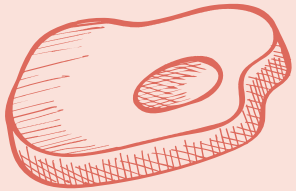

Alternative Protein Market

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MBA 585 Spring 2025

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BEYOND MEAT

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Introduction

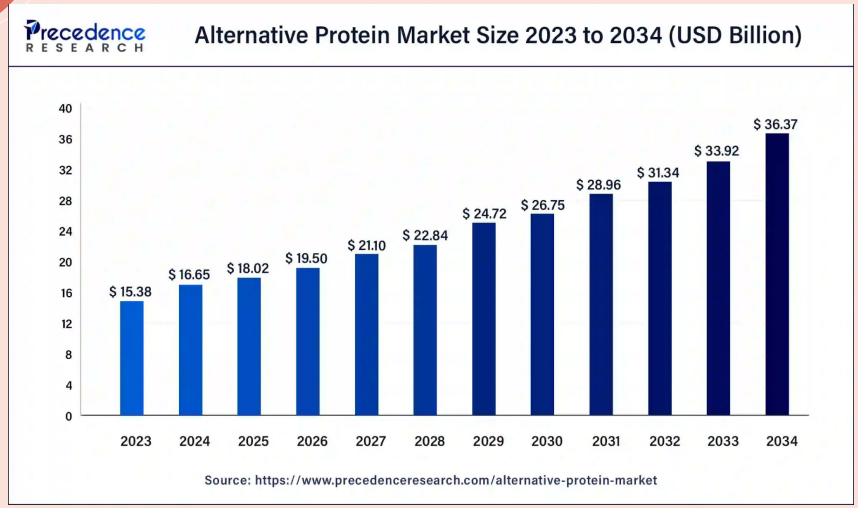
What are Alternative Proteins?

Traditional animal-based protein production is becoming increasingly scrutinized for environmental, ethical, and health impacts.

This scrutiny has fueled the rapid emergence of the alternative protein market.

- Derived from plants, fungi, algae, insects, and cultivated animal cells
- Vegetarians, vegans, and flexitarians seek out meat alternatives
- **Potential climate solution**

Market Analysis



- Growth is pushed by:
  - Consumers wanting **sustainable and ethical** food sources
  - Increased government and private investment
  - Technology advancements in food production
  - **Global re-evaluation of food systems (Post-COVID)**
- Livestock production generates 15% of greenhouse gases
- Alternative proteins are poised as a **climate solution** in addition to a **dietary innovation**
- The global market for alternative proteins is not uniform:
  - CAGR in Asia-Pacific is 9.2%
  - Italy **banned cultivated meat** in 2023
- Regulatory inconsistencies are a huge barrier
- AI and precision fermentation enhance R&D efforts
  - Need scalable infrastructure

Alternative proteins are a promising alternative to traditional meats, but significant work needs to be done to understand their implications and sustainably produce these products.

Key Drivers for Consumer Purchase

What's the secret sauce that makes you say 'yes' to plant-based?

Taste

Taste is the most important factor, influencing repeat purchases and consumer satisfaction.

Price

Price parity with conventional meat is crucial for attracting budget-conscious consumers.

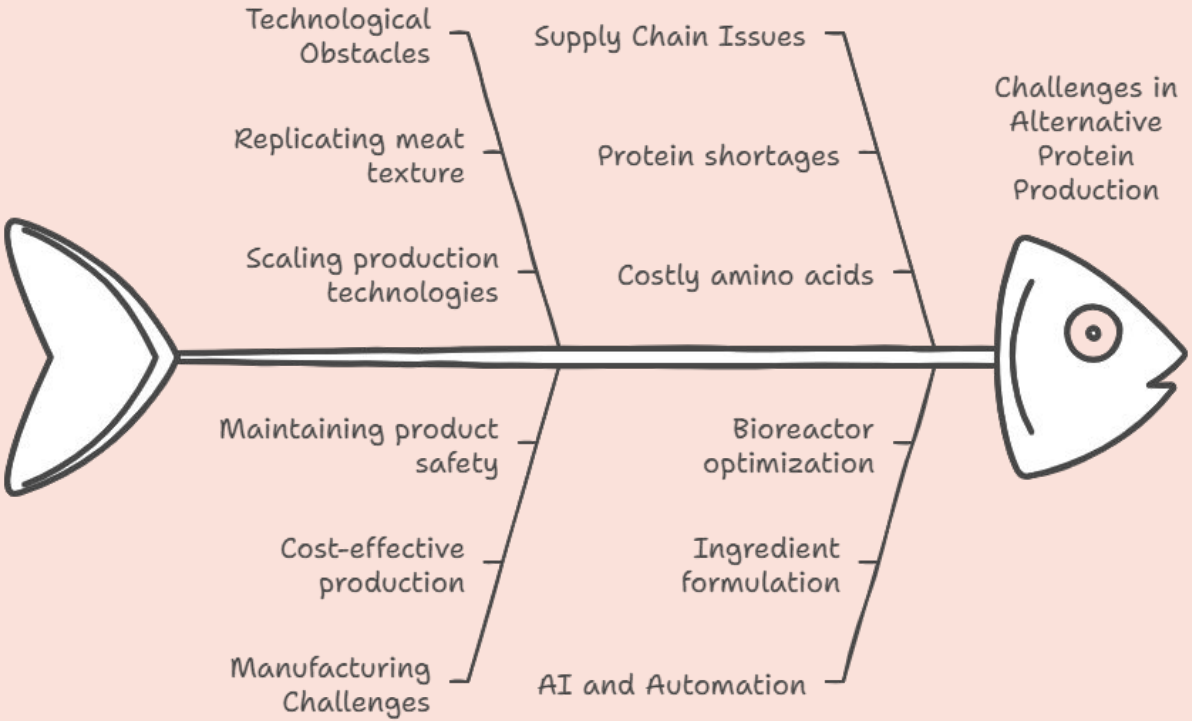
Familiarity

Familiar appearance and naming enhance acceptance and reduce novelty-induced aversion.

Health

Health perceptions can positively influence intent, especially for health-conscious consumers.

Technological and Manufacturing Challenges



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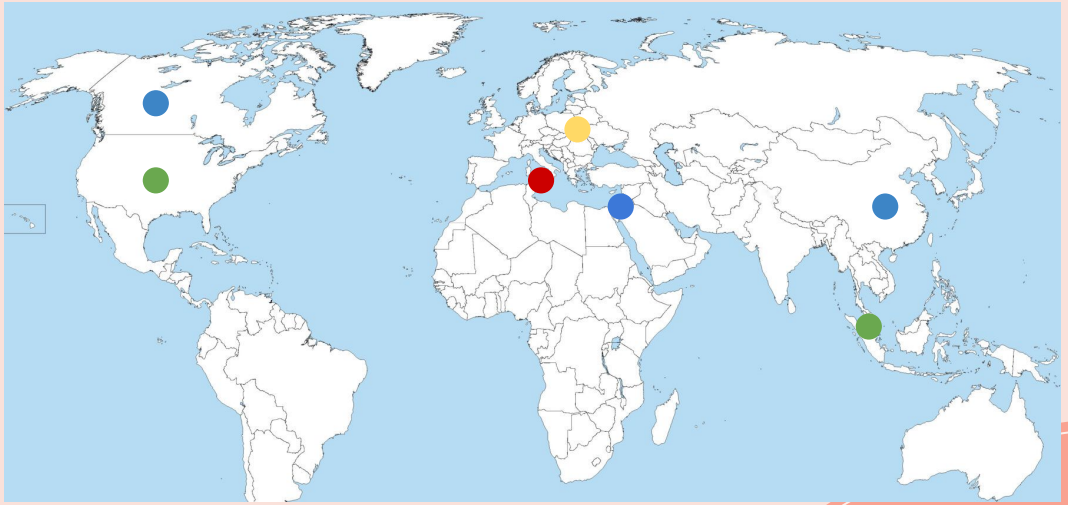
Regulatory Landscape

Global Regulatory Landscape

- **Fragmented regulations**: Different countries are at very different stages.
- **Proactive**: Singapore, U.S. (FDA + USDA coordination).
- **Cautious**: European Union (EFSA), with lengthy approval processes.
- **Restrictive**: Italy banned cultivated meat in 2023.
- **Supportive**: China, Canada, Israel investing heavily in R&D.



Labeling and Policy Challenges

- **Labeling is critical** to consumer trust.
  - Example: U.S. may require “cultivated chicken” not just “chicken.”
  - FDA suggests labeling plant-based milks as “lower protein than dairy.”
- **Policy support accelerates adoption**:
  - Public funding (~$1.67B globally by 2023)
  - Procurement incentives, revised nutrition guidelines
- **Need for global standardization**:
  - Harmonized naming (e.g., “cultivated” vs. “lab-grown”)
  - International safety and transparency norms

“If your goal is to build something new, do it—and then move to the next step. Don’t let complexity slow you down.”

~ Dr. Chauhan

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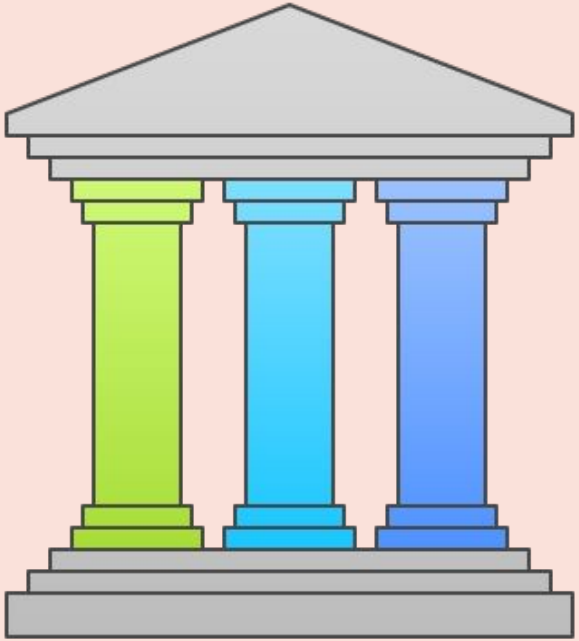
SWOT Analysis

Strengths



Sustainability

Highlights the environmental benefits of alternative proteins over traditional meat.

Purity and Customization

Emphasizes the nutritional purity and customization options of alternative proteins.

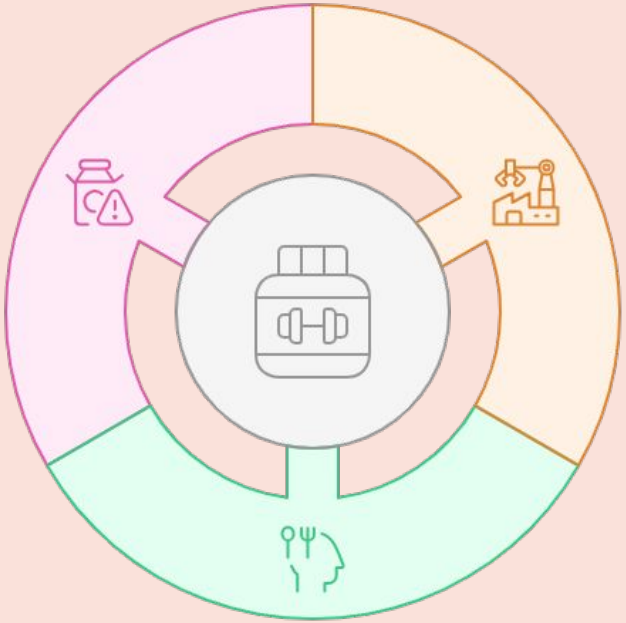
Future-Proofing Supply

Focuses on the role of alternative proteins in meeting future protein demands.

Weaknesses

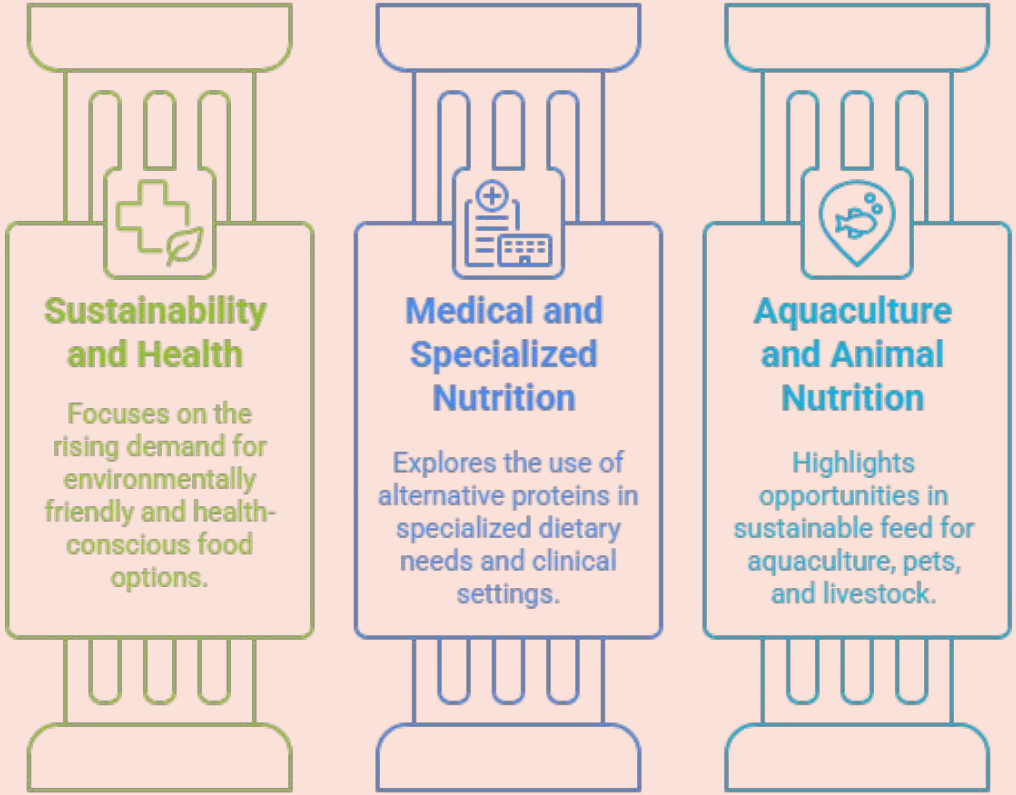
Nutritional Concerns
Potential health issues affect public perception.

High Production Costs
The expense of bioreactors and R&D hampers competitiveness.



Sensory Limitations
Significantly hinder consumer acceptance but can be improved.

Opportunities



Threats

High prices and unfamiliar ingredients limit consumer acceptance.

Scaling for cell-based and fermentation-based protein sources require detailed and complex infrastructure.

Conventional meats remain competitive due to their cost-effectiveness and nutritional completeness.

Consumer Acceptance

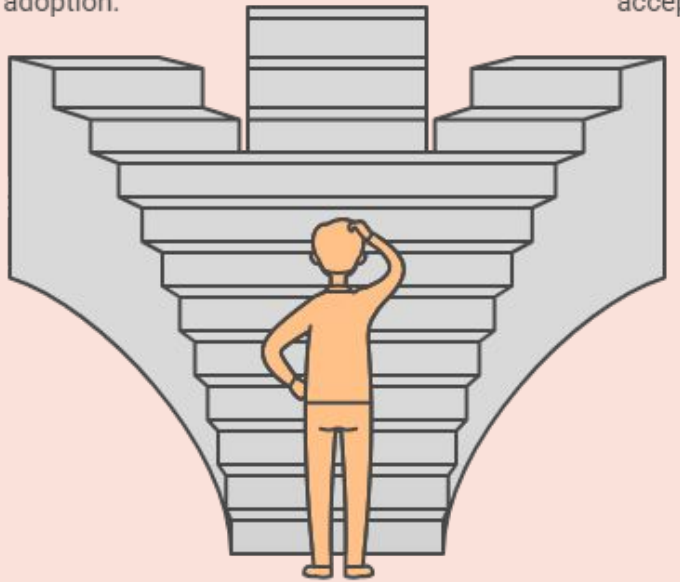
Focus on improving taste, price, and safety perceptions to enhance mass-market adoption.

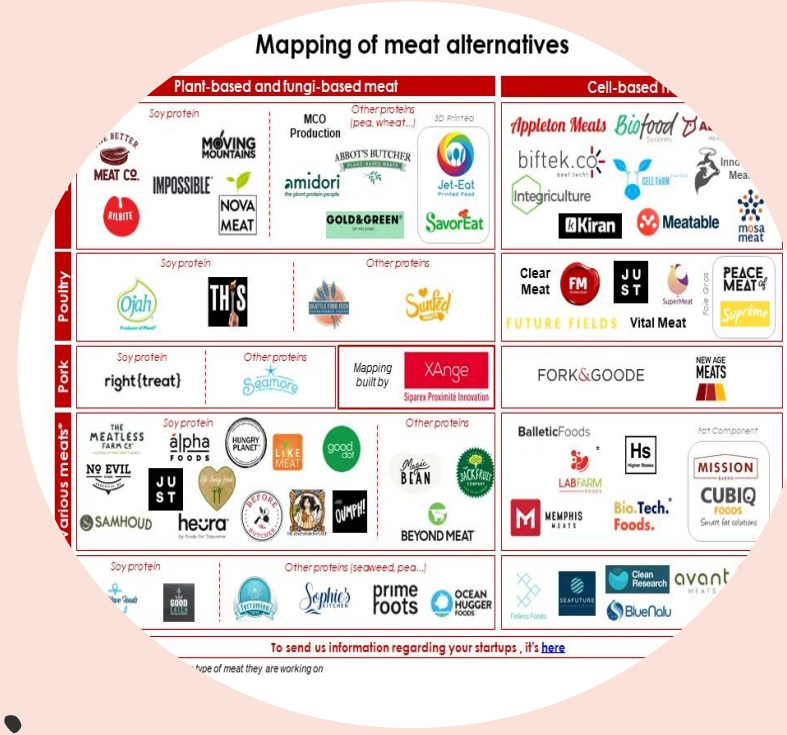
Technical Barriers

Invest in infrastructure and quality control to scale production effectively.

Competitive Pressure

Develop strategies to compete with traditional proteins on price and acceptance.





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Case Studies

Impossible Foods: Pioneering Plant-Based Meat

Origin & Break Through

Founded: 2011 by Dr. Patrick Brown (Stanford Biochemist)

Mission: Eliminate the need for animal agriculture

Key Innovation: Discovery of **heme** as the flavor catalyst for meat & engineered yeast

Launch: First burger in upscale environment (2016), FDA GRAS approved

Strategy & Impact

Target audience: Focused Meat lovers, not just vegetarians

Marketing approach: High end chefs, mainstream via **Burger King's Impossible Whopper (2019)**

Scaling Tactics: Partnered with OSI Group for large scale production

Retail Strategy: Shelf placement in meat aisles

Key Takeaways

Clever market positioning changed public perception

Strategic Partnerships enable rapid scale-up

Technological differentiation (heme) created a unique product experience

$1.5 B

The Very Good Food Company

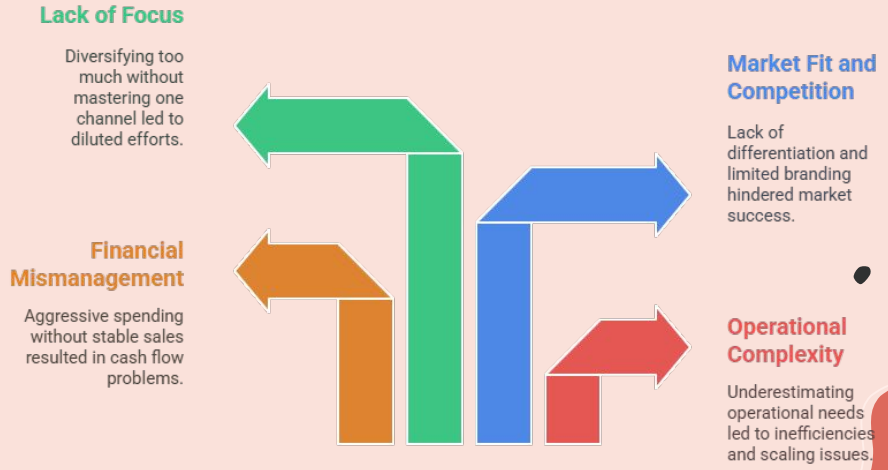
Founded: 2016 in British Columbia

Gained popularity during 2020 and the alternative meat stock craze.

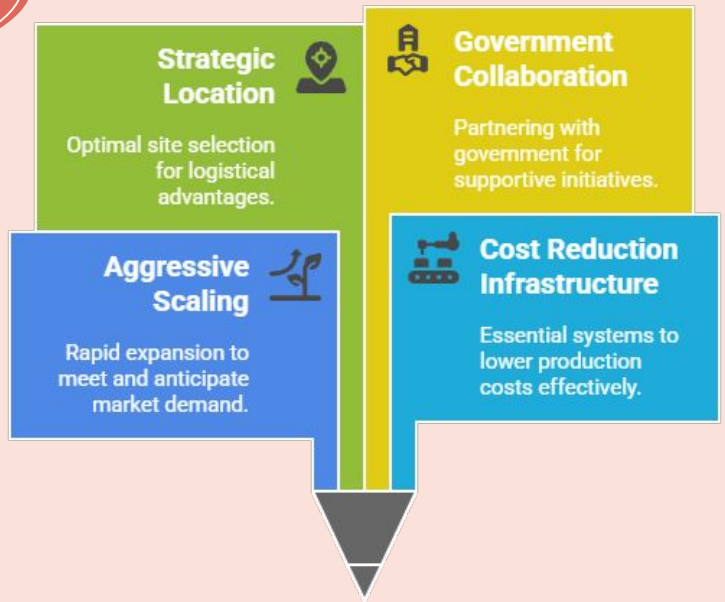
Dramatic decline in markets in 2022/2023. Due to:

- Financial Mismanagement: Aggressive expansion before sales could respond positively.
- Lack of Focus: Tried to expand to several sectors too quickly (restaurants, new products, etc.).
- Market Misfit and Competition: Product range was too “artisan” and niche.
- Underestimation of Operational Complexity: Scaling of products without systems in place.

This case emphasizes that business fundamentals matter. Passion for the mission is not enough!



Believer Meats: Scaling Cultivated Meats



Founded: 2018 in Israel by Yaakov Nahmias

Prioritized process efficiency and cost from the get-go.

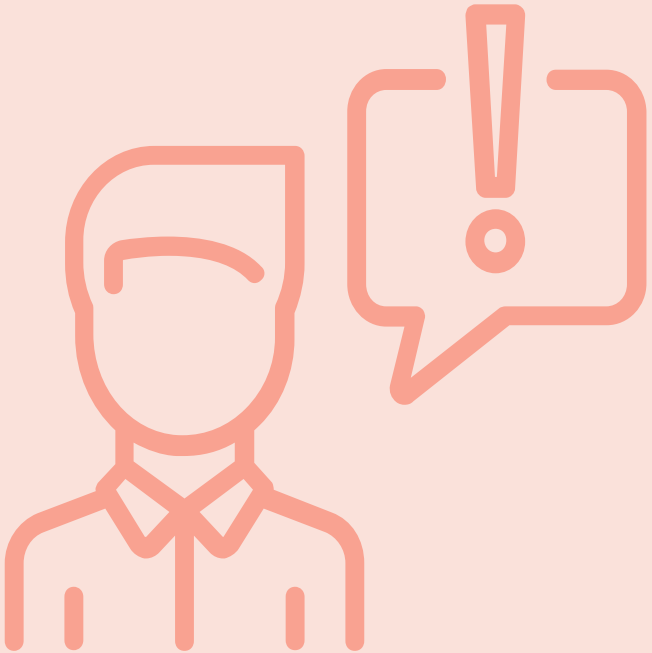
Goal: To reduce cost per cultured meat product.
EX. In 2021, they created a chicken product for $35 per piece

Chose NC for their new plant, funded by $347 million in Series B funding, one of the largest in the industry.

Changed name from Future to Believer Meats, promoting a more consumer-friendly image.

Key Takeaways:

- Aggressive scaling of production ahead of demand and innovation go hand in hand.
- Infrastructure for cost reduction in production is essential.
- Strategic location and collaboration with government agencies is essential.



04

Expert Insights

Expert Insights

"Alternative proteins gained momentum when environmental awareness, startup culture, and venture capital aligned — but growth has plateaued since 2022. Today, success depends on delivering taste, affordability, and real value amid economic and regulatory headwinds." -
Nikhil Mishra (QA Director, Bilinski Sausage Co)

"Collaboration efforts are the way! Reaching out to experts from other sectors of the alternate protein world has greatly helped quickly evolve and advance programs."
Dr. Kristin Soave, Alternate Protein Platform Leader, Kalsec

"In cultivated meat, scaling is where reality hits — cell density is low, media is expensive, and structure is still primitive. To succeed, startups must think beyond the lab: design for process efficiency, media optimization, and logistics from day one."
Dr. Sarita Chauhan, Biotechnology & Food Tech Expert, GEA Group

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Recommendations

Product Improvement & Innovation

Making Plant-based or cultivated products **indistinguishable** from animal-based counterparts (taste texture, aroma)

Explore novel plant protein sources - **Chickpea, fava bean, duckweed, mung bean** etc.

Extrusion, shear-cell technology, 3D printing, mycelium scaffolding

Plant based + Cultivated Fat - enhanced mouthfeel and flavor

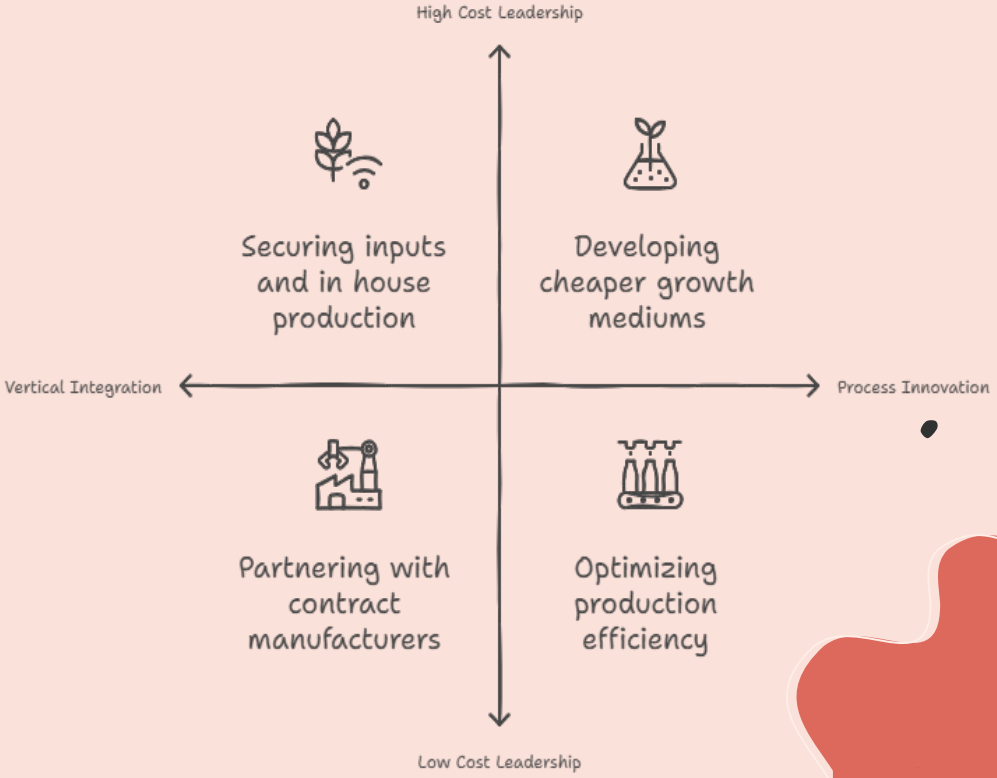
Meat + plant blends - lower environmental impact and price

New Product Categories - **Seafood alternatives**, **Hybrid innovations**

Innovation is key to winning mainstream consumers and unlocking new market segments

Scaling & Cost Leadership Opportunities

- Build **large-scale** fermentation or cultivation facilities.
- Achieve **price parity** or undercut conventional meat
- **Vertical integration** - secure inputs, in house production
- Develop **cheaper media**/ more efficient workflows
- Reduce waste and improve throughput
- Collaborate with major players to **optimize operations**
- Diversify **product lines** and stabilize supply chains



Market Positioning & Education

Re-branding alt-proteins from a **“substitute”** to simply a delicious, **modern choice**

Highlight chef endorsements, recipes and cooking experiences

Demystify cultivated meat production

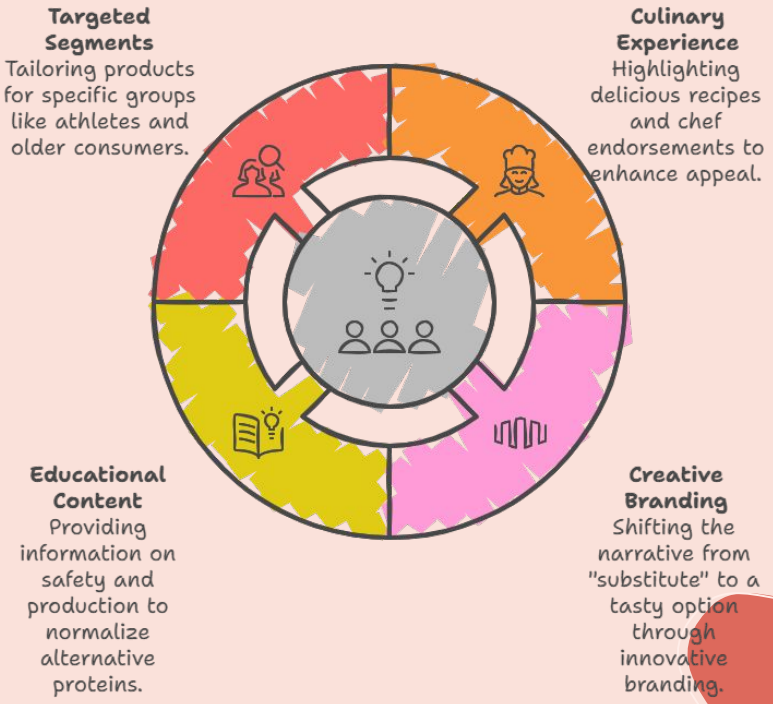
Tailored messaging for key sectors

Athletes → High protein, performance -enhancing foods

Older adults → Heart Healthy, cholesterol-free protein

Eco-conscious youth → Emphasize climate and animal welfare benefits

Omnichannel communication - using **short videos**, **infographics** and **on-pack QR codes** to deliver value-driven content.



Partnerships and Collaboration

Beyond Meat + PepsiCo (snack products)

Impossible Foods + Burger King (mainstream reach)

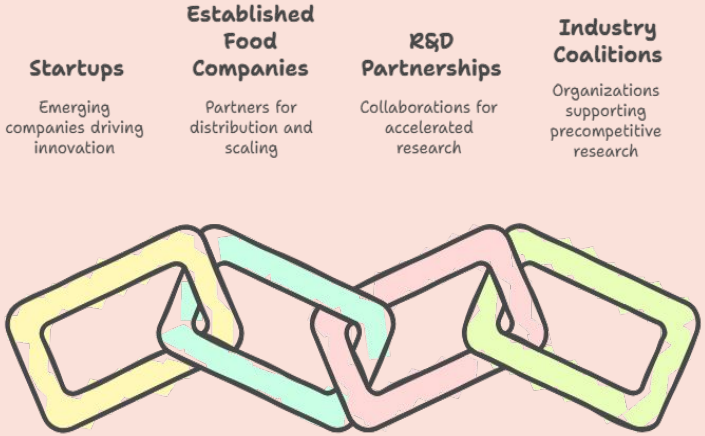
Could partner with **flavor houses**, **ingredients suppliers**, or **university labs**

Combine **food science**, biotechnology, **culinary arts** and engineering

Accelerate innovation and product realism

Join coalitions like **The Good Food Institute**

Engage in **pre competitive research** and policy advocacy



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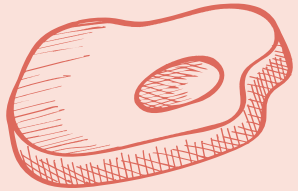
Conclusions

Shaping the Future of Protein

- **Alternative proteins are poised for massive growth**—driven by sustainability, health, and innovation.
- **Success depends on more than product quality**—business fundamentals, cost efficiency, and market strategy are critical.
- **Regulatory clarity, consumer education, and smart branding** are essential for mainstream adoption.
- **Real-world lessons** from industry leaders and failures offer a roadmap for future success.

Innovation alone doesn’t win markets—execution, trust, and strategy do.



Thanks

Questions?