



Acceptance of Alternative Proteins Among European Consumers. Industry Brief.

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LIKE-A-PRO Project

Acceptance of Alternative Proteins Among European Consumers

Target Group

Industry/ Business Decision Makers

Introduction

High-quality protein is crucial for health, weight management, metabolism, and healthy aging. Yet, the more traditional sources of protein, namely meat and dairy production raise significant socio-economic and environmental concerns.¹ Hence there's a need for alternative proteins such as plant-, fungus-/mushroom-, and/or insect-based proteins which hold manifold sustainability benefits. Despite the recognised positive impacts, the widespread adoption of alternative proteins among European consumers is not quick nor large enough in scale to meet the needed sustainability transition. Understanding the factors at play – both at the individual and food system environment level – that limit or enable the prevalence of alternative proteins is crucial in catalysing (mitigate the limiting and exploit the enabling) the much-needed shift.

The following summary illustrates the key insights of a series of studies conducted as part of the LIKE-A-PRO project. These studies address different factors, both enabling and limiting, that influence the uptake and acceptance of alternative protein sources in our diets. The factors are clustered using the COM-B model² which covers both factors close to the individual (capability and motivation) as well as those external to individuals (opportunity). Insights are also clustered by demographic factors such as age, gender, education, income, and geographical location. On the basis of the compiled insights, this summary concludes with some key recommendations to industry players on how to promote and mainstream the consumption, and by default, the production of alternative proteins in Europe, as well as foster the transition towards a sustainable and good life for all.

Enablers and Barriers of the Acceptance of Alternative Proteins

The table below summarises the findings on the enablers and barriers to the uptake and acceptance of various alternative protein sources and products. The insights stem from a review of existing literature conducted as part of the LIKE-A-PRO project^{3,4}. A determinant has been linked to an alternative protein source where and when information was found in the reviewed literature. This is not exhaustive due to the specific approaches in our research process. For more information on the methodological approaches, please have a look at the original reports listed in the footnote section (3 & 4).

	Enablers	Barriers
Capability	<ul style="list-style-type: none">• Familiarity with alternative protein products (<i>applicable to general, plant, fungus/mushroom and insect-based proteins</i>) as well as cooking skills	<ul style="list-style-type: none">• Lack of cooking skills (<i>applicable to general and plant-based proteins</i>)

¹ EAT. (2022). Healthy diets from sustainable food systems. Food planet health. Summary report of the EAT-Lancet Commission. EAT.

² Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, 6, Article 42. <https://doi.org/10.1186/1748-5908-6-42>

³ Zaleskiewicz, H., Luszczynska, A., Kulis, E., Siwa, M., Szczuka, Z., Banik, A., Grossi, F., Nystrand, B.T., Samoggia, A., Chrysochou, P., Perrea, T., Krystallis, A. (2023). D1.1. Alternative protein integration in EU diets. LIKE A PRO project.

⁴ Zaleskiewicz, H., Luszczynska, A., Kulis, E., Siwa, M., Szczuka, Z., Banik, A., Grossi, F., Xhelili, A., Nystrand, B.T., Samoggia, A., Chrysochou, P., Perrea, T. (2023). D1.2 Built food environment typology. LIKE A PRO project. See also <https://doi.org/10.1186/s12966-024-01606-6>.

	<p><i>(applicable to general and plant-based proteins)</i></p> <ul style="list-style-type: none"> • Easiness to replace conventional food products with alternative ones <i>(applicable to general, plant, fungus/mushroom and insect-based proteins)</i> • Labels and information indicating ingredients and origin (clean and local / regional sources) <i>(applicable to general proteins)</i> 	
	<ul style="list-style-type: none"> • Increased health literacy as well as general knowledge about the environmental impact of conventional products have moderate and volatile impact on people's acceptance of other sources of protein <i>(applicable to general, plant-based, fungus/mushroom as well as insect-based proteins)</i> 	
Opportunity	<ul style="list-style-type: none"> • Increased availability and accessibility of alternative products in food environments <i>(applicable to general, plant, fungus/mushroom and insect-based proteins)</i> • Casual and non-routine food environment situations which are linked to curiosity and feeling of adventure (e.g., festivals, restaurants, food markets) <i>(applicable to plant and insect-based proteins)</i> • If insects are invisible in the meal, the name of the insect-based product is ambiguous or deliberately beautified consumers are more likely to eat insect-based proteins <i>(applicable to insect-based protein products)</i> • Positive social and cultural norms, including increased acceptance of alternative protein products among immediate social circles <i>(applicable to general, plant, fungus/mushroom and insect-based proteins)</i> 	<ul style="list-style-type: none"> • Difficulty to recognize alternative protein products and/or find them in food environments <i>(applicable to general and plant-based proteins)</i> • Isolated and/or segregated placement of alternative protein products in food environments <i>(applicable to general and plant-based proteins)</i> • Selling insect-based proteins solely via e-commerce • Perceived incompatibility with local food and/or people's preference for regional / local food, including sources/ingredients <i>(applicable to general alternative sources of proteins)</i> • Labelling plant-based proteins as vegetarian or vegan • Social norms among men and masculinity and related identity built around meat <i>(applicable to general proteins)</i>
Motivation	<ul style="list-style-type: none"> • Perceived nutritional and health value <i>(applicable to general, plant and insect-based proteins)</i> • Good and matching taste, flavour and texture with conventional meat and dairy products <i>(applicable to general and plant-based proteins)</i> • Lower and/or equal prices to conventional products <i>(applicable to general and plant-based proteins)</i> • Presential pro-environmental and generally pro-sustainability attitudes <i>(applicable to general, plant, fungus/mushroom and insect-based proteins)</i> 	<ul style="list-style-type: none"> • Simultaneously, off flavour and unpleasant texture can inhibit the uptake products based on alternative sources of protein • Neophobia as well as unbalanced nutritional profiles and health risk aversiveness <i>(applicable to general, plant and insect-based proteins)</i> • Attachment, positive emotions and routine food behaviours, especially towards meat <i>(applicable to general, plant and insect-based proteins)</i> • Perceived unsafety of food production and handling (storing, maintenance) at the upper part of the value chain <i>(applicable to general, plant and insect-based proteins)</i>

	<ul style="list-style-type: none"> • Pro-animal welfare attitudes (<i>applicable to general, plant and insect-based proteins</i>) • Feeling adventurous, daring, excitement accompanying sensation-seeking as well as curiosity (<i>applicable to general, fungus/mushroom and insect-based proteins</i>) 	<ul style="list-style-type: none"> • Distrust towards high technologically processed food (<i>applicable to general and insect-based proteins</i>)
Other demographic factors (e.g., age, gender, education, income, geographical location)	<ul style="list-style-type: none"> • Women, people of younger ages as well as those with higher income levels showcase more positive attitudes towards <i>general and plant-based proteins</i> • Higher education level is correlated with positive attitudes towards <i>general and plant-based proteins</i> • Older consumers are more likely to buy <i>insect-based proteins</i> if they are sourced locally while as younger ages and people with higher income seem to be more accepting of <i>insect-based proteins</i>, regardless of their source • Men have a tendency to be more accepting of <i>insect-based proteins</i> • People living in urban areas exhibit increased curiosity towards <i>general and plant-based</i> alternative sources of protein. 	<ul style="list-style-type: none"> • Simultaneously, men most likely to avoid alternative sources of protein, especially if among peer (as seen above due to social pressure)

Recommendations for Action

Increased investment in alternative proteins. Invest in advancing alternative proteins by allocating resources towards research and development initiatives aimed at improving the taste, texture, and nutritional profiles of the new sources and products. Moreover, investments can be redirected to provide the necessary infrastructure and support suppliers to scale up production and meet growing demand for alternative protein products.

Clean and sustainable production methods. Produce alternative protein products using methods that prioritise environmental sustainability (both in terms of product processes and the origin of sources) and minimised processing (e.g., reduced use of chemicals and additives, intensive processing techniques etc.). This can help maintain the nutritional integrity of the final products. These approaches align with consumers' preferences (as seen above) and can facilitate market differentiation. The latter could include labelling of products with certifications such as organic, non-GMO, sustainably sourced.

Communication as key to promoting alternative proteins. Explore innovative promotional and marketing strategies to effectively communicate the value proposition of alternative protein sources and products. The latter could include an emphasis on the benefits of alternative proteins such as environmental sustainability, health advantages, culinary versatility (and/or other insights captured above). Using human-centric language (integration of people's values, emotions, desires, needs etc. as seen above) in promotional materials and marketing efforts could help making these products more relatable and appealing to consumers.

Increase trust among consumers. As highlighted above, communication is key, and one of form of rather mass communication is labelling. The latter is essential for building trust and transparency with consumers. Providing clear and accurate information about the ingredients, production methods, and nutritional content of alternative protein products can help consumers make informed purchasing decisions. Additionally, implementing traceability measures, and communicating about those, throughout the supply chain can reassure consumers about the integrity and safety of the products they are purchasing, further enhancing trust and loyalty towards alternative protein brands.

Planning food environments. Strategic product placement is essential for ensuring that alternative protein products are readily available and easily discoverable by consumers across different food environments e.g. in supermarkets and grocery stores, for example, alternative protein products can be integrated into relevant categories such as meat substitutes, dairy alternatives, or health foods. Overall, by strategically architecting food environments and focusing on optimal product placement, businesses can maximize consumer reach, enhance visibility, and facilitate widespread adoption of alternative protein products in the market. This approach not only benefits consumers by providing them with accessible and nutritious options but also supports the growth and sustainability of the alternative protein industry.

Raising awareness and further capacity building still crucial for the promotion of alternative proteins. Implement consumer awareness raising activities and campaigns to accompany all aforementioned recommendations to raise understanding about alternative protein sources, dispel myths and misconceptions surrounding them through factual and science-based information and highlight the health and environmental benefits of their integration in our diets. Tailoring the content of such efforts to specific consumer groups can ensure relevance and resonance with target audiences. In addition, running trainings and cooking capacity building initiatives for consumers can support the uptake of alternative protein ingredients and products by consumers. For an added value and flavour, these could be conducted in different point of sales, and probably most fitting in restaurants and/or canteens.

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