



Alternative protein pasta & pizza CNTA

Like a
PRO



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LIKE-A-PRO is a EU-funded project aiming to facilitate sustainable and healthy diets by mainstreaming alternative proteins and products, making them more available, accessible and acceptable.

Benefits of alternative protein pasta & pizza

Alternative protein-based pasta and pizza offer opportunities to improve nutritional value and diversify protein sources within familiar, widely consumed food categories. By incorporating innovative ingredients into established meal formats, these products respond to growing consumer demand for convenient, protein-rich and nutritionally differentiated foods. Their familiar preparation methods and culinary versatility can facilitate consumer adoption while creating new opportunities for food manufacturers.



Development challenges

Developing alternative protein pasta and pizza requires balancing nutritional enhancement with taste, texture, appearance and processing performance. Novel protein ingredients can affect dough characteristics, sensory acceptance and product stability, while refrigerated storage demands appropriate microbiological control. Manufacturers must also ensure compatibility with existing production equipment, regulatory compliance and cost-effective industrial scalability.



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CNTA's solution

Within LIKE-A-PRO, CNTA developed six alternative protein formulations across two convenience-food categories: fresh pasta and ready-to-bake pizza. Three pasta variants incorporated fava bean, insect or microbial proteins, while three pizza formulations replaced conventional meat toppings with insect, fungi-lentil or lentinula-pea analogues, alongside a fava bean-based cheese alternative.

The products were designed to combine nutritional differentiation with familiar preparation and consumption formats. Pasta formulations were produced using professional fresh-pasta equipment, while the pizza concepts were developed for potential integration into conventional topping lines. Both approaches demonstrated promising technological performance, although further industrial-scale validation remains necessary. **The developed solutions offer four key advantages:**



Protein- and fibre-enriched fresh pasta

The pasta formulations provide 12.68–25.73 g protein and 3.33–12 g fibre per 100 g, while all qualify for low-fat claims. Fava bean and microbial pastas are "high protein", with the fava bean variant also qualifying as "high fibre", offering clear nutritional differentiation within the fresh pasta category.



Innovative alternative-protein pizza toppings

The three ready-to-bake pizzas replace conventional meat and cheese toppings with alternative-protein ingredients. All qualify as a "source of protein", providing 7.06–7.75 g/100 g, with higher average protein content and lower saturated fat than several commercial vegan alternatives analysed.



Promising sensory acceptance in familiar formats

Fava bean and insect pastas achieved overall acceptance scores of 6–7/10, while all three pizzas scored at least 6/10. These results demonstrate the potential to introduce alternative proteins into familiar meals, although microbial pasta requires further flavour optimisation.



Manufacturing adaptability and technology transfer potential

The pastas were processed using professional continuous pasta-making equipment, while the pizza concepts were designed for potential integration into established topping lines. Both offer opportunities for licensing and industrial adoption, subject to further scale-up validation.

Commercial potential and B2B value proposition

CNTA's alternative pasta and pizza concepts offer opportunities within refrigerated retail, private-label, foodservice and convenience-food markets. Through a B2B model focused on technology transfer, licensing and formulation support, CNTA enables manufacturers to develop nutritionally differentiated products using established food categories and potentially compatible processing infrastructure. Their diverse protein sources and familiar formats support portfolio innovation, while further industrial, regulatory and economic validation will help determine commercial readiness.

Overall, the developments achieved within LIKE-A-PRO demonstrate the potential of alternative proteins to enhance familiar pasta and pizza products through nutritional differentiation and formulation flexibility. By combining promising sensory performance, established food formats and industrial compatibility potential, CNTA's concepts offer opportunities for next-generation convenience foods and future commercial innovation.

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