



Drivers of consumer food safety perceptions

Understanding how consumers think about food safety can help growers to assure them of the goodness of their product. By **Paul Hardman** and **Paula Bester**



A recent review of studies looking at consumers' perceptions suggests that their lack of scientific knowledge and reasoning betrays them. Plus, distortions are readily introduced into the purchasing decision-making process.

Using sound science

Explaining the complexities of food safety simply, is challenging. The European Food Safety Authority (EFSA) recently published a scientific literature review titled *Communication of food-related health risks and benefits* to provide data to address this. The study, which was undertaken with

ICF Europe, concluded that consumer perception of food safety or what they see as "high risk" foods, hardly reflects the reality or available scientific evidence.

The influence of media

A study involving 824 Albanian consumers found that locally grown tomatoes are perceived to pose a high risk due to assumed higher levels of pesticide and herbicide content. Therefore, tomato production in Albania has declined in line with increased negative publicity around pesticide use in tomato production. Irrespective of proven scientific evidence, consumers believed increasingly the idea created by media that local tomatoes pose a higher risk. A Serbian study of 711 consumers revealed relatively low vegetable

consumption fuelled by Serbians' perception that some vegetables are unsafe to consume fresh, especially in the Northern region.

In Spain national messaging campaigns regarding "environmentally friendly" claims proved to have a significant impact on the consumers' perceptions and potential consumption of palm oil. Whereas in Poland, health related statements carried more weight and had more of an impact, whether consumers perceived palm oil as beneficial or a high-risk ingredient. A few studies also found that consumers were generally more concerned about chemical risks such as pesticides compared to biological risks (e.g., food pathogens). The authors suggested that the media may frame biological risks as being more natural and controllable.

Uncertainty of the unknown

One study found that 70% of their study group in Turkey believed that irradiated foods are either extremely dangerous or dangerous, and over 50% of participants indicated unawareness around the benefits of food radiation. Consumer anxiety due to misconceptions is also proven by the perception of risk in the UK and Switzerland. If well-established scientific reasoning behind a food technology or processing methodology is not clearly communicated to consumers, it's more likely to be perceived as risky. Similarly, amongst 1 046 Irish consumers, the majority viewed food products that involved conventional technology as more acceptable compared to when novel nanotechnology was used during processing or packaging. In a study of 990 Turkish consumers, the authors found that almost 70% of the respondents believed that food additives were extremely dangerous. Thus, most consumers were not aware of the benefits and functions of food additives. Furthermore, most of the consumers thought that food additives are more dangerous compared to pathogenic bacteria.

The role of food labels and trademarks

Geographical trademarks or label

indications of the origin of products do not serve the purpose of communicating food safety-related information to the consumer. However, from a study pool of 505 Hungarian consumers, the majority frequently linked traceability information to food safety. In addition, Italian consumers indicated that details on product labels linked to its origin create the idea that the food product is healthy. In contrast, although traceability information is a consumer preference, it was not found as a high priority, because taste and price remain the main drivers for consumption. Italian consumers also tended to associate organic foods with the idea of safe foods (more than being healthy or environmentally friendly). Clearly, many factors influence consumers' views on food labels, and their food-safety perceptions. Globally, the presentation of food safety information varies and different policies, such as laws around advertising, influence how food safety is communicated.

Trade-offs

A survey with Swiss adults showed that the negatively perceived risk of exposure to pesticide residues on fruits and vegetables outweighed the well-proven health benefits. This may result in reduced fruit and vegetable intake. The authors suggested that public health agencies reconsider how they communicate health risks to consumers, to avoid decision-making that may lead to negative health implications in the long run. Overall, findings indicate that consumers make trade-offs between their health, the environment and social and economic factors based on the food information provided to them (or their interpretation thereof). Conflicting information may lead to people prioritising the perceived risks over the benefits, when in reality, the risk profile might actually be more favourable than they understand.

The EU Green Deal and the impact on EU farmers

One of the EU Green Deal targets under the

Farm-to-Fork strategy is to phase out the use of plant protection products that meet certain hazardous cut-off criteria. While, in principle, this may seem straightforward, it can have dire implications on food production if lacking proper impact assessments and sound scientific evidence. One such example was the pressure placed on Italy to reduce their pesticide use by 62%. According to Gennaro Sicolo, the vice president of the CIA (the Italian acronym for the Italian



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Farmers Confederation of the Province of Ancona, part of one of the largest European organisations for farmers and the agricultural sector), this could lead to a total upheaval of Italian agriculture. Puglia is famous for its olive tree plantations and is believed to be home to one of the world's oldest olive

trees. This region produced almost 50% of Italy's valuable olive oil before the divesting effect of *Xylella fastidiosa* (a vector-transmitted bacterial plant pathogen), which almost wiped out their olive orchards. The reduction objective of the use of plant protection products coming from the European Commission is argued to be within unrealistic timelines, without practical and effective alternatives that could guarantee the same production quantities and product quality. Economic sustainability and the users of the plant protection products were not considered and, according to Sicolo, the objectives of the Farm-to-Fork strategy will need to be reconsidered. Another hit from a "new *Xylella*" without the tools to control it, would be the final straw for Italian olive producers.

Final thoughts

Food safety should not scare consumers. The lack of easy-to-understand scientific information or misconceptions around food safety may create anxiety in consumers and may lead to unhealthy consumption patterns, like avoiding fruits and vegetables.

The EU Green Deal objectives, particularly focused on reducing the use of plant protection products, are impacting the European producers directly, and we can expect resultant political pressure and tension in trade. There are clear anomalies in this approach. But moving away from the science creates detrimental political or emotional-driven decision-making.

References

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