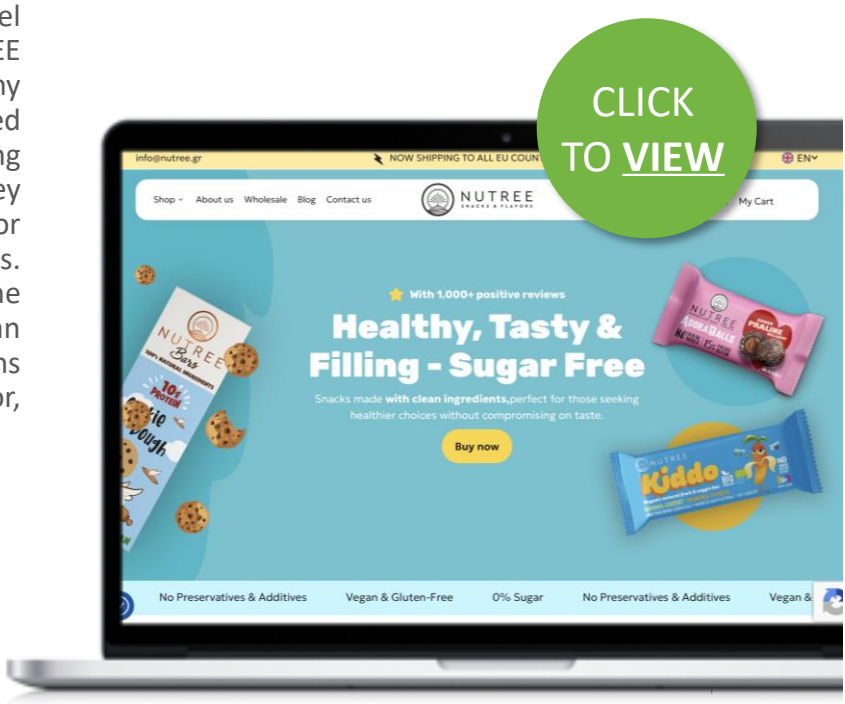
Clean-Label Snack Innovation and Mass Retail Positioning.

Country
Greece

They produce 100% natural dehydrated fruit snacks Case Study Summary. NUTREE is a dynamic Greek small and medium enterprise (SME) founded by two friends and partners, Anastasis and Faidon. Having lived abroad and experienced the challenges of maintaining a balanced diet within a fast-paced urban lifestyle, they founded the first Greek brand dedicated to incorporating raw, plant-based ready-to-eat (RTE) snacks into daily life. The company manufactures 100% natural energy bars and protein bites utilizing pure, authentic ingredients inspired by the richness of the Greek land.

The company's absolute focus is on clean-label innovation and sensory excellence. NUTREE successfully balances nutrition with "healthy indulgence," ensuring that sustainable plant-based eating remains inherently delicious. By relying entirely on unprocessed raw materials, they eliminate added sugars, synthetic additives, or artificial preservatives from their formulations. Furthermore, they actively innovate within the functional food space by blending Mediterranean raw materials with clean plant-based proteins (such as pea protein) to deliver a superior, satisfying texture.

NUTREE serves as an outstanding best-practice example for plant-based entrepreneurship. It demonstrates how a value-driven local startup can shift from a niche concept into high-volume mainstream retail. By aligning their packaging, authentic storytelling, and visual identity with modern consumer trends, they built immediate credibility. Through excellent execution of product texture, portability, and convenience, NUTREE successfully secured competitive retail space on major national supermarket shelves and international markets, providing a scalable business blueprint for other Mediterranean food SMEs.



NUTREE
SNACKS & FLAVORS

Reflection Exercise

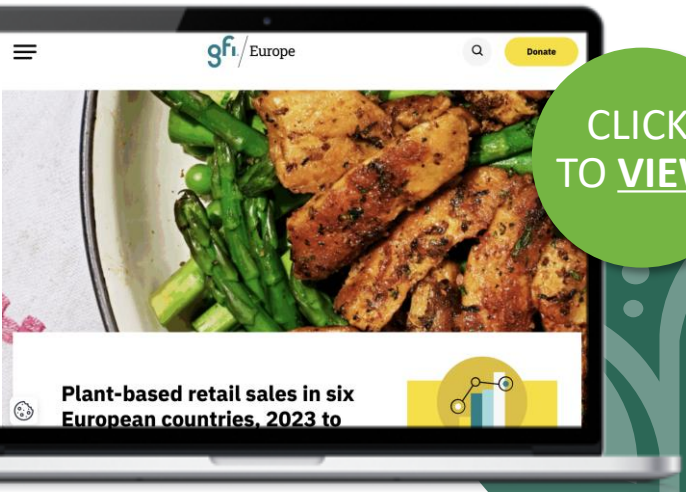
Take a moment to reflect on consumer trends and market demand within a SME landscape. Use the following questions to guide your thinking.

01 How can an agrifood SME effectively balance the consumer demand for "Clean Label" products (minimizing synthetic additives) with the strict technical requirements of mass supermarkets for an extended shelf life?

02 Reflecting on the case study, what are the operational risks and commercial rewards for a small business when demanding to be placed in the chilled high-traffic aisle next to conventional meals rather than the isolated vegetarian section?

03 In a plant-based retail market increasingly crowded with different logos (e.g., V-Label, Organic, Eco-scores), which type of certification or packaging communication do you believe is most effective for gaining the trust of a skeptical flexitarian consumer?

Learning Materials



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The Good Food Institute Europe:
Europe plant-based sales data 2022-2024

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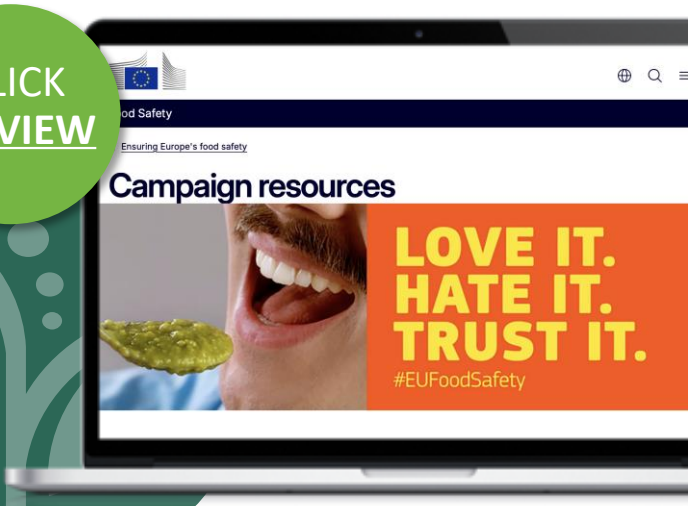
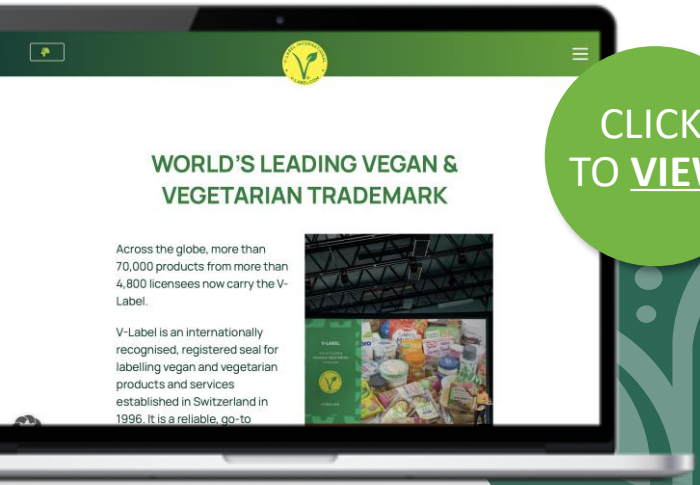


European Campaign on Food Safety:
Factsheets



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V-Label Europe:
Cultivating Consumer Trust

See more on the next slide

EIT-Food: Unlocking Transparency: What Do Consumers Want to Know?

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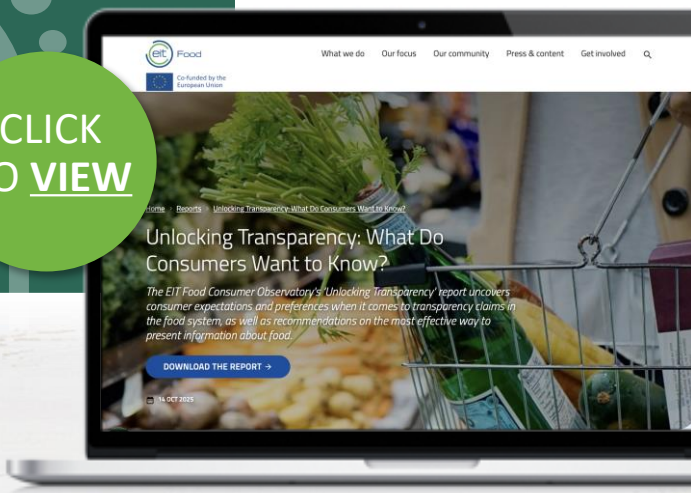
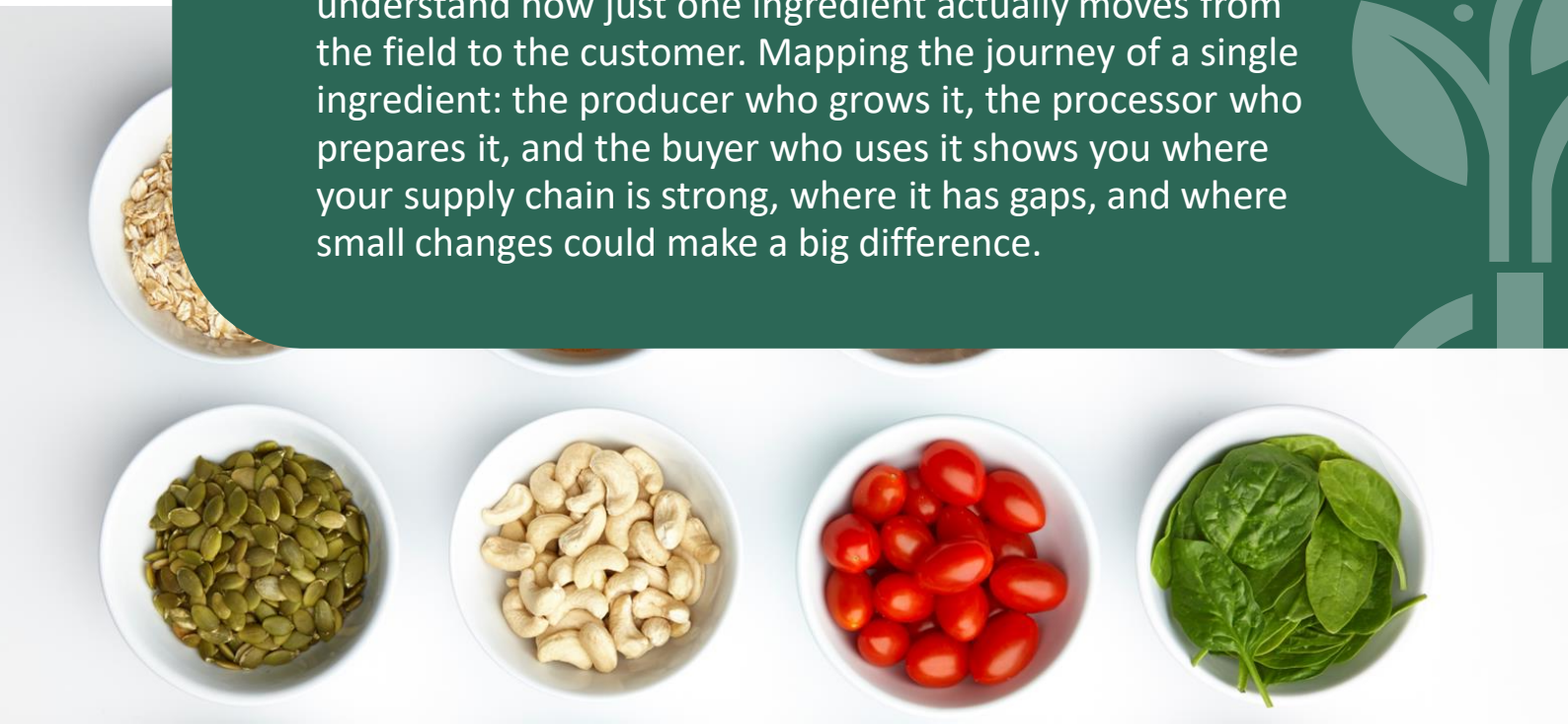


Module 4

Using Local Ingredients to Build Stronger Plant-Based Food Products

Before investing in a new plant-based product, it helps to understand how just one ingredient actually moves from the field to the customer. Mapping the journey of a single ingredient: the producer who grows it, the processor who prepares it, and the buyer who uses it shows you where your supply chain is strong, where it has gaps, and where small changes could make a big difference.



Key concepts. Local sourcing usually refers to ingredients that move around 100–150 km from origin to processing. Regional sourcing extends out to around 500 km. Anything further is a signal to ask whether a closer option exists. Three points anchor every supply chain: the producer (the farm or grower group), the processor (where the ingredient is cleaned, milled, pressed, frozen or packed), and the buyer (the caterer, retailer or manufacturer who uses it).

Practical relevance. Plant-based SMEs often have a good relationship with the buyer end of the chain but limited visibility of the producer end. Long transport legs and missing processing steps are the two clearest signals that local sourcing has room to grow. Denmark's plant-based sector has built strength here through coordinated value chains, Naturli', Simple Feast and DRYK all use Danish or near-EU raw materials and tell that story openly to customers.

Learner-focused explanation. By the end of this subsection, learners should be able to pick one ingredient, sketch a simple **producer → processor → buyer pathway** for their own region, and identify one strength, one gap and one opportunity. The exercise is deliberately small. Start with one ingredient before redesigning the whole product.

Sketch the Pathway: From Producer → Processor → Buyer. This exercise is best done as a pair or in a small group setting.

Estimated Duration Time: 20 minutes

01 **Pick one plant-based ingredient** you already use, or one you'd like to switch to (e.g. oats, peas, fava beans, tomatoes, rapeseed oil, herbs).

02 **Find the producer.** Who grows it? Name a farm, co-op or grower group in your region.

03 **Find the processor.** Where is it cleaned, milled, pressed, frozen or packed? This is often the missing link in local supply.

04 **Find the buyer.** Who ends up using it – a caterer, retailer, food-service kitchen, or your own business?

05 **Draw three boxes on paper or a whiteboard**, with arrows between them. Label each arrow with the approximate distance in km. If a step is missing or unknown, leave it blank – that's a finding.

06 **Write down** one strength, one gap or barrier, and one opportunity you can see in the pathway.

Learners will be able to sketch a simple supply pathway for one plant-based ingredient in their region, identify where the chain is strong or weak, and spot one practical opportunity to source more locally.

Case Study

DRYK

A Simple Sourcing Story Built Around Two Ingredients

Country
Denmark

DRYK is a Danish plant-based drinks company launched in 2020 by Christian Christensen and Marina Hansen in Stevns, with its main office in Køge.

The brand makes oat- and pea-based drinks designed to match the nutritional quality of cow's milk while staying transparent about every ingredient.

What it does. DRYK produces plant-based drinks from oats sourced in Norway and yellow peas sourced in France. It also uses smaller quantities of hemp and quinoa. Unlike many plant-based drink brands, DRYK avoids boiled-down plant syrups and uses pressed raw materials instead, which preserves more natural protein and reduces processing.

Sustainability and innovation focus. DRYK partners with the Danish Nature Fund – for each carton sold in Scandinavia, the company donates an amount equal to the carton's base area to free Danish land for nature. The brand also commits to using more local ingredients over time to lower its carbon footprint further.

The company doesn't claim everything is Danish – it says exactly where its oats and peas come from. That openness builds customer trust and shows other SMEs that a strong sourcing story can be built on two ingredients, not the whole recipe

Reflection Exercise

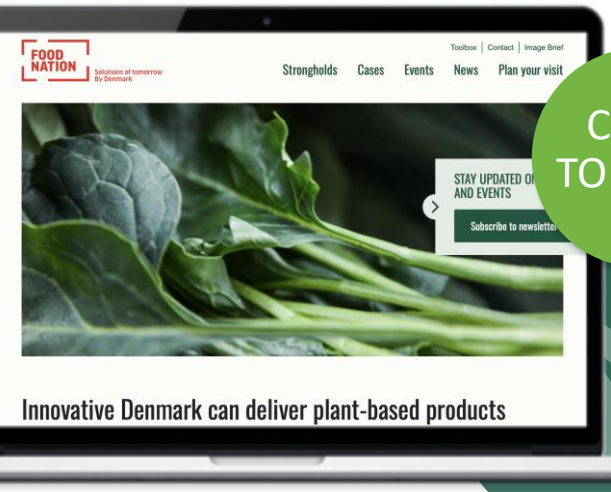
Take a moment to reflect and focus on your chosen pathway. How has mapping this ingredient assisted in production. Use the following questions to guide your thinking.

01 Look at the pathway you sketched. Where is the biggest distance between two points and is that distance a problem, or just a fact of how this ingredient is grown?

02 DRYK only makes a sourcing claim about two ingredients (oats and peas). Which one or two ingredients in your own product would you feel confident making a clear, honest sourcing claim about?

03 Where is the processor step in your local supply chain weakest? What kind of co-operation shared storage, a regional miller, a freezing facility would help fix it?

Learning Materials



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Food Nation Denmark Plant-based Food Industry Overview

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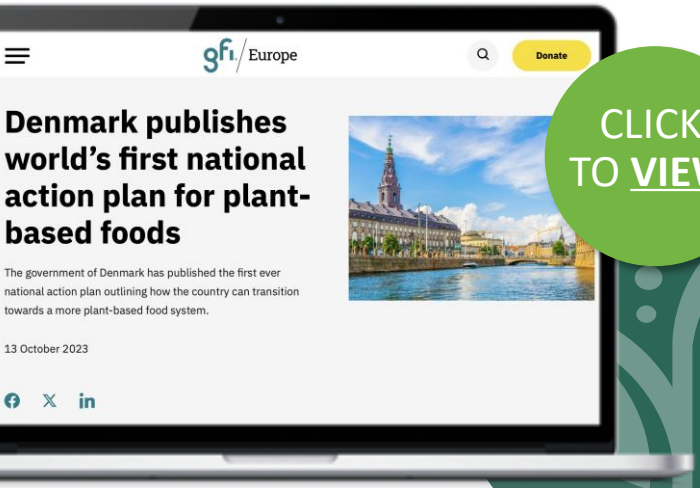
SEGES Innovation Plant-Based Foods



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GFI Europe – Denmark's national Action Plan for Plant-Based Foods

See more on the next slide

Food Nation: Stories by Denmark – plant-based and ingredient sector episodes

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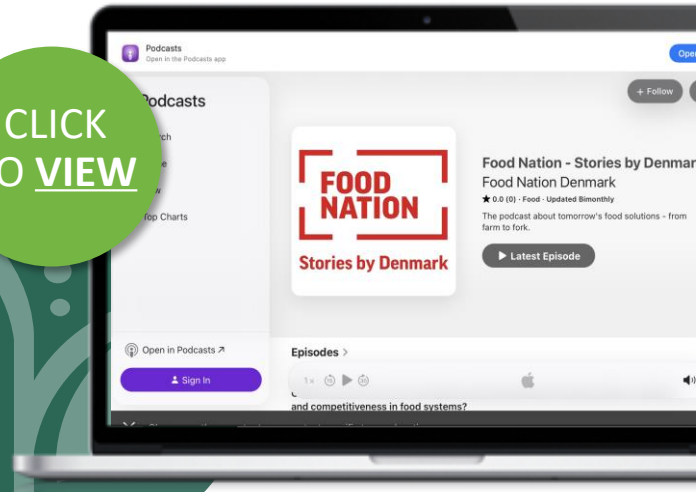

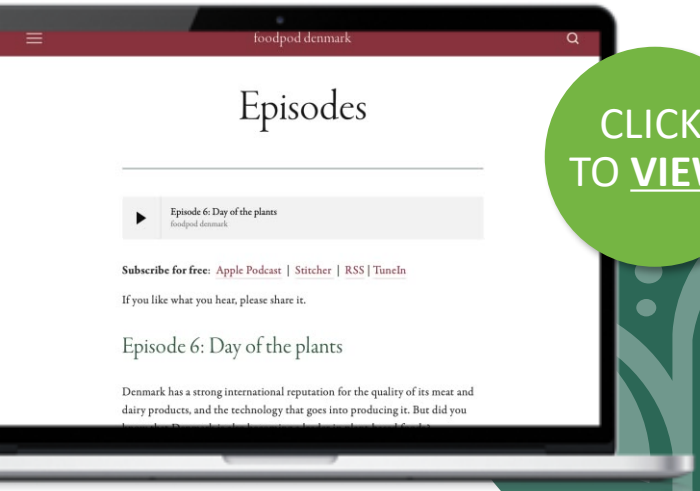

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Foodpod Denmark – Ep. 6: Day of the Plants (Naturli' & Danish Vegetarian Society)

Eurostat – Agriculture database (NUTS 2 / NUTS 3 crop production data

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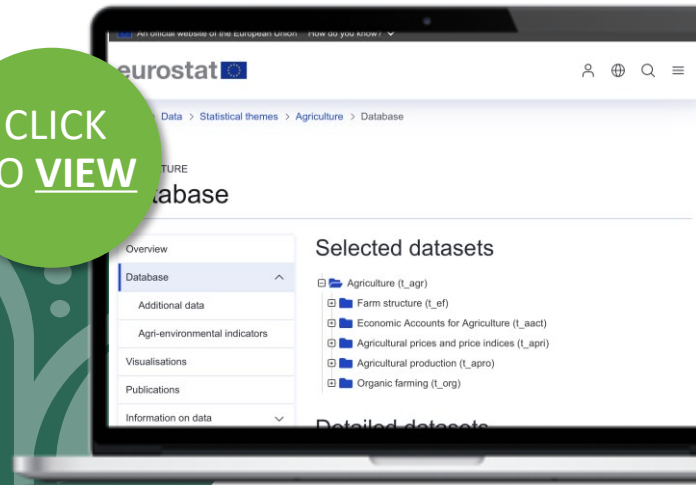


“Food systems are at the heart of the transition towards a sustainable future.”

European Institute of Innovation and Technology Food

Module 5

Using Plant Power to Build a More Sustainable Food Business

Through Using Plant Power to Build a More Sustainable Food Business, SMEs understand the critical role plant-based food systems play in shaping a resilient future. They're equipped with the knowledge to align their practices with sustainability trends, and shifting consumer demand for plant-based products.

They are encouraged to reflect on current global challenges and imagine transformative solutions rooted in plant-based innovation. It helps SMEs identify opportunities for innovation, cost-efficiency, and new market growth in plant-based food systems. This module serves as a foundational introduction to a plant-based food future, encouraging participants to critically examine traditional food systems and envision alternatives that align with the Sustainable Development Goals (SDGs). We use blended content, and practical activities so learners will become agents of change in the transition to sustainable food systems.

By the end of these exercises, learners should be able to:

01 Explain the role of plant-based food systems in environmental and public health.

02 Identify how plant-based solutions align with the EU Green Deal and UN SDGs.

03 Reflect on the socio-economic impact of shifting to plant-based diets.

04 Envision innovative plant-based ideas that promote sustainability and equity.

Estimated Duration Time:
40-60 minutes

Learn by doing the following exercise!

Design Your Future Food Business

Imagine it is the year 2035 and you are launching a food business that contributes to a healthier, fairer, and more sustainable food system.

Working individually or in groups, design a future-focused plant-based food business and answer the following questions:

01 What product or service does your business offer?

02 Which local or sustainable ingredients do you use?

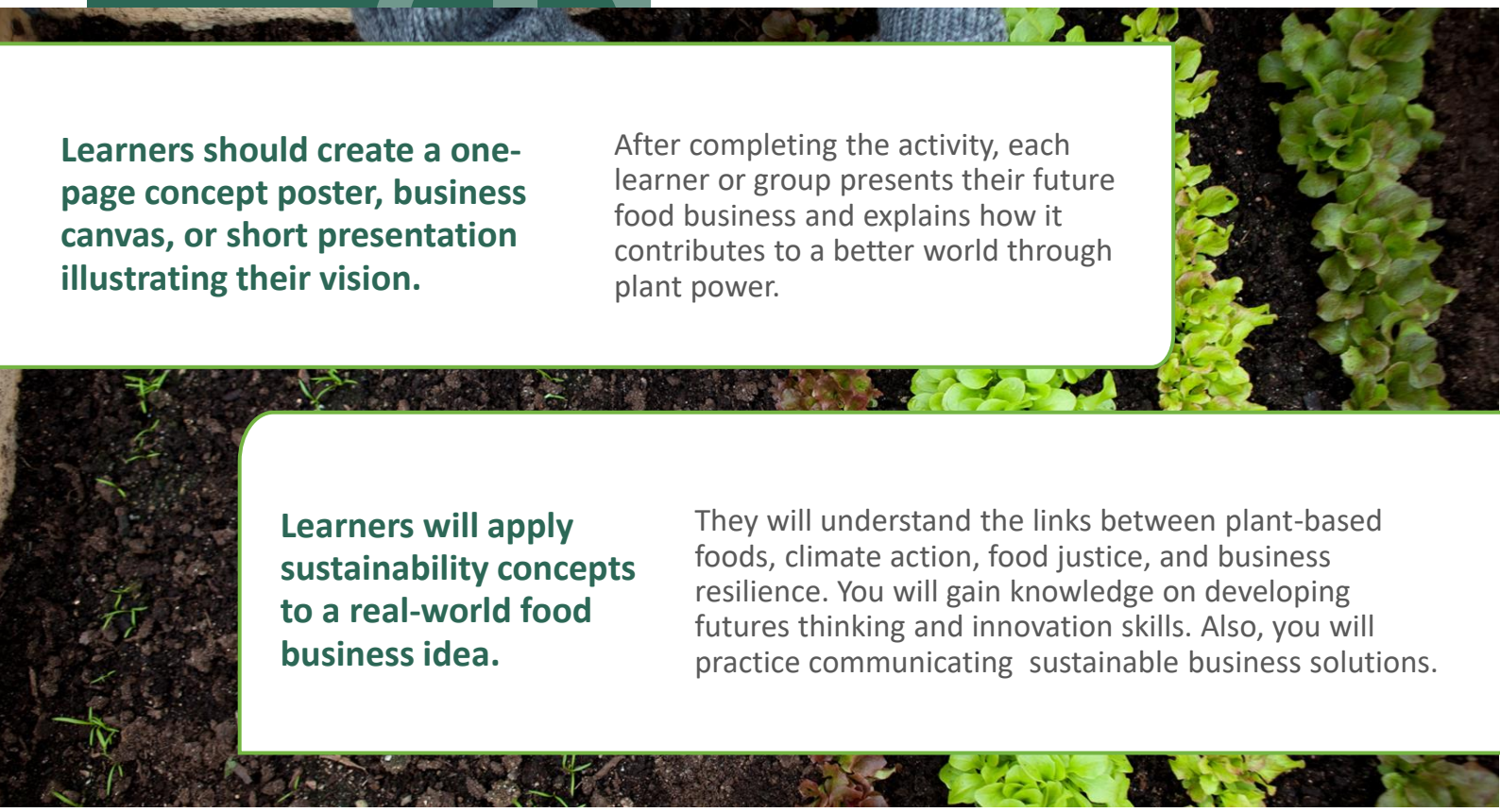
03 How does your business reduce environmental impact?

04 How does it address food waste or support a circular economy?

05 How does it respond to customer needs and changing food trends?

06 How does it support fairness, accessibility, or food justice?

07 What makes your business resilient in a changing climate and economy?



Learners should create a one-page concept poster, business canvas, or short presentation illustrating their vision.

After completing the activity, each learner or group presents their future food business and explains how it contributes to a better world through plant power.

Learners will apply sustainability concepts to a real-world food business idea.

They will understand the links between plant-based foods, climate action, food justice, and business resilience. You will gain knowledge on developing futures thinking and innovation skills. Also, you will practice communicating sustainable business solutions.

Case Study

Heura Foods

From Startup to Food Revolution: How Heura Foods is Transforming Europe's Food System

Country

Spain

Heura Foods is a Barcelona-based food company that develops and markets 100% plant-based alternatives. The company produces products designed to reduce the environmental impact associated with conventional animal agriculture.

Heuras mission is to help transform the food system into one that is healthier, more sustainable, and more nutritious.

Heura®

The company focuses on:

- Developing plant-based foods with a significantly lower environmental footprint than animal products.
- Using Mediterranean-inspired ingredients such as legumes and olive oil.
- Investing heavily in research and development to improve nutritional quality and taste.
- Replacing ingredients such as saturated fats and additives with healthier plant-based alternatives.
- Supporting the transition to more sustainable food consumption patterns across Europe.

Heura is one of Europe's most successful examples of plant-based entrepreneurship. The company demonstrates how a startup can combine sustainability, innovation, and commercial success to address major food system challenges. The company has become a leading player in the European plant-based market while continuing to innovate through food technology and product development.

Heura is considered a good practice example because they've combined a strong social and environmental mission with a successful business model. It demonstrates how sustainability can drive innovation and market growth. Furthermore, their products align with European priorities on sustainable food systems, climate action, and healthier diets.

Heura®

Reflection Exercise

Take a moment to reflect on practices and their impact on sustainability. Use the following questions to guide your thinking.

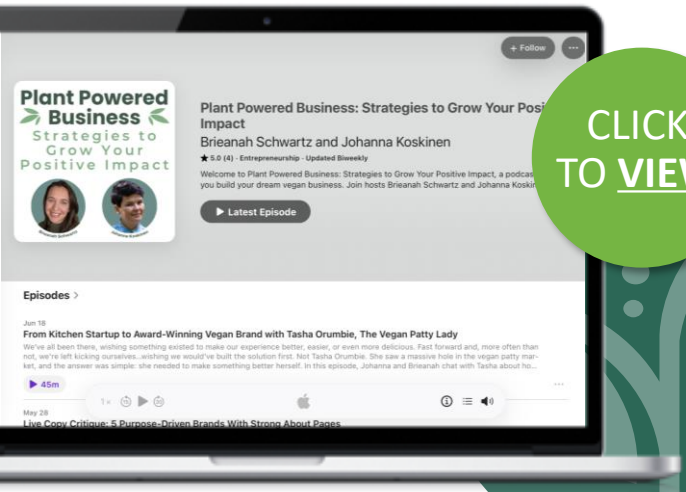
01 How do your current food choices affect the environment, and what is one change you could make to reduce your environmental footprint?

02 What role do you think plant-based food systems can play in addressing global challenges such as climate change, food insecurity, and social inequality?

03 Imagine your community in 2035. What would a sustainable and equitable food system look like, and what actions could individuals, businesses, & governments take to help achieve it?

TIP! Ask minority background learners to use their cultural foods in this reflection.

Learning Materials



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Plant Powered Business: Strategies to Grow Your Positive Impact

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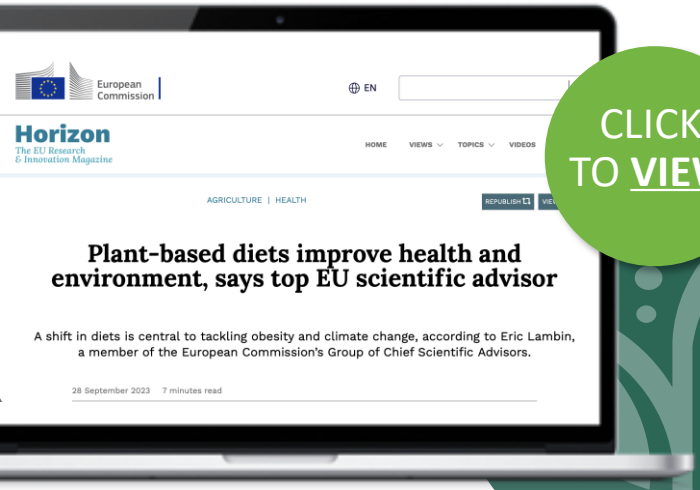
The Futuristic Farms That Will Feed the World



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Plant-based diets improve health and environment, says top EU scientific advisor

See more on the next slide

EIT Food

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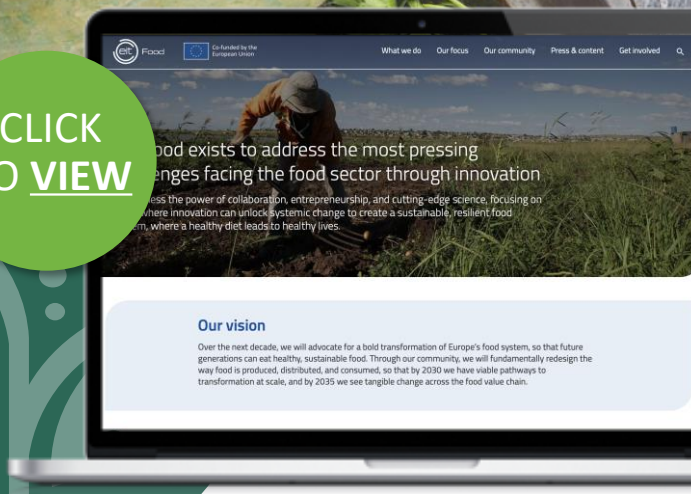

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Planting the future of sustainable food systems in Europe

Module 6

Creating Plant-Based Innovations for Food Service Outlets

The overall objective of this module is to equip food service providers with the knowledge needed to integrate plant-based innovation into their business.

By examining the key drivers behind plant-based diets, as well as the associated challenges and opportunities for SMEs, the module supports learners in responding effectively to evolving consumer demand. It also contextualises the plant-based sector by exploring global trends. In addition, the module provides practical advice and guidelines on adapting and developing menus to incorporate plant-based options. It's best accomplished in pairs, in a small group, or as a classroom discussion.

By the end of this module, learners will be able to:

01 Understand the challenges and opportunities of plant-based options

02 Identify operational requirements for different service outlets

03 Critically evaluate global trends in the plant-based industry

04 Comprehend nutritional value of plant-based products

05 Apply menu planning strategies to develop plant-based recipes

Estimated Duration Time:
45 minutes

Exercise

Menu and Product Development

Starters
Soup of the day, served with brown bread
Chicken wings and blue cheese dip
Garlic bread with mozzarella
Prawn cocktail with salad garnish

Main courses
Beef burger with fries and coleslaw
Roast chicken with Caesar dressing
Fish and chips with mushy peas
Pasta carbonara
Lamb curry with basmati rice

Sandwiches and wraps
Ham and cheese toastie
Tuna mayo wrap
BLT sandwich
Chicken Caesar wrap
Egg salad sandwich

Desserts
Cheesecake
Chocolate brownie
Vanilla ice cream
Apple pie with custard
Fruit salad

Task 1: Menu Gap Analysis Exercise

01

Instructions: Best done in a small group, pair work, or classroom discussion.

Review the sample service menu provided and identify where plant-based options could be added or improved.

Use local and national supplier price indexes for calculations.

Your Answer:

Operational and Business Skills

Estimated Duration Time:
45 minutes

This exercise can be done in **pairs, in a small group or as a classroom discussion**.

02 Task 2: Costing Exercise

Instructions: Examine the cost of the plant-based dishes listed below and compare it with their meat-based alternatives.

Mediterranean Chickpea Salad- A mix of diced cucumbers, tomatoes, red onions, kalamata olives, and chickpeas, tossed in a lemon vinaigrette.

Cost Estimate

Chicken Caesar Salad - Romain lettuce, crunchy croutons, shaved Parmesan cheese and grilled chicken tossed in a creamy Caesar sauce.

Cost Estimate **Cost Comparison**

Lentil Bolognese - A rich, savoury pasta sauce made with brown lentils, crushed tomatoes, garlic, and italian herbs, served with spaghetti.

Cost Estimate

Spaghetti Bolognese - Slow-simmered ground beef and aromatic vegetables in a rich tomato and red wine sauce, served with spaghetti and finished with grated Pasmesan cheese.

Cost Estimate **Cost Comparison**

Portobello Mushroom Burger - Grilled portobello caps served on a bun with avocado, lettuce, sauteed onions, served with spicy chipotle sauce.

Cost Estimate

Beef Burger - Our signature 8oz prime Irish beef patty layered with melted mature farmhouse cheddar cheese, crisp lettuce, vine-ripened tomatoes, and our house-made savoury bacon jam, served on a brioche bun.

Cost Estimate **Cost Comparison**

Learning Objective:

The menu gap analysis task invites learners to critically evaluate classic menu options and challenge them to create plant-based alternatives for a more varied menu that appeals to vegetarians, flexitarians and meat-eaters alike. The costing exercise immerses learners in menu economics to help address potential cost barriers associated with serving plant-based menu options.

Case Study

The Happy Pear

5 Secret Vegan Flavours this Michelin Star Chef Loves

Country
Ireland

Founded in 2004 by identical twins Dave and Steve, **The Happy Pear** started as a vegetable shop in Greystones, Co. Wicklow

Twenty-two years later, the company has expanded to include a café and bakery, a commercial brand offering 80 plant-based food products, more than 15 online courses, 7 cookbooks, a 4-acre regenerative organic farm, and a coffee roastery.

Throughout the years, the company's mission has remained the same: create a healthier, happier world and build community. With a social media following of over 2 million people, The Happy Pear is testament to the rising consumer demand for plant-based options. Their regenerative farm keeps their café and shop stocked with fresh, organic produce and is an inspiring example of sustainability and a local supply chain.

In this video, The Happy Pear meet Irish Michelin-star chef JP McMahon to discover 5 vegan flavours, including hay, black apple purée, mushroom broth, seaweed, and wild garlic. This innovative approach to flavour is helping to shape the plant-based sector and support the creation of satisfying Michelin-star quality plant-based dishes for restaurant menus

The Happy Pear

Reflection Exercise

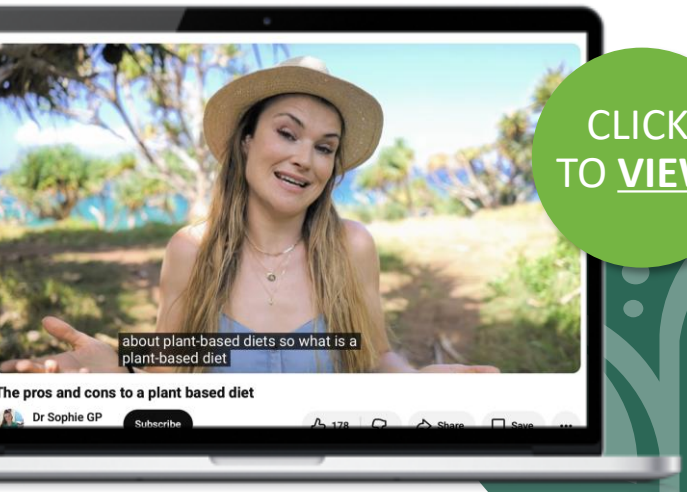
Take a moment to reflect on the effect of integrating plant-based foods within Food Service Outlets. Use the following questions to guide your thinking.

01 Should vegetarian and vegan dishes cost the same as meat dishes in restaurants?

02 Are you for or against the proposal to ban labelling plant-based products with animal terms? What influence do you think this proposal would have on the HoReCa (Hotel, Restaurant, Café) sector?

03 Do you think that the plant-based diet is more popular now than it was 10 years ago? Why or why not?

Learning Materials



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Dr Sophie GP (2019) The Pros and Cons to a Plant-Based Diet.

EAT & GlobeScan (2023) Global Consumer Research on Healthy and Sustainable Food Systems, Grains of Truth 2023.

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EAT & GlobeScan (2024) Taste Price Optimism & Obstacles Habit Convenience Health, Grains of Truth 2024.

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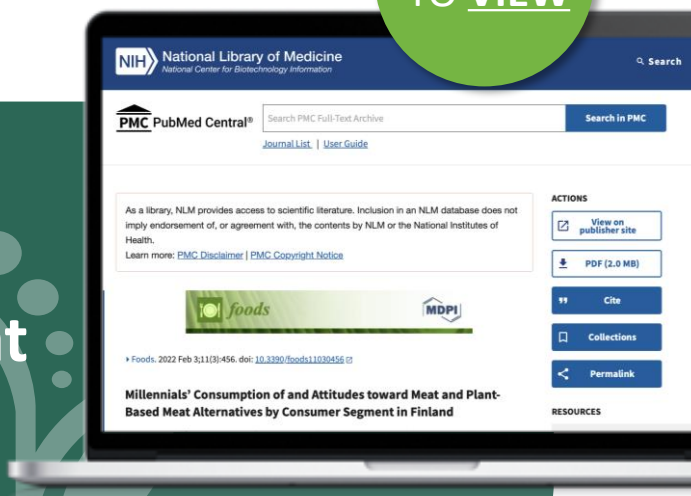
Millennials' Consumption of and Attitudes toward Meat and Plant-Based Meat Alternatives by Consumer Segment in Finland



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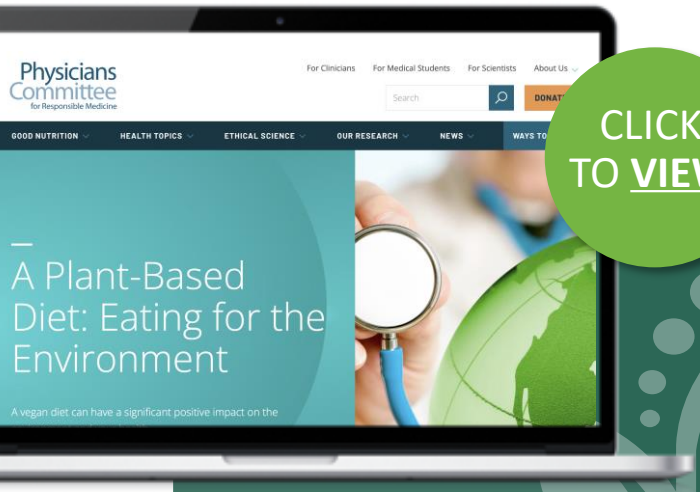
Physicians Committee for Responsible Medicine (2024) A Plant-Based Diet: Eating for the Environment



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Boosting Innovation for Food SMEs

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