

## Sundried, Slow-cooked and... Sustainable?

### Testing the Mediterranean Appetite for Alternative Proteins

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*Food neophobia is the clinical reluctance to eat novel or unknown foods. In a Mediterranean context, where culinary heritage is a source of pride, this biological 'safety' mechanism can become a significant barrier to environmental sustainability.*

**T**raditional diets are the bedrock of Mediterranean identity, but as global food systems reach a breaking point, a new menu is emerging. From familiar plant-based staples to the frontiers of lab-grown meat, a study from the University of Malta's Department of Food Science, Nutrition and Dietetics explores whether local consumers are ready to embrace a more sustainable plate, or if ingrained tradition, safety fears, and the 'ick factor' remain unbreakable barriers.

#### TRADITION IN TRANSITION

On a typical Mediterranean table, grilled fish, slow-cooked meat, and aged cheeses are more than food – they are tradition. But behind these familiar dishes lies a growing question: can the way we eat today sustain the world of tomorrow? By 2050, the global food system must feed 10 billion people while responding to climate change and environmental degradation. Traditional livestock farming places heavy pressure on land and water. If current consumption patterns continue, the strain on both planetary and human health will intensify.

Alternative proteins (APs) offer a solution. These sustainable substitutes, ranging from plant-based proteins to cultured (lab-grown) meat and edible insects, are moving from niche markets into mainstream Mediterranean diets as consumers seek to reduce meat intake. To understand how Maltese consumers perceive these sources, a study led by Annah Mallia under the supervision of Dr Petra Jones surveyed 479 adults. The study used an online panel survey with a structured questionnaire adapted from a 2022 Food Standards Agency (FSA)-commissioned study. It included demographic questions and assessed participants' knowledge, perceptions, willingness, concerns, and motivations regarding three APs. The data were presented visually in tables, similar to Table 1, then organised in Excel and imported into SPSS for analysis. Chi-squared tests were used to examine relationships between demographic factors and perceptions of alternative proteins, including knowledge, safety, and willingness. The cohort, predominantly female

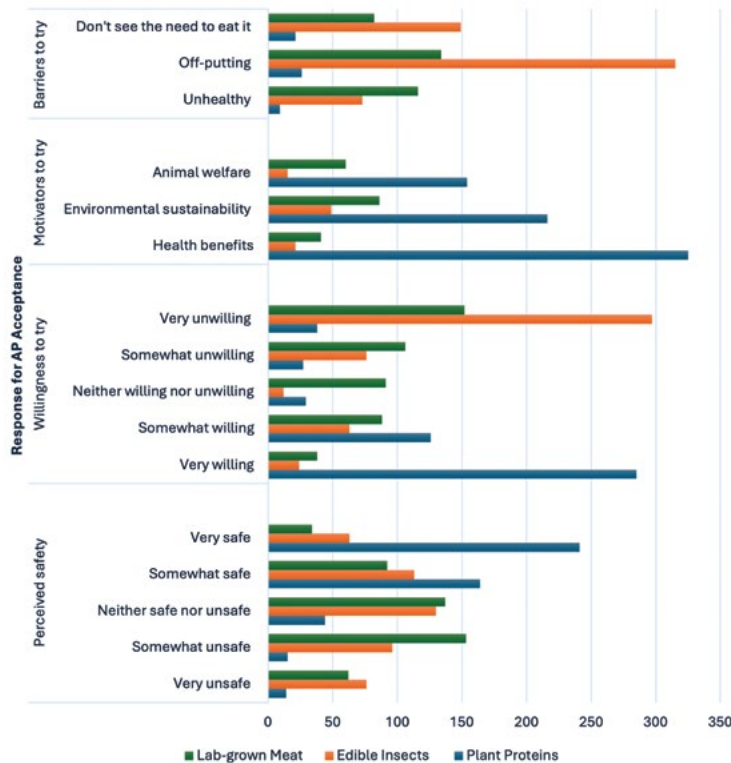
and health-literate, provides a unique window into the demographic most likely to drive dietary change.

The results reveal a clear hierarchy of acceptance. Plant-based proteins were viewed as the safest and most preferred option, with 50.3% of participants rating them highly, compared to only 7.1% for lab-grown meat. Safety perceptions closely mirrored willingness to try. While health benefits motivated plant protein choices, environmental sustainability and animal welfare drove



Annah Mallia  
Photo by James Moffett





*Transforming food systems requires more than technological advancement; it requires cultural adaptation.*

**Table 1: Participants' responses on acceptance of APs on lab-grown meat, edible insects, and plant proteins**

interest in cultured meat. Insects primarily attracted curiosity due to novelty rather than perceived necessity.

## THE BARRIER OF EMOTION

However, perceived benefits alone do not eliminate hesitation. Interestingly, despite high levels of health literacy among participants, knowledge did not override emotion. Even for those well-versed in nutrition and sustainability, barriers to acceptance differed markedly between products.



**Dr Petra Jones**  
*Photo by James Moffett*

Disgust and unfamiliarity played a substantial role in the rejection of edible insects, a clear manifestation of food neophobia, the psychological reluctance to eat novel or 'alien' foods. This visceral reaction proved highly resilient; even when presented with incentives or safety assurances, more than half of the respondents stated that nothing would convince them to try edible insects.

Cultured meat faced its own hurdles, with nearly half of the participants describing it as 'off-putting'. This reflects a deep-seated discomfort with the production process itself, suggesting that for a health-literate audience, the 'naturalness' of food remains a non-negotiable value.

## THE TRUST GAP

Regulatory uncertainty also fuelled mistrust. The fact that around 11% of health-conscious respondents expressed concerns regarding insect safety regulations, while 28% questioned oversight of cultured meat, is particularly telling. When consumers lack clarity about legal frameworks and safety assessments, scepticism

naturally increases. Transparent communication and clearer regulatory guidelines could therefore play a pivotal role in building confidence. For an informed public, knowing *how* a product is monitored is often as important as knowing *what* is in it.

## FROM FRICTION TO FLOW

For Mediterranean societies, the transition must be handled thoughtfully. Positioning plant-based options within familiar dishes may be more effective than radical dietary shifts. Cultured meat requires transparent communication about its production, whereas insects may require processed forms that reduce visual disgust cues. APs are not a replacement for tradition, nor are they a universal solution; rather, they are an additional tool for sustainability. Ultimately, transforming food systems requires more than technological advancement – it requires cultural adaptation. Whether APs become a Mediterranean staple will depend on our ability to move beyond 'the ick factor' and build a bridge of trust between the laboratory and the kitchen table. **T**