

CASE STUDY

Topic: Vegan meat

Team №...9

Team members: Sarita Romani

Mentors: Diego García and María Jesús Serrano

Case study

PLEASE USE THIS TEMPLATE. PLEASE RESPECT THE NUMBER OF CHARACTERS SPECIFIED.

FOR EACH OF THE ELEMENTS YOU MAY INCLUDE GRAPHICS, FIGURES, AND PHOTOS, WHICH MUST BE APPROPRIATELY INTEGRATED INTO THE TEXT.

I. Executive Summary (150 words)

VitaJack breaks the mold of plant-based burgers, not by mimicking meat, but by reinventing it. Made with upcycled young jackfruit, protein-rich red beans, and ancient Andean quinoa, this clean-label patty delivers a satisfying, juicy bite that surprises even the most dedicated flexitarian. Packed in recyclable stand-up pouches and ready in just 10 minutes, VitaJack meets modern demands for fast, convenient, and truly sustainable food. With clear branding, realistic pricing, and diverse distribution channels, VitaJack is primed to win a share of Europe's booming alternative protein market. Financial projections show healthy profit margins and an attractive return on investment, confirming that taste, ethics, and profit can coexist. By fusing the power of quinoa and the natural texture of jackfruit, VitaJack doesn't just offer a burger, It offers a bold promise: **Expect the Unexpected Bite** and join the movement redefining what real food can be.

II. Introduction (300 words)

A diet rich in meat products can be related to health concerns including colon cancer, obesity, and cardiovascular diseases due to the high content of cholesterol, saturated fatty acids, and salt (Boukid & Castellani., 2021). This situation is especially problematic in the United States, where the consumption of meat is three times higher than the global average (Piester et al., 2021). Additionally, the livestock sector, including meat and dairy, significantly impacts the environment, contributing to deforestation, greenhouse gas emissions, and water pollution (Jang & Lee, 2024).

Therefore, an effective strategy would be to convince consumers to alter their diets, especially to eat less meat (Piester et al., 2021). Plant-based meat analogs (PBMs) have gained attention for their potential to provide a more nutritious profile than red meat. These alternatives aim to replicate the texture and flavor of animal meats using plant-derived ingredients (Jang & Lee, 2024). Despite substantial social marketing investment, Europeans eat twice or more red or processed meat than the recommended levels and exceed sugar intake by several orders of magnitude (Perez-Cueto et al., 2022). The main causes are that plant-based food products would not

Case study

be filling enough, take too long to prepare plant-based meals, and would not be tasty enough, according to Perez-Cueto (2022).

Therefore, to develop a product that satisfies European customers, the E-food will be created as a vegan burger composed primarily of jackfruit, beans, and quinoa. Jackfruit provides a meat-like texture (Ghangale et al., 2022; Capello, 2024); beans bring the protein and bring the sensation of filling, and quinoa has attracted much attention because of its excellent nutritional ingredients and being less allergenic, as it is gluten-free (Boukid & Castellani, 2021). Together, these ingredients create a nutritionally balanced, texturally appealing, and filling sensation dish that will satisfy European consumer expectations for taste, nutrition, and sustainability and is easy to cook.

III. Market Analysis: (300 words)

This market analysis was developed using observation research to understand consumer behavior and trends in the plant-based food sector. In Europe, women are generally more inclined to adopt plant-based diets. This gender trend is often linked to the social belief that meat consumption is associated with masculinity. Geographically, countries like Austria and Denmark show fewer barriers to consuming vegan meat, suggesting a more receptive market for plant-based diets in German-speaking countries, including Germany (Perez-Cueto et al., 2022).

Generational differences significantly shape meat consumption. Baby Boomers show higher meat consumption, whereas Millennials and Generation Z are more open to reducing meat intake. For younger generations, reducing meat is associated with environmental benefits, ethical values, and personal well-being, including weight management (Mustapa et al., 2024).

Income and employment status also influence consumer choices. Higher-income individuals are more likely to view plant-based diets as beneficial for health, disease prevention, and sustainability. Additionally, people with full-time or part-time jobs purchase meat alternatives more frequently than those who are unemployed (Mustapa et al., 2024).

Case study

The analysis concludes that plant-based diet adoption in Europe is influenced by sociodemographic factors such as gender, age, income, and employment status. The ideal target market includes employed, high-income individuals, particularly among Millennials and Gen Z.

However, there are still barriers to adoption. These include a lack of motivation to change dietary habits, perceptions of insufficient energy from plant-based foods, and concerns about taste and satiety (Perez-Cueto et al., 2022).

Recent trends reveal a growing preference for versatile meat alternatives, especially minced meat, which represents 32% of vegan beef consumption in Germany. Consumers are also seeking products with natural ingredients and strong nutritional value (ProVeg International, 2022).

IV. Research and Development: (500 words) Explain the research and **development process undertaken for the new food product.**

Nowadays, the development of a **meat analogue** to provide alternatives for meat has become a trend. The increase in consumers has driven this trending demand for a healthy diet, the concern about rising meat prices, the increase in the popularity of vegetarianism, and the growing consumer interest in related eating patterns such as the avoidance or reduced consumption of red meat. Meat analogue can be defined as food which is structurally similar to meat but differs in composition (Hamid et al., 2020).

The key drivers for establishment and growth of this sector are food safety concerns amongst consumers regarding animal products, increasing promotion of the vegetarian or vegan diet, demand for variety by consumers, health concerns surrounding the overconsumption of meat and the increased use of convenience foods (Kumar et al., 2018).

A variety of ingredients can be utilized for the formulation of meat analogs, though plant based derivatives are dominant (Kumar 2019). Plant proteins could also ensure long-term food security and

Case study

sustainability owing to their lower resource requirements; plant proteins typically require 100 times less water and 90% less land compared with the equivalent amount of edible animal proteins. In addition to being more economically viable and eco-friendly, plant-based foods have numerous health advantages, including anti-obesity, anti-diabetic, and cardioprotective qualities (Baig et al., 2025).

Jackfruit is an alternative because mimics meats due to fibrous structure, have neutral flavour which permit the absorption of spices, marinades, and sauces, so whether you're craving smoky BBQ or spicy curry and; jackfruit is naturally free from common allergens, making it a safe option for many (Ghangale et al., 2022; Capello 2024). The only drawback is protein content, which is around 1.9 g of protein per 100g in contrast to 20g of protein containing 100g of meat burger (Ranasinghe et al, 2019). Therefore Jackfruit usually is combined with another plant with high protein content such as beans (Ghangale et al., 2022).

For the formulation of the meat analogs jackfruit based, the table of Malva et al. (2015) extracted from Kumar et al., (2019) could be a good guide:

Table 1. Formulation meat analogs jackfruit based

Ingredients	Purpose	Ingredient for the new product	Usage level (%)
I. Water	ingredient distribution	drinking water	50 %
II. Textured vegetable protein	texture and mouthfeel, appearance	jackfruit powder	15 %
III- Non textured proteins	protein fortification	beans flour	25%
Non textured protein	protein	quinoa flour	10 %
IV. Flavour spices	flavour, savory	salt (0.2%), nutritional	3 to 10

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

		yeast (0.75%), mushroom seasonings (0.7%), garlic powder (0.4%), onion powder (0.4%), chili powder (0.3%), turmeric powder (0.15%), black pepper powder (0.05%) and Chinese five-spices powder (0.05%) (Hamid 2020)	
VI. Binding agents	texture, water binding	carageenan (seaweed source)	1-5
VII. Coloring agents	appearance/ eye appeal	malt extracts and beet extract	0-0.5

According to Aduana et al., (2023), the target consumer of this product is the health-conscious individuals or vegan eaters as well the lower to middle-class groups of families. To be precise the product aimed to serve children 8 years old and above and adults for healthy consumption and to avoid unhealthy food that may cause malnutrition and other health problems .

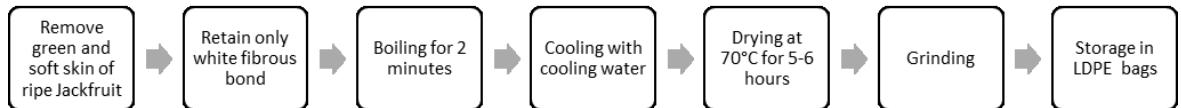
Some jackfruit products have passed some taste tests. According to Singh et al (2024); the most sensory-acceptable composite flour blend is a 30:50:20 mixture of jackfruit, soybean, and amaranth for vegan meat, comparable with Minced chicken . Meanwhile, according to Ghangale et al., (2022) the combination of jackfruit and cashew nut flour complex would make a suitable meat analogue.

The formulation is compound of **8 main steps**:

1. **Preparation of jackfruit powder** (Singh et al., 2024):

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

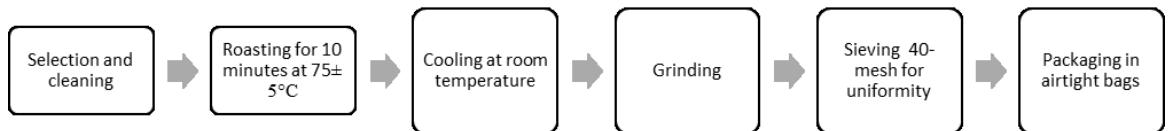
Case study



2. Preparation of red beans flour (Wijayanti ; 2024)



3. Preparation of quinoa flour (Signh et al., 2024)



4. Preparation of composite flour for vegan meat:

For preparation of composite flour for vegan meat, this uses the second generation of plant-based meat which is high-moisture extrusion (HME). HME has proven highly effective, employing intense mechanical mixing under high pressures and temperatures to transform plant-based protein isolates into products that closely mimic the texture and flavor of meat (Jang & Lee, 2024).

The process is shown in the next picture:

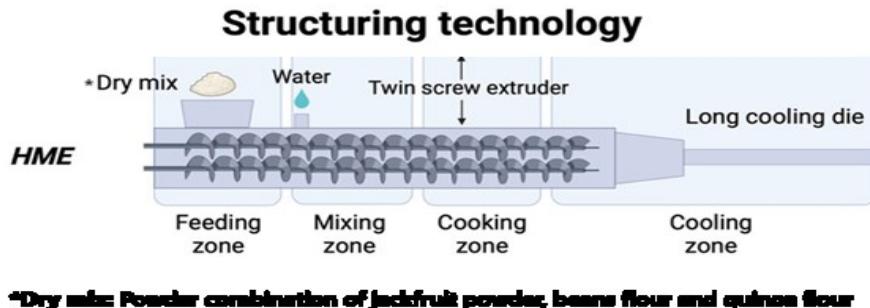


Fig 1. Picture of high-moisture extrusion (HME) modified from

After preparing, each powder is added in the proportion 30:50:20 mixture of jackfruit, red beans, and quinoa for vegan meat. The water (70 °C) will be used to composite flour to 50% in order to pre-gelatinize the feed mixture and bring the texture of meat (Singh et al , 2024). In the cooking zone the temperature was 140°C during processing resulting in a distinct fibrous arrangement, crucial for accurately, emulating muscle tissue. After that, it is recommended to maintain a temperature below 75°C in the cooling die (Dinali et al, 2024).

5. **Additional flavour, colorants and binding agents:** Add the flavouring species in the proportion of the TABLE 1 ; the mixing is for 10 minutes.
6. **Shaping :** The extruded and flavored mixture is formed and divided into burger shapes-usually round patties using molds.
7. **Cooking:** Cooking at 180-200°C for 2-10 minutes (Rajaretnam & Malil, 2023) .
8. **Cooling :** Immediately after baking, patties are rapidly frozen below 0°C (32°F), often within 30 minutes. Freezing forms ice crystals that help retain moisture and juiciness when the patties are finally cooked by consumers (Visual Capitalist, n.d.;Jang & Lee, 2024).
9. **Packaging and storage:**Frozen patties are vacuum-sealed or packaged using modified atmosphere packaging (MAP) to reduce oxygen exposure and extend shelf life.(Visual Capitalist, n.d; Jang & Lee, 2024).

V. Product Description: (500 words):

Name of the product: VitaJack Burger

Description of the new product:

VitaJack Burger is a flavorful, 100% plant-based burger patty made from a blend of red beans (*Phaseolus vulgaris*), Andean quinoa (*Chenopodium quinoa*), and young jackfruit (*Artocarpus heterophyllus*), a tropical fruit native to India. That is rich in texture, taste, and nutritional value.

It is inspired by ancient food traditions from South America and Asia, bringing together the protein power of beans and quinoa with the fibrous, meaty texture of jackfruit. The result is a vegan burger that doesn't just imitate meat—it redefines it.

Designed for fast preparation (grill or pan-fry), this product is ideal for busy professionals, flexitarians, vegans, and families looking for a tasty, ethical alternative to traditional burgers

Ingredientes: Water, Shredded Jackfruit (15%), Quinoa flour (25%), Red Beans flour(10%), Carrageenan (E407), Nutritional Yeast, Mushroom Seasoning, Garlic Powder, Onion Powder, Salt, Chili Powder, Turmeric Powder, Black Pepper, Chinese Five-Spice Powder, Malt Extract, Beet Extract.

Allergens: None declared.

Nutritional information:

Serving information:

Serving Size: 100 g (1 patty)

Servings per package: 4

Calories for each 100g:

The first part is to calculate the amount of protein, carbohydrates and fats The information is extracted from Food data central .

Case study

Nutrient	Approximate Calculation (Proportion x the quantity of macronutrient in each 100g)	Result (g)
Protein	Jackfruit: $(15 \times 0.015) = 0.225\text{g}$ Red Beans: $(25 \times 0.23) = 5.75\text{g}$ Quinoa: $(10 \times 0.14) = 1.4\text{g}$ Nutritional yeast: $(1 \times 0.5) = 0.5\text{g}$	7.85 g
Carbohydrates	Jackfruit: $15 \times 0.75 = 11.25\text{g}$ Red Beans: $25 \times 0.5 = 12.5\text{g}$ Quinoa: $10 \times 0.5 = 6\text{g}$ Malt extract: $0.5 \times 0.75 = 0.375\text{g}$	30.125 g
Fats	Jackfruit: $15 \times 0.01 = 0.15\text{g}$ Quinoa: $10 \times 0.06 = 0.6\text{g}$ Red Beans: $25 \times 0.02 = 0.5\text{g}$	1.25 g
Fiber	Jackfruit: $15 \times 0.1 = 1.5\text{g}$ Red Beans: $25 \times 0.15 = 3.75\text{g}$ Quinoa: $10 \times 0.1 = 1\text{g}$	6.25 g

For calculate the calories:

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

						Case study
						kcal
Protein:	7.88	x	4	=	31.5	
Carbohydrates:	30.13	x	4	=	120.5	
Fat:	1.25	x	9	=	11.25	

Total ≈ 163 kcal per 100 g

Nutrients and daily value:

Nutritional Facts

Amount per servings	163 Kcal
Calories	163 Kcal
	% Daily Value*
Total Fat 1.25 g	2%
• Saturated Fat 0.2 g	1%
• Trans Fat 0 g	—
Cholesterol 0 mg	0%
Sodium ~350 mg	15%
Total Carbohydrate 30.1 g	11%
• Dietary Fiber 6.25 g	22%
• Includes 0 g Added Sugars	0%
Protein 7.9 g	16%
Vitamin D 0 mcg	0%
Calcium ~40 mg	4%
Iron ~2 mg	11%
Potassium ~300 mg (est.)	6%

*% Daily Values (DV) are based on a 2,000-calorie diet.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

Unique selling proposition (USP) and how it differentiates from existing products in the market.

“VitaJack is the only vegan burger that **fuses ancient Andean quinoa, protein-rich red beans, and the fibrous, meaty texture of young jackfruit** — creating a 100% plant-based patty that doesn’t imitate meat, but redefines it. **Clean-label and nutrient-rich**, VitaJack brings real food traditions from South America and Asia to modern plates — for conscious eaters who crave authentic taste and texture without compromise for young flexitarians, vegans, busy professionals to enjoy a flavorful, nutrient-rich, and fast-prep meal inspired by ancient food traditions.”

VI. Marketing and Promotion:

MARKETING STRATEGY:

1. Segmentation:

Our target segments include health-conscious millennials, flexitarians, and environmentally aware consumers. We will focus on urban markets where plant-based alternatives have seen the highest growth.

2. Competitors: To compare the main competitors for the **VITAJACK**. We develop a comparison with the main brands of vegan burgers.

Case study

BRANDS	Beyond Meats	Impossible Foods	Garden gourmet	Naturali' Foods	Vita Jack Burger
Strengths	<ul style="list-style-type: none"> -Iconic brand -Global recognition - Wide distribution in retail & food service 	<ul style="list-style-type: none"> -Strong brand - Realistic meat mimicry -Big partnerships with chains (Burger King, Starbucks in some markets) 	<ul style="list-style-type: none"> -Broad range of products - Good balance price and quality -Very strong retail reach in Europe 	<ul style="list-style-type: none"> -Organic ,No GMO's - Sustainable credential - Seen as authentic & niche 	<ul style="list-style-type: none"> -Unique recipe (black beans, quinoa, jackfruit) -Not ultra-processed -Strong cultural & sustainability story -Quick prep for busy lifestyles
Weakness	<ul style="list-style-type: none"> -Ultraprocessed -High price - Consumer backlash over additives 	<ul style="list-style-type: none"> -Limit EU presence -High R&D cost -Also positioned as highly processed 	<ul style="list-style-type: none"> -Big food conglomerate -Not story beyond sustainability 	<ul style="list-style-type: none"> -Small scale -Premium price point - Limited distribution outside Nordics/Germany 	<ul style="list-style-type: none"> -New brand no manage recognition -Small marketing budget
Opportunities	<ul style="list-style-type: none"> -Expansion - Local production reduce costs - Innovations in clean-label or healthier recipes 	<ul style="list-style-type: none"> -Enter new EU market -Sustainable message - Develop non-GMO or clean-label variants for Europe 	<ul style="list-style-type: none"> -Expand into more EU markets - Expand in food service -Keep improving recipes to balance taste + clean label 	<ul style="list-style-type: none"> -Expand into more mainstream retail -Appeal to health conscious -Collaborate with eco-friendly chains & stores 	<ul style="list-style-type: none"> -Tap premium retail, organic shops, vegan cafés -Educate consumers that "vegan burger" can mean more than fake beef
Threats	<ul style="list-style-type: none"> -More player -Regulatory pressure - Private labels offering cheaper options 	<ul style="list-style-type: none"> -Competitor from local " real food" -Heavy EU food law scrutiny - Competition from local "real food" brands 	<ul style="list-style-type: none"> -Smaller authentic brands -Private labels 	<ul style="list-style-type: none"> -Compete with local start-ups -Rising new material costs -Competition from local start-ups with similar ethics 	<ul style="list-style-type: none"> -Copycats (other brands could launch jackfruit patties) -Private labels undercutting price -Need to secure reliable sourcing & fair trade story

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

3. Marketing Mix:

- **Product:** VitaJack Burger is a flavorful, 100% plant-based patty made from black beans, quinoa, and young jackfruit with no artificial additive. It combines protein-rich beans and quinoa with the meaty texture of jackfruit. Inspired by South American and Asian food traditions, VitaJack is nutritious, tasty, and convenient.
- **Price:** Vitaljack will cost slightly more than traditional meat but be competitive with other premium plant-products; **€8 for 400g (4 portions).**
- **Place:** We will distribute through specialty organic stores in Germany and Germany countries due to the disposition for plant-based organic innovative products, vegan coffee shops such as exotic option online grocery platforms to reach a wide audience, mainly for millennials and Z generation which are our main consumers.
- **Promotion:** Digital Advertising in social media ads (Facebook, Instagram, LinkedIn, Tik Tok), and video ads (YouTube) focus on sustainability and traditional and nutrition components of the main ingredients to build brand trust.

BRANDING, PACKAGING AND LABELLING CONSIDERATION:

Branding:

The Vitajack brand emphasizes sustainability, innovation, and transparency. The brand identity will highlight the product's natural origin and nutritional benefits and the new flavor will bring this fusion. Due to the original of the product brand name is: *"Expect the unexpected Bite"* and *"Quinoa and jackfruit in one bite"*.

Packaging:

Ecofriendly, recyclable solution of monomaterial polyethylene (PE) with coating (Ethylene Vinyl Alcohol) to avoid the presence of oxygen (Carullo et al., 2023). The packaging will be a stand up pouch because it is easy to open. Adequate for fast preparation (grill or pan-fry), this product is ideal for busy professionals. In front will be the name of the product and the brands **"Expect the unexpected bite"** and **"Quinoa and jackfruit in one bite"**.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Labelling considerations:

The labelling will include the term “**plant-based**” because according to the study of Sucapane et al. (2021) that people thought the *plant-based* product was healthier and more eco-friendly than the *meat alternative*. Then mentioned the main ingredients: “**fusion of ancient Andean quinoa, protein-rich red beans, and the fibrous young jackfruit**” .

With the most important label information the “**non-gluten**”, “**High fiber content**” and “**16% of protein in each patty**”.

Additionally the traditional labels such as “**use by**” dates can help to prevent and reduce food waste, **how to cook** and the **safe handling instruction**. Other labels such as the **5-colour Nutri-Score label**, **Nutritional facts** and **ingredients** will be in the back of the package, a **QR code linking** to different recipes and the brand story of the two traditional ingredients (quinoa and Jackfruit). This integrated plan ensures Vitajack will stand out and connect strongly with its target market.

Case study



VII. Financial Analysis:

COST ANALYSIS :

1. Ingredients costs:

Ingredient	Quantity per Burger	Cost per Kg	Cost per burger

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

Jackfruit	15g= 0.015kg	1.15 USD/Kg	0.01725 USD
Red beans	25g= 0.025kg	1.00 USD/Kg	0.025 USD
Quinoa	10g= 0.010Kg	2.10 USD/kg	0.021 USD
Subtotal			0.06325 USD

2. Packaging costs:

Packaging element	Unit cost	Notes
Stand-up pouch	0.20 USD	Laminated pouch
Label	0.05 USD	Only in branding is not fully on the pouch
Outer shipping carton	0.02 USD	For 10 pouches
Total packaging	0.27 USD	Small-batch costs

3. Processing costs:

Activity	Costs
Direct labor	0.25 USD
Utilities (energy, water)	0.10 USD
Equipment	0.10 USD

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

Facilities overhead (rent, cleaning)	0.10 USD
Subtotal	0.55 USD

4. Logistics costs:

Activity	Costs
Cold storage	0.10 USD
Transport distributors	0.10 USD
Subtotal	0.20 USD

5. Marketing costs:

Activity	Costs
Promo materials (FLyers)	0.10 USD
Free samples	0.10 USD
Sales commissions	0.15 USD
Subtotal	0.35 USD

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

TOTAL COSTS: $0.6325 + 0.27 + 0.55 + 0.20 + 0.35 = 1.4$ USD dollar each patty

SALES AND REVENUE:

Therefore for sale each patty need to cost 2.00 USD dollar; therefore the product will cost 8.00\$.

The amount of product will be 500 packs which is 2000 burgers.

-total cost: $1.40 \text{ USD} \times 4 \times 500 = 2800 \text{ USD}$

-total revenue: $2.00 \text{ USD} \times 4 \times 500 = 4000 \text{ USD}$

TOTAL GROSS PROFITS: $4000 - 2800 = 1200 \text{ USD}$

$$\text{Gross Margin (\%)} = \frac{\text{Gross Profit}}{\text{Total Revenue}} \times 100$$

$$\text{Gross Margin (\%)} = (1200 / 4000) \times 100$$

$$\text{Gross Margin (\%)} = 30\%$$

PROFITABLE AND ROI:

For calculate:

$$\text{ROI (\%)} = \frac{\text{Gross Profit}}{\text{Total Cost}} \times 100$$

$$\text{ROI (\%)} = (1200 / 2800) \times 100$$

$$\text{ROI (\%)} = 42.86\%$$

As production scales up and economies of scale reduce costs, the profit margin is expected to improve further. Overall, the financial outlook for Vitajack is promising due to the growing plant-based market, efficient sourcing of raw materials, and the potential for expansion into new markets and product lines in the future. With careful cost management and strategic marketing, Vitajack can become a profitable and sustainable venture.

VIII. Challenges and Risks: (200 words) (Sara)

Case study

Launching Vitajack may face several challenges that could affect its market success. One key risk is **consumer acceptance**, as some customers may be hesitant to try jackfruit-based meat analogs due to unfamiliarity with the ingredient. To mitigate this, strong promotional activities, sampling campaigns, and clear communication of taste, nutrition, and sustainability benefits will be crucial.

Another challenge is **supply chain stability**, as sourcing consistent, high-quality jackfruit from international suppliers could be impacted by seasonal availability or logistics disruptions. Building relationships with multiple suppliers and investing in local partnerships can help secure a stable raw material supply.

Price competition from well-established brands is another risk. Vitajack will counter this by emphasizing its unique selling points — portion-controlled packs, upcycled ingredients, and recyclable packaging — to differentiate it from other meat alternatives.

Finally, **potential regulatory changes in food labeling or sustainability claims** could affect branding. Staying up-to-date with food safety and labeling standards will help the team adapt quickly.

IX. Conclusion: (150 words)

The VitaJack doesn't just mimic meat — it redefines it. This product demonstrates the strong potential for launching an innovative, sustainable, plant-based burger that perfectly aligns with today's consumer demand for healthier and planet-friendly food choices. By combining Andean quinoa, known for its exceptional protein content and ancient nutritional heritage, with upcycled young jackfruit, prized for its naturally fibrous, meat-like texture, VitaJack offers more than a meat substitute — it's a celebration of powerful, real ingredients from nature.

A clear marketing plan, realistic pricing, and multi-channel distribution lay a solid foundation to capture a meaningful share of the booming plant-based market. Financial forecasts confirm healthy profit margins and a solid ROI, proving the concept is economically viable and scalable. For lasting success, VitaJack must keep investing in strong branding, authentic storytelling, and continuous market research to stay ahead of evolving tastes.

Expect the unexpected bite — powered by quinoa, perfected by jackfruit.

X. Internationalization strategy:

VitaJack's internationalization will follow a phased market entry focusing first on Germany, Austria, and Denmark, where consumer acceptance of vegan meat is highest. These countries also show strong demand for clean-label and sustainable products. The second expansion phase will target the Netherlands, Sweden, and France, leveraging the rising flexitarian trend and openness to plant-based innovation.

The company will use a "local adaptation–global vision" strategy. Core product attributes (jackfruit–quinoa base, clean label, recyclable packaging) will remain constant to ensure brand integrity, while marketing and flavor profiles will adapt to local preferences (e.g. collaborating with local vegan chefs and vegan influencers for meeting the website and product) and at the same time understand the preference of consumers; mainly places usually like to buy. This step is relevant for the product became more familiarize. The focus was in store and online because in Europe people like to buy in vegan stores and visit vegan café according to Europe Vegan Food Market Size.

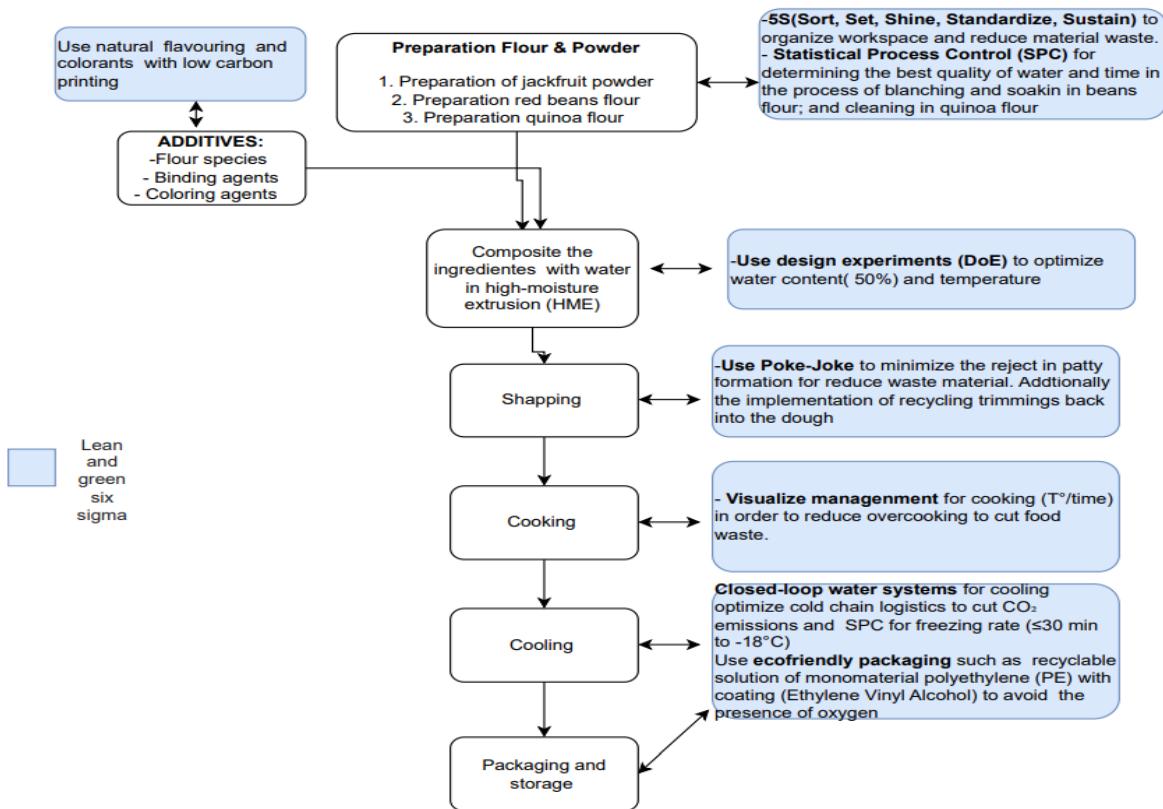
After that the process will accelerate, Partnerships with organic food distributors, vegan cafés, and online retailers such as Veganz and Greenweez will accelerate visibility. Additionally, B2B collaborations with restaurants and delivery apps (like Wolt) will help build trust and trial. In later stages, VitaJack will explore co-branding or licensing agreements to enter the UK and North American markets, supported by storytelling around *upcycled ingredients and cultural fusion* — a narrative that resonates with sustainability-driven consumers worldwide

XI. Sustainability impact:

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

The sustainability impact is focused on the supply chain. Firstly the startup will focus on the Lean & Green Six Sigma. Therefore, it is necessary to organize the process in flowchart. The picture shows the main actions, the start-up will develop to be sustainable and measure the impact on the Earth.



Additionally the integration of Green KPI:

- Energy per kg product (kWh/kg)
- Water footprint (L/kg)
- Packaging recyclability (%)
- Waste valorization rate (%)

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Lean + Green Integration: Value Stream Mapping (Green VSM): Map not only material/energy flow but also CO₂, water, and waste.

XII. Digital and technological integration:

Digital transformation underpins VitaJack's operations and marketing. The company's **official website** will serve as a storytelling and e-commerce platform featuring recipes, sustainability data, and a QR code connection found on the product packaging. This enhances transparency and customer engagement.

Data analytics tools such as **Google Trends** and **Meta Business Suite** will track consumer interest in keywords like "vegan burger" and "plant-based protein" to optimize ad performance and SEO. Artificial intelligence (AI) chatbots integrated into the website will guide users with personalized recipe suggestions or dietary tips, strengthening loyalty.

On the production side, **blockchain technology** will ensure traceability of ingredients such as jackfruit and quinoa, verifying fair-trade sourcing and sustainability claims. Additionally, implementing **IoT-based quality sensors** during storage and distribution will monitor temperature and reduce food waste, aligning with VitaJack's green innovation goals.

Together, these tools make VitaJack a **digitally native food brand** combining transparency, engagement, and smart sustainability.

Case study

XIII. Make a consumer communication plan (max. 250 words) - Develop a clear visual and textual plan for how you will communicate product benefits (e.g., health, sustainability) to the target audience

VitaJack's consumer communication will center on "Real Taste. Real Plants. Real Impact." — a visual and textual campaign highlighting the fusion of health, flavor, and sustainability.

Visual

Plan:

The packaging and social media visuals will emphasize natural textures and earthy tones, using imagery of jackfruit, quinoa, and beans to evoke freshness and authenticity. Infographics will communicate key nutritional benefits: *"High in protein,"* *"Rich in fiber,"* *"100% gluten-free,"* and *"Made from upcycled ingredients."* Video campaigns on Instagram, and TikTok will show quick recipes and testimonials from flexitarians and vegan influencers endorsing the product's taste and convenience. Actually, we are focused on Maya Leinenbac and Bianca Zapatka for collaboration.

Textual

Plan:

Messaging will focus on empowerment and conscious choice:

- "Expect the Unexpected Bite — where ancient grains meet modern taste."
- "Powered by quinoa, perfected by jackfruit."

The brand will also implement interactive storytelling via QR codes linking to origin stories of quinoa farmers and sustainable sourcing videos. Additionally add recipes and social media challenges (#VitaJackChallenge) will encourage consumers to share creative recipes, fostering brand community and loyalty.

Case study

By blending emotional storytelling with factual transparency, VitaJack will build a trustworthy, health-driven image that resonates deeply with Europe's eco-conscious audience

XIV. References and Appendices (up to 20 references)

1. Aduana, B. R., Lorica, R. R., Torres, A. C., & Narca, J. Establishment of Jackfruit Meat Gourmet Manufacturing Business in Siniloan Laguna.
2. Baig, M. A., Ajayi, F. F., Hamdi, M., Baba, W., Brishti, F. H., Khalid, N., ... & Maqsood, S. (2025). Recent research advances in meat analogues: A comprehensive review on production, protein sources, quality attributes, analytical techniques used, and consumer perception. *Food Reviews International*, 41(1), 236-267.
3. Boukid, F., & Castellari, M. (2021). Veggie burgers in the EU market: a nutritional challenge?. *European food research and technology = Zeitschrift fur Lebensmittel-Untersuchung und -Forschung. A*, 247(10), 2445–2453. <https://doi.org/10.1007/s00217-021-03808-9>
4. Cappiello, Julie. "What Is Jackfruit, and Is It the Ultimate Plant-Based Meat Alternative?" *World Animal Protection US*, 20 Nov. 2024, <https://www.worldanimalprotection.us/latest/blogs/what-is-jackfruit-and-is-it-the-ultimate-plant-based-meat-alternative/>.
5. Carullo, D., Casson, A., Rovera, C., Ghaani, M., Bellesia, T., Guidetti, R., & Farris, S. (2023). Testing a coated PE-based mono-material for food packaging applications: an in-depth performance comparison with conventional multi-layer configurations. *Food Packaging and Shelf Life*, 39, 101143. <https://doi.org/10.1016/j.fpsl.2023.101143>
6. Dinali, M., Liyanage, R., Silva, M., Newman, L., Adhikari, B., Wijesekara, I., & Chandrapala, J. (2024). Fibrous structure in plant-based meat: High-moisture extrusion factors and sensory attributes in production and storage. *Food Reviews International*, 40(9), 2940-2968. <https://doi.org/10.1080/87559129.2024.2309593>
7. **FoodData Central.** (s. f.). *Food and Nutrient Database for Dietary Studies (FNDDS)*. U.S. Department of Agriculture. Recuperado de [https://fdc.nal.usda.gov/food-search?type=Survey%20\(FNDDS\)](https://fdc.nal.usda.gov/food-search?type=Survey%20(FNDDS))
8. Ghangale, D., Veerapandian, C., Rawson, A., & Rangarajan, J. (2022). *Development of plant-based meat analogue using jackfruit: A healthy substitute for meat*. The Pharma Innovation Journal, SP-11(8), 85–89.
9. Hamid, M. A., Tsia, F. L. C., Okit, A. A. B., Xin, C. W., Cien, H. H., Harn, L. S., ... & Yee, C. F. (2020, October). The application of Jackfruit by-product on the development of healthy meat analogue. In *IOP Conference Series: Earth and Environmental Science* (Vol. 575, No. 1, p. 012001). IOP Publishing.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Case study

10. Kumar, P., Mehta, N., Malav, O. P., Verma, A. K., Umraw, P., & Krishna kanth, M. (2018). *The Structure of Meat Analogs. Reference Module in Food Science*. doi:10.1016/b978-0-08-100596-5
11. Jang, J., Lee, DW. Advancements in plant based meat analogs enhancing sensory and nutritional attributes. *npj Sci Food* 8, 50 (2024). <https://doi.org/10.1038/s41538-024-00292-9>
12. Mustapa, M. A. C., Baba, Y., Baishakhy, S. D., & Kallas, Z. (2025). Evolving Appetites: Current Evidence and Future Perspectives in Terms of Meat Substitutes in Europe. *Food science & nutrition*, 13(1), e4753. <https://doi.org/10.1002/fsn3.4753>
13. Perez-Cueto, F. J., Rini, L., Faber, I., Rasmussen, M. A., Bechtold, K. B., Schouteten, J. J., & De Steur, H. (2022). How barriers towards plant-based food consumption differ according to dietary lifestyle: Findings from a consumer survey in 10 EU countries. *International Journal of Gastronomy and Food Science*, 29, 100587. <https://doi.org/10.1016/j.ijgfs.2022.100587>
14. Piester, H. E., DeRieux, C. M., Tucker, J., Buttrick, N. R., Galloway, J. N., & Wilson, T. D. (2020). "I'll try the veggie burger": Increasing purchases of sustainable foods with information about sustainability and taste. *Appetite*, 155, 104842. <https://doi.org/10.1016/j.appet.2020.104842>
15. Ranasinghe, R. A. S. N., Maduwanthi, S. D. T., & Marapana, R. A. U. J. (2019). Nutritional and health benefits of jackfruit (*Artocarpus heterophyllus* Lam.): a review. *International journal of food science*, 2019(1), 4327183.
16. Singh, Anshul, et al. "Evaluation of Textural and Sensory Properties of Jackfruit, Soybean and Amaranth Based Vegan Meat." *International Journal of Advanced Biochemistry Research*, vol. 8, no. 2, 2024, pp. 01–05. <https://doi.org/10.33545/26174693.2024.v8.i2a.496>
17. Sucapane, D., Roux, C., & Sobol, K. (2021). Exploring how product descriptors and packaging colors impact consumers' perceptions of plant-based meat alternative products. *Appetite*, 167, 105590. <https://doi.org/10.1016/j.appet.2021.105590>
18. Visual Capitalist. (n.d.). *Plant-based products: The journey from bean to burger*. <https://www.visualcapitalist.com/sp/plant-based-products-the-journey-from-bean-to-burger/>

Attach any supporting documents or additional information related to the project.

Link of articles:
<https://drive.google.com/drive/folders/1QV4fzzEoI4b7ZMRn4EXaYlqjnVVwrC43?usp=sharing>

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Project №: 2022-1-BG01-KA220-HED-000085089