

Innovate UK

Global Insights: Alternative Proteins in the US





Agenda

Time (GMT)	Item	Speaker
15:00-15:05	Welcome & introduction	Alexandra Leech-Gribben, <i>Knowledge Transfer Manager</i> - Global Alliance, Innovate UK Business Connect
15:05:15:15	How Innovate UK supports the alternative protein sector	Tom Jenkins, Deputy Director: Transforming Food Production / Farming Innovation programmes – Innovate UK
15:15-15:25	Overview of the alternative protein market in the US	Stella Child, Research and Grants Manager – Good Food Institute Linus Pardoe, Senior Policy Manager, UK – Good Food Institute
15:25-15:35	Support for innovation in California	Jim Taschetta - COO, MISTA
15:35-15:45	US plant-based food landscape	Noah Hyams, Founder - Vegpreneur
15:45-15:55	Getting a product to market	Nolan Lewin, Executive Director - Food Innovation Center at Rutgers representative
15:55-16:05	US market insights and consumer trends, relevant for UK businesses	Indy Kaur, Founder and Director - Plant Futures Collective
16:05-16:15	Key considerations before entering the US market	Simon Hurley, Director and Co-founder – Cock and Bull
16:15-16:35	Takeaways & highlights from the GEM	UK GEM delegation
16:35-16:40	Identified opportunities	David Golding, Head of Global Innovation Partnerships – Innovate UK
16:40-16:55	Q&A	All
16:55-17:00	Close	Alexandra Leech-Gribben



Innovate UK

We are a key delivery body of the UK Government's Innovation Strategy
We support business-led innovation in all sectors, technologies and UK regions

Our Mission

To help UK businesses grow through the development and commercialisation of new products, processes, and services, supported by an outstanding innovation ecosystem that is agile, inclusive, and easy to navigate



Overview of Innovate UK Global Programme

Global Scoping Workshops

Bring together in a workshop, UK businesses, research organisations and other stakeholders in specific technology and sector areas to help identify countries offering the best prospects for partnership and collaboration with the UK.

The outputs of the workshop(s) will help to narrow down where Global Expert Missions could be used to scope opportunities in more detail.

Global Expert Missions

Group of 6-8 experts scoping opportunities for UK businesses in specific countries and technology and sector areas.

Three stages -

- Scoping visit
- Dissemination report
- Dissemination workshop

Global
Business
Innovation
Programmes

Cohort of c.15 innovative high growth businesses exploring opportunities and building collaborations and partnerships in specific countries and technology and sector areas.

Programme over 9-12 months with 3 phases –

- Get ready
- Visit the market
- Exploit the opportunity

Global Incubator Programmes

Cohort of c.6-8 innovative high growth businesses building long-term relationships and foundations for future market growth.

Programme over 12-18 months with 4 phases –

- Prepare
- Participate
- Pursue 3-6 months in an incubator in country
- Exploit



Innovate UK



Innovate UK Support for the Alternative Proteins sector

Tom Jenkins,

Deputy Director: Transforming Food Production / Farming Innovation programmes –Innovate UK



Transforming Food Production



Catalysing the transition to net zero food production

Projects from the Transforming Food Production Challenge, a UKRI Challenge Fund Programme



Up to £90m funding to catalyse transition to net-zero food systems

Includes projects across:

- Precision fermentation
- Algal proteins
- Insect proteins
- Cultivated meat





UK Alternative Protein Roadmap

- Identified priorities for industry, academia, funders and policy makers
- Roadmaps across plant-based, fermentation and novel systems
- Considers opportunities and challenges relating to technical, commercial, regulatory and consumers
- Informed future funding activities across UKRI and with international partners



Alternative Proteins: Identifying UK priorities

A roadmap for the future of the alternative protein sector in the UK

June 2022





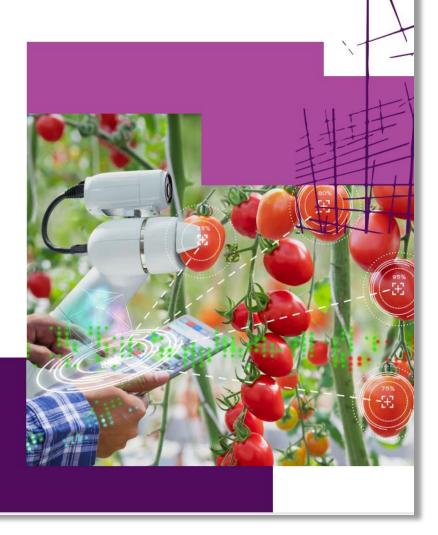


Future Food Innovation



Future Food Innovation

Driving the transition towards a healthier future for people and planet



- Better Food For All
- up to £20m to support food innovation focused on diet & health
- Novel Low Emission Food Production Systems

up to £19m to support AltPtn and CEA innovations for net-zero

Includes:

- Plant-based foods
- Fermentation-based foods
- Cultivated meat
- Enhancing food quality





Plant based Food & Alternative Proteins Portfolio

Plant Based

















Cultivated meat



















Fermentation based











Novel Systems









Aquaculture













AGRIFOODX













Innovation and Knowledge Centre (IKC)

Vision: Helping alternative proteins go mainstream for a sustainable planet

CURRENTLY A £38 MN COHESIVE ENTITY WITH 150+ PARTNERS

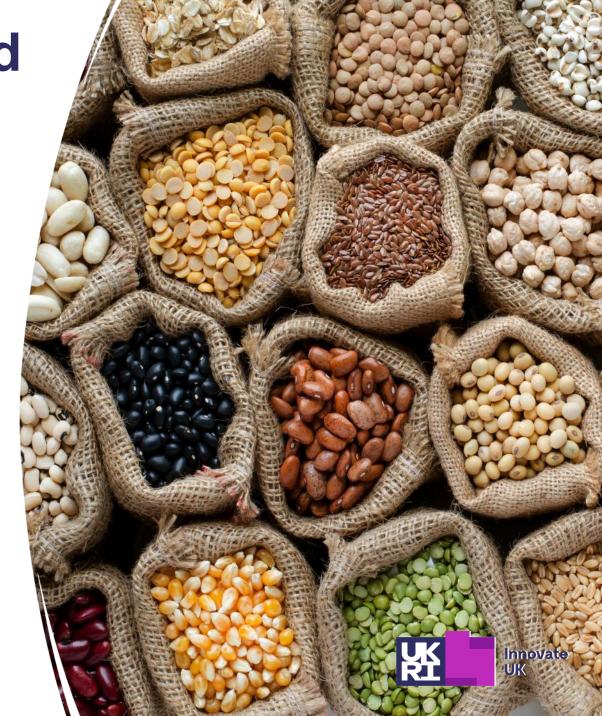




Canada-UK: Plant-based Protein Innovation

- Alternative proteins are strategic focus
- PIC recognised global leader in Plant-based protein innovation
- Bilateral funding competition to support plant-based innovation, enabling access to global markets
- Collaborative projects underway to:
 - Develop nutritionally enhanced plant-based foods
 - Improve the taste and texture of plant-based products
 - Enhance flavour, functionality and sustainability through process optimisation

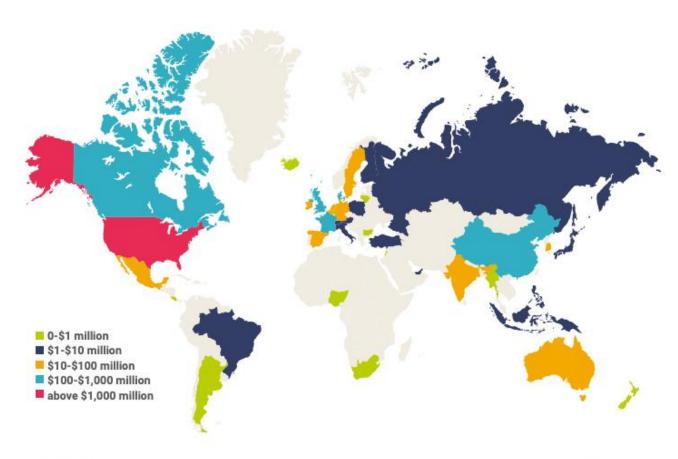




Why the US?

- Build on from the Canada GBIP to further explore opportunities in North America.
- One of the largest and most dynamic alternative proteins sectors in the world:
 - Recent approvals of cultivated meat products for sale in the US.
 - Public investment dramatically increased to \$82 million in 2023.
 - US largest market for private investment in the alternative proteins sector – over \$1 billion between 2014 - 2024
- We will highlight further throughout this webinar the unique opportunities for collaboration between the US and UK.





Graph 1 Global publicly disclosed private investment in alternative proteins, 2014-20246

US GEM Objectives

Building International Collaboration

Focused on plant-based, fermentation and cultivated meat verticals, the GEM sought to:

- Understand the innovation landscape within the US.
- Explore the key trends for consumer insights and investment for the sector.
- Identify routes to market and regulatory requirements for alternative protein products.
- Develop opportunities for UK & US organisations to collaborate around research and innovation.

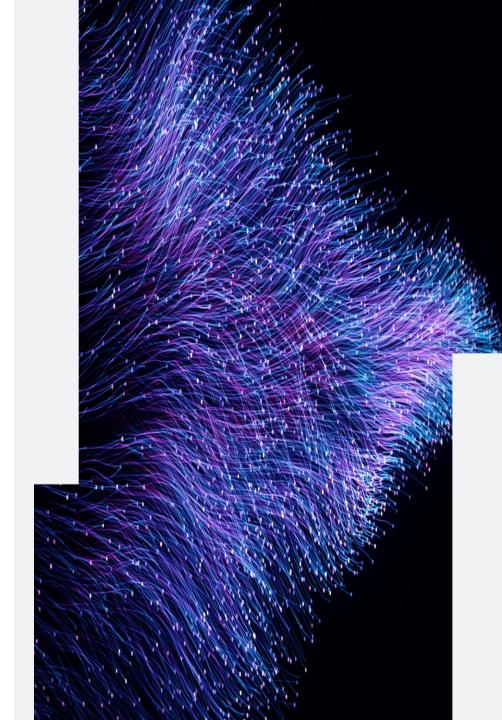
Informing UK businesses and Government

Develop these findings into strategic actions for Innovate UK to build on and provide information to enable UK and US companies to exploit collaboration opportunities.

Showcasing UK Capabilities

Promote the UK's technological and business strengths to be the "Partner of Choice" in future innovation partnerships with the US.





Stakeholders met during the GEM

Wider ecosystem

- Bühler
- NotCo
- Hawkwood Bio

Sacramento

San Francisco

California

Incubators, & commercial insight organisations

- Food Innovation Center at Rutgers
- TAG CPG
- Next Level Solutions
- Food Marketing Institute
- Vegpreneur
- Plant Based Food Association
- Drexel University
- BrandGrowth

Incubators, & commercial insight organisations

- MISTA
- AgStart
- LifeSpace labs

Alternative Protein companies

- Pow.Bio
- Melibio
- New Culture
- Livestock Labs
- Perfect Day
- Eat Just
- Every

Wider ecosystem

- Choose NJ
- Big Idea Ventures
- Clear Current Capital
- Keller and Heckman
- Northwell Health

New York

New Jersey

Alternative Protein companies

- BlueNalu
- Mission Plant
- Helaina
- Plantega

Introduction to MISTA



Jim Taschetta - COO, MISTA

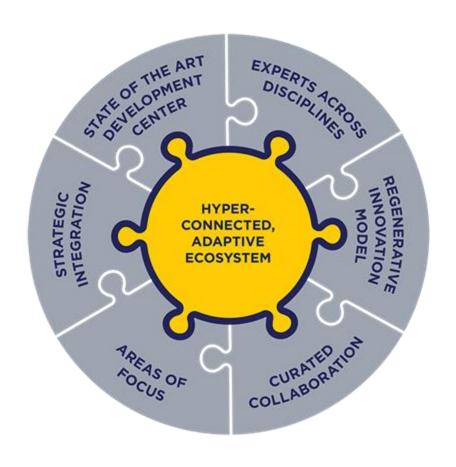


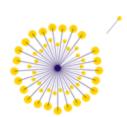
To accelerate the transformation of the global food system to meet the needs of the future





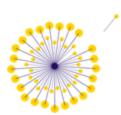
MISTA is a food innovation platform & ecosystem consisting of members and partners collaborating to build the food system of tomorrow





A Hyperconnected Nodal Network





Ecosystem Highlights

Members

Leadership Team







Scott May

Jim Taschetta

Céline Schiff-Deb

Advisory Board







Dr. Justin Siegel



Atif Rafiq



Po Bronson



Rob Trice



























































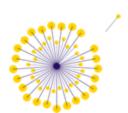




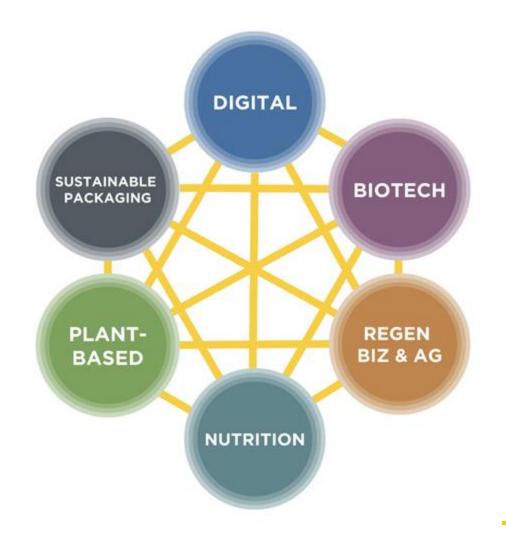


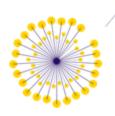






Areas of Focus – MISTA Nodes





MISTA Innovation Center - San Francisco

The MISTA Innovation Center provides development space and co-working space for rapid product development.

The facility includes:

- > NPD Kitchen
- Extrusion Hub
- Beverage & Dairy Lab
- Culinary Kitchen
- Biotech Lab
- > DSP Lab
- Co-Working and Event Space





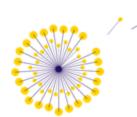












MISTA Programs & Services

MISTA Innovation Center

Co-Creation / Co-Innovation

MISTA Extended Leadership Team

Start-up & Technology Scouting

Growth Hacks / Pitch Events

Al Network Program / NPD Studio

MISTA Academy

Fireside Chat Series





GROWASS FERMENTATION





The 14 start-ups selected

are organized by the type of organisms they are using and their main carbon feedstock.

ORGANIS RBON EDSTOCK	SMS Bacteria	Cyano- bacteria	Microalgae	Yeast	Fungus	Plant
Sugar	SUPERBREWED		NOTIFITION FROM MATER		THE BETTER	California CULTURED
Side streams	FOOD			MOA	MEAT Cº.	
Others (yeast, plant material)				EQUII C revyve	SEMPERA ORGANICS	
Photosynthesis (CO ₂)		ARBOREA INGREDIOME				
Gas fermentation (CO ₂ , methane)	CALYSTA SOLAR FOODS		SOLMEYEA			

Thank You!





www.MISTAfood.com

WHO ARE WE?







VEGPRENEUR is the leading global media brand and community for founders, investors, and leaders building a plant-based future.



JOIN OUR EVENTS







We host sold-out pitch competitions, panel discussions, and happy hours every quarter in New York and Los Angeles

MEET SOME OF OUR PARTNERS





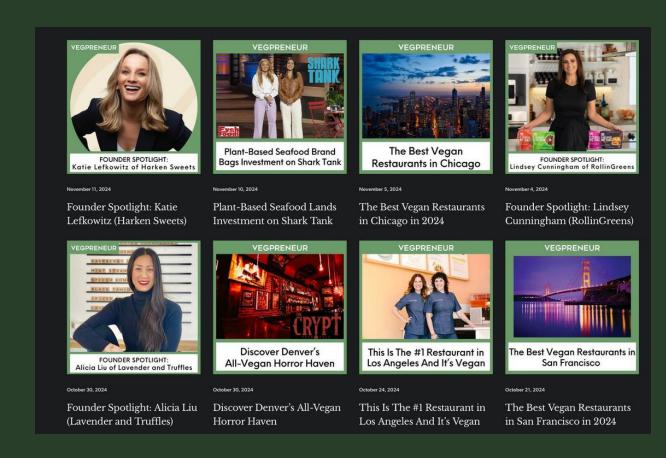








OUR BLOG



Become a guest contributor or send us your press releases!

FOUNDER SPOTLIGHT



December 2, 2024

Founder Spotlight: Joslyn Faust (HeyBamboo)



November 4, 2024

Founder Spotlight: Lindsey Cunningham (RollinGreens)



November 25, 2024

Founder Spotlight: Holden Rouse (AVVIKA)



October 30, 20

Founder Spotlight: Alicia Liu (Lavender and Truffles)



November 18, 2024

Founder Spotlight: Melissa L'Heureux-Haché (VEGAIN)



Heather Donaldson of Mad Cheese

October 21, 2024

Founder Spotlight: Heather Donaldson (Mad Cheese)



November 11, 2024

Founder Spotlight: Katie Lefkowitz (Harken Sweets)

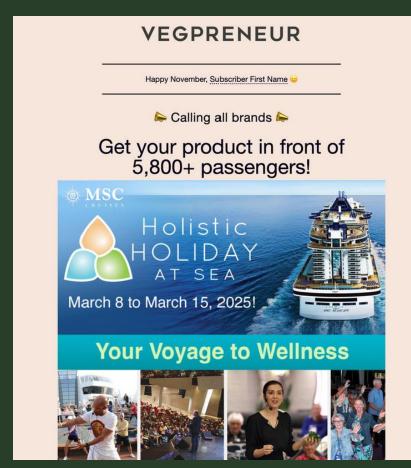


October 14, 2024

Founder Spotlight: Chase Worthen (Enliven Foods)

OUR NEWSLETTER







OUR FACEBOOK GROUP



Join:



OUR MENTOR NETWORK



VEGPRENEUR Mentor: Joann Jen



VEGPRENEUR Mentor: Tara Kriese of Kulture



VEGPRENEUR Mentor: Christina Ra



VEGPRENEUR Mentor: David Benzaguen



VEGPRENEUR Mentor: Kate Dugan



VEGPRENEUR Mentor: Lori Dunn



VEGPRENEUR Mentor: Jeff Matthews



VEGPRENEUR Mentor: Luna Guo



VEGPRENEUR Mentor: Neil Potts



VEGPRENEUR Mentor: Samia Gore

Access the largest plant-based business mentor network on the planet

MEMBERSHIP



Our mentor network of prominent business leaders, investors, and service providers from leading companies and agencies

- Intros to investors
- Sample your products at our events
- Intros to retailers
- Databases (journalists, investors, influencers, retailers)
- 👿 Intros to restaurants and food service opportunities
- 1 on 1 consultation calls with the VEGPRENEUR team
- Free and discounted tickets to VEGPRENEUR events
- **§** Exclusive discounts from partners and VEGPRENEUR
- mare!

MEET SOME OF OUR MEMBERS















BECOME A MEMBER



Are you ready to give your business an unfair advantage?

Join: vegpreneur.org/join

MEET SOME OF OUR MEMBERS









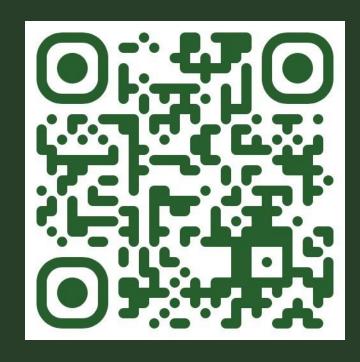








JOIN TODAY





Give your business an unfair advantage!

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Let's chat: noah@vegpreneur.org

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Rutgers Food Innovation Center

December 4,2024



Mission

To stimulate and support sustainable economic growth and prosperity to the food and agricultural industries in the New Jersey region by providing businesses with innovative research, customized practical solutions, resources for business incubation and a trusted source for information and guidance.

Vision

To serve as the catalyst that will promote a viable and prosperous food processing and agriculture base in New Jersey and to be recognized as a global model for regional economic development.

Rutgers Food Innovation Center Advisory Board



Advisory Board Members



President & CEO BlueNalu



Andrew Gellert
President
Gellert Global Group



Takis Solomos Partner Elikonos Capital Partners



Brian Choi Managing Partner The Food Institute



Peggy Brennan-Tonetta Sr. Associate Director Rutgers NJAES

Our Team -400+ Years of Hands-on Food Industry Experience



























Broad Array of Product / ProcessCapabilities

- Refrigerated Foods Processing
 - Refrigeration controlled facilities for fresh-cut produce, or value-added meat, poultry or seafood products
- Beverages and Hot Processing
 - Processing equipment for Beverages, Soups, Sauces, Stews, Saisas, Jams and Jelly, Grilled and Roasted Vegetables, and Prepared Entrees
 - Bottling line that allows for automated production
- Bakery and Dry Processing
 - Processing equipment for Pies, Breads, Cookies, and Confectionery products
- Cold Assembly/Clean Room
 - Packaging of perishable products in HEPA-filtered clean room
- Blast Chilling and Freezing
- Refrigerated, Frozen & Ambient Storage











FIC Capabilities from Insights to Innovation, and Concept to Commercialization



Business Insights and Product Differentiation

Business Strategy and Mentoring

Consumer Research

Concept ideation and innovation

Sensory Evaluation

R&D – Product Development

Food Safety, HACCP and Quality Design

Workforce Development; Food Safety and Quality Training

Equipment Specification

Product Commercialization

Manufacturing in our FDA/USDA-inspected production facility

Rutgers FIC is a Unique and Award-Winning Business Incubation *Program* Worldwide

- Comprehensive product/process capabilities including confidential manufacturing, flexibility in scheduling/occupancy, and a unique breadth of mentoring services by a professional staff
- Proof of commercialization abilities, within a USDA and FDA regulated facility that offers a variety of in-house equipment that supports small and mid-scale manufacturing, and supports technology transfer from proof-of-concept to proof of commercialization
- > **Multi-stage support**, including startups as well as established domestic and international businesses
- Designation as the <u>only</u> Soft Landings food incubation program in world, including collaborations with NJ state government and foreign economic development agencies and incubators
- > Awards-selection team, for the best new products globally for the Fancy Food Show



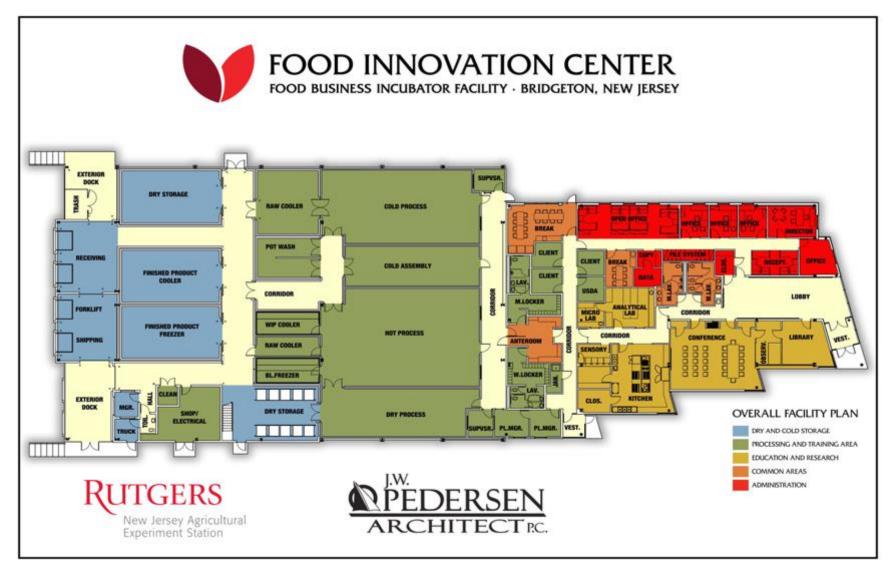








Rutgers FIC also includes a Unique Business Incubation Facility Worldwide



- > 23,000 sq. ft. facility, located in southern NJ
- FDA and USDA inspected, with hygienic design and multi-product and process capabilities
- Services and Space enables
 product design,
 development, analysis,
 commercialization, and
 ongoing manufacture of
 products for sale to retail and
 foodservice markets

Over 3200 Current and Former Client Projects

IMPOSSIBLE"

























New FIC Programs in Process

- Food Tech 2024 in conjunction with NJEDA and Middlesex County the return of the highly successful 1-day event at Rutgers New Brunswick on June 26, 2024
- Rutgers Food Innovation Center Global Market Entry
 Program intensifying efforts to recruit international
 companies. Attended Greek Expo in March 2024 with
 potential clients identified. Israeli candidates through Strauss
 and The Kitchen. ChooseNJ identified Irish, Indian and
 Singapore clients on their last visit to RFIC.
- Re-engagement with Other food Incubators worldwide (FoodBIN) including University of Colorado, University of Hawaii, LSU, University of Arkansas, North Carolina State University Plant Lab, Cornell and others.









US market insights and consumer trends for UK businesses

Indy Kaur,

Founder and Director - Plant Futures Collective



US market insights and consumer trends for UK businesses

Innovate UK | Global Expert Mission (GEM) Alternative Proteins in the United States 2024 Online webinar 4th December 2024





We were able to understand the market from a unique perspective

Roundtable discussions and workshop with 30 attendees gave more granular insight

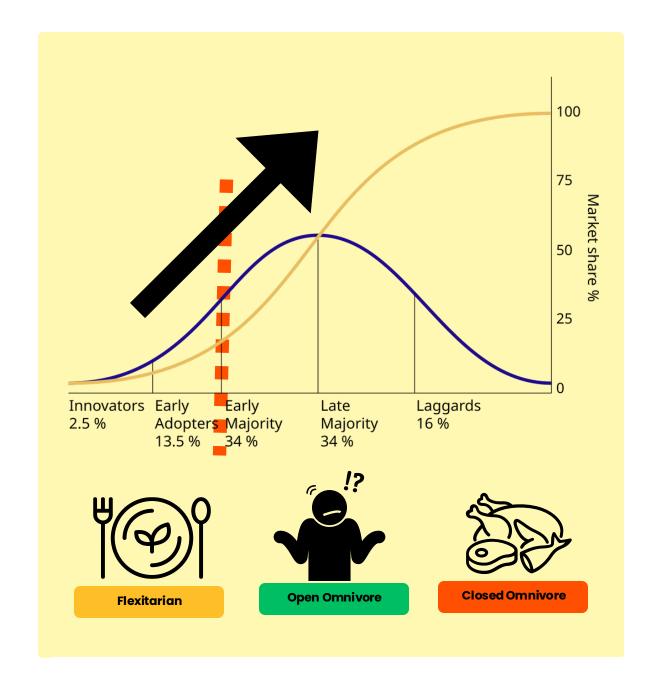




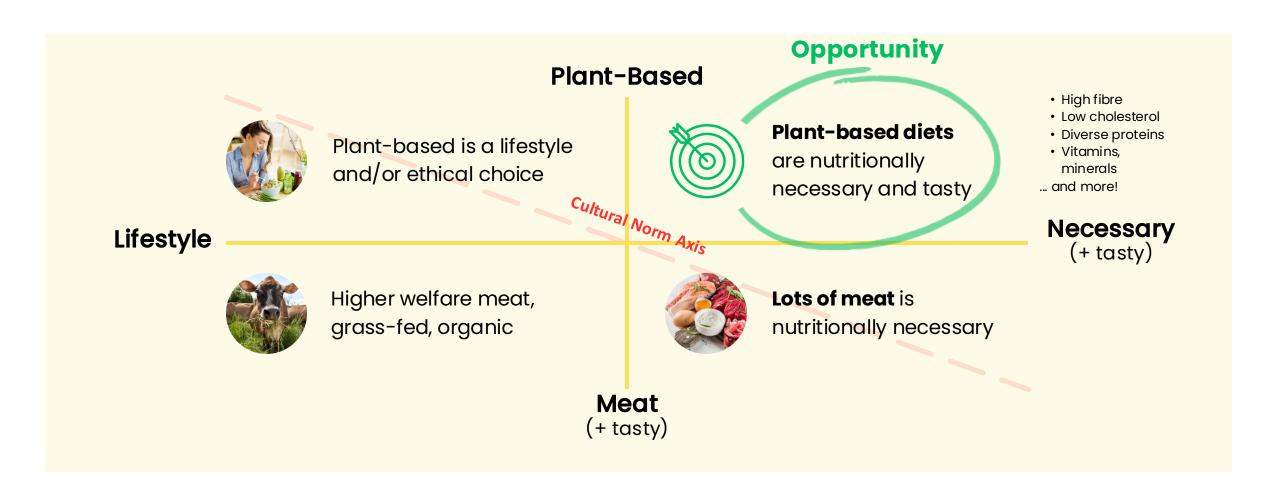


We learnt the challenges and opportunities in both markets are similar

Suggesting that a partnership can address shared challenges while unlocking significant growth potential, particularly by focusing on consumer adoption among 'open-omnivores.



As well as a common opportunity to position alt-proteins as tasty and essential.



There is substantial activity addressing these opportunities.

And fostering partnerships can drive greater success.

Innovators and entrepreneurs continue to push boundaries

Innovation in taste & texture continues is unlocking exceptional experiences which will increase consumer interest and adoption







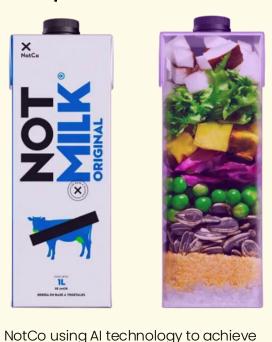












desired textures and flavours from an unexpected combination of ingredients, such as peas, pineapple and cabbage.

Innovation addressing both desire and health benefits

Snacking continues to be a large and growing market and the diversity of plant-proteins being created are able to offer improved health credentials.



JUST's Breakfast Burrito with just 330 calories, 11g protein and 0mg of cholesterol.



Incubated at MISTA, Rivalz, uses a variety of protein and fibre sources.

Personalised Nutrition and the intersection between nutrition and technology is emerging.



Amplifying Gut Health and Food is Medicine, to craft recipes tailored to personal health and diet needs or goals.

Plant-based in health care with more headroom for growth

Northwell Health developed a mission to revitalise the quality, diversity and message behind the food produced and provided by their network of 21 hospital sites, and have revolutionised patient and staff experience, including a plant-based approach to using alternative protein sources.



Fuelled by the knowledge that food is powerful medicine, Northwell's Michelin-starred chefs are bringing restaurant quality food to the menu.



NYC Health + Hospitals Celebrates 1.2 Million Plant-Based Meals Served, March 14 2024

Beyond health, into indulgence

The alt-protein sector continues to deliver on demand for indulgence.

Burgers continue to feature on many menus, offering choice

Healthier Choice

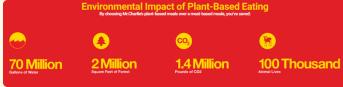


Made with: a vegetable pattie, organic tempeh bacon, plant-based, egg-free mayo. High in protein, 24g protein with a

reasonable calorie count 460 - 550 cal.

Animal Welfare & Environment





Indulgent Choice





Plant-based patty loaded with vegan bacon, vegan cheese, sauce

Innovation continues to go beyond the ordinary



Traditional, scoop and serve



To meeting where consumers are at



Opportunity to create new markets through ease & accessibility

Example: Rising concerns about sustainability and health, along with the popularity of sushi, are driving demand for alt-sashimi.

Typically a high skilled job, plant-based sashimi is able to make it easy and safer for chefs to handle and prepare as well as allergen-free, longer-shelf life, more inclusive and addresses the issues of intensive fishing.



©GTFO It's Vegan

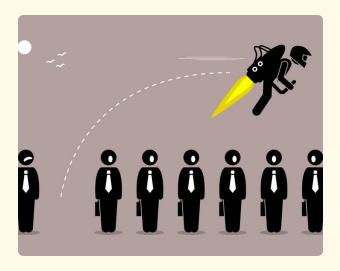
In summary:



Consumer adoption is key and both markets have learnings to share and opportunities to solve.



Health & Nutrition is a lever and the intersection of technology opens up further opportunities.



Collaborative ideas & technology enables businesses
to 'leapfrog' the ordinary and
create new markets.

Thank you!

US market insights and consumer trends for UK businesses

Innovate UK | Global Expert Mission (GEM) | Alternative Proteins in the United States 2024 Online webinar 4th December 2024



Indy Kaur

indy@plant-futures.com



Key considerations before entering the US market

Simon Hurley,

Director and Co-founder - Cock and Bull





A Cock and Bull Journey, Branding and Understanding the US market.



FIBS WITH FLAVOUR

A Cock and Bull journey; Branding for the USA; State variations labeling

The Federal Food, Drug, and Cosmetic Act.
There is a federal law prohibiting food product
manufacturers from misleading consumers about a
product's contents. Under the Act, a food label
is considered misleading if the labelled product does
not meet U.S. Food Drug Administration standards for
the food it claims to contain.

FIBS WITH FLAVOUR

A Cock and Bull journey; Branding for the USA;
State variations labeling

Confusion from the outside looking in.

Example; Lab-grown meat. In the 2024 legislative sessions, four states Alabama, Arizona, Florida, and Tennessee, considered legislation banning the manufacture, sale, or distribution of cell-cultured meat. Florida and Alabama both passed the legislation, and the respective governors signed it into law.



Though thirteen states have banned the use of certain labels on alternative meat products, the laws do not follow any singular model legislation, they seem to bear surprisingly little similarity to each other.

DO NOT ADJUST YOUR TONGUE.



The Rest of the world

However, the apparent difficulties are not confined to the U.S market.

The rest of the world is no easier in reality.

Italy banned the sale of lab-grown meat late last year. French lawmakers have also introduced a bill to ban it.

Plant-based foods can continue to be sold and promoted using terms traditionally associated with meat, as long as their composition is clearly labelled and does not mislead consumers, the EU Court of Justice ruled, October 2024.

In the UK There's no legal definition of the term 'vegan' in food law, nor is there official legislation governing how to use it on a food label. Ultimately, 'vegan' is a voluntary marketing Claim.

100% herbivore-friendly

Labeling in USA from a federal perspective.

There seem to be 5 basic requirements.

- 1. Identity of food in package form. The principal display panel of a label for a food in package form shall bear as one of its principal features a statement of the identity of the commodity by its common or usual name.
- 2. Name of manufacturer, packer, or distributor. In the case of a corporation, only the actual corporate name, and this may be preceded or followed by the name of the particular division involved. In the case of an individual, partnership, or association, the name under which the business is conducted shall be used.

 When the food is not manufactured by the person whose name appears on the label, a qualifying phrase such as "Manufactured for ______", "Distributed by ______", or other expression of facts shall appear with the name.
- **3.Place of business.** The place of business shall include the street address, city, state, and ZIP code. The street address may be omitted if it is shown in a current city or telephone directory.
- **4. Ingredient declaration.** The ingredients shall be listed by their common or usual name in descending order of predominance by weight, on a single panel of the label.
- **5. Net quantity of contents.** The principal display panel of a label for a food in packaged form shall bear a declaration of net quantity of contents. The declaration shall be expressed in terms of avoirdupois pound and ounce, volume, and/or numerical count. The declaration shall appear as a distinct item within the lower 30 percent of the principal display panel. The declaration shall be printed in boldface print or type in letters and numbers in a size in relationship to the total square inches of the principal display panel.



Understanding the Market

As pointed out even though the EU is apparently one trading region there are different rules in different countries across Europe. Also, as someone who has worked in food and drink for a long, long time it has been very apparent that for a long time European countries only follow what rules they want too anyway.

The US is one, very large, country. In reality Europe covers 3.9 million sq miles and the US covers 3.8 million sq miles.

Not a lot in it

The Cock and Bull approach to the US has been to find a manufacturing partner in Canada, thanks to Innovate UK and PIC we have done this, who is already working in the US marketplace and let them teach us along the way.

That, and what we feel is key is to, view the US as 50 separate countries, approach each one, one at a time and learn how it works before entering it.

Europe is made up of 44 countries presently and no one would try and do all of it at once. That would be crazy.



FINANCIAL FIBS WITH FLAVOUR

A Cock and Bull journey; Value Chain for the UK and the USA

Value Chain and associated cost variations across UK and USA

UK Margins to take into account.

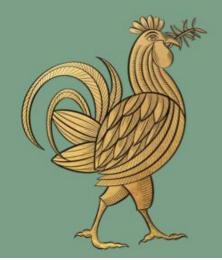
Manufacturers margin - Brands margin - Distributor margin - Retailers margin / F/Service margin. Marketing, PR.....

USA Margins to take into account.

Manufacturing margin - Importer of Record margin (cost to ship) - Warehousing cost - Sales Agents cost - Broker cost - Distributor margin and cost - Retailer margin / F/Service margin, Marketing, PR.....

GET IN TOUCH & Final Thought





CALL SIMON ON +44 7586 704 356
EMAIL SIMON AT SIMON@COCK&BULLCO.COM



GEM Delegation key insights



UK GEM Delegation



Abi Aspen Glencross- Chief Technology Officer, Stars



Sarah Gaunt- Director, SPG Innovation Limited



John Carslake- Senior Market Strategy Manager, CPI



Rick Mumford— Deputy Chief Scientific Advisor & Deputy Director of Science & Research, Food Standards Agency



Identified opportunities

Global Business Innovation Programme (GBIP)

 Potential for a GBIP to further allow UK businesses to gain first-hand insight of the market, making connections and testing the viability of their product through expert advice.

Hacks

 Opportunity to engage with incubators to facilitate a 'hack' to solve issues within nutrition adequacy and digestibility in alternative proteins.

Alternative Proteins Forum

 Expanding on current resources to develop a forum for UK and US stakeholders to meet and collaborate in the alternative proteins sector.

Information resources

 Developing resources to encourage skills development and private investment for UK-US collaboration.

Further information can be found in our report:



