

# **Enhancing Consumer Confidence**

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# Partnership between Europe - China

- China: 3<sup>rd</sup> destination for EU agri-food exports  
5<sup>th</sup> country of origin for EU agri-food imports.
- Cooperation has the potential to further encourage trade and improve food safety.
- The consumer behaviour unit at QUB worked closely with colleagues in Europe (UCD, AZTI, Nofima) and China (CFSA) to investigate strategies to increase consumer trust in food.



# Definition of problem

- Persistent incidents of food fraud have been documented in both the EU and China:
  - 2013 horsemeat scandal in Europe
  - 2008 melamine scandal in China
- Incidents such as these have had implications for industry creditability, consumer trust and public health.



# Pathway to solution

Innovative food fraud strategies present new long-term proactive solutions for ensuring food integrity e.g.,

- blockchain technology
- non-targeted analysis of food for authentication
- QR code for counterfeit protection

Can these strategies enhance consumer trust in the food chain, add value and increase sales?

We conducted two online consumer surveys with exemplar foods...



# Infant formula milk (IFM) survey

N = 996 participants from China

- middle/high income consumers
- who have purchased IFM in the last 3 months

Questionnaire items:

(strongly disagree = 1 to strongly agree = 7)

- Trust (product, manufacturer) in domestic IFM
- Attitudes/beliefs to verifying the origin of EU IFM
- Trust and purchase intentions towards tracked and tested EU IFM...



If this code exists in the **EU** manufacturer's database and hasn't been scanned before, the pack is revealed to be a genuine product

### Infant Formula Milk

Pack is **tracked** using high-end record-keeping technology

**Tracked  
infant formula milk**



By scanning this code, you can access a brand page containing tracked information on where the formula was manufactured and the product's journey through the supply chain

### Infant Formula Milk

Formula in pack is **tested** using high-end analytical scanning technology

**Tested  
infant formula milk**



Upon scanning the formula, captured sensory data is communicated to a cloud platform for further analysis. The cloud platform then reveals the geographic origin.

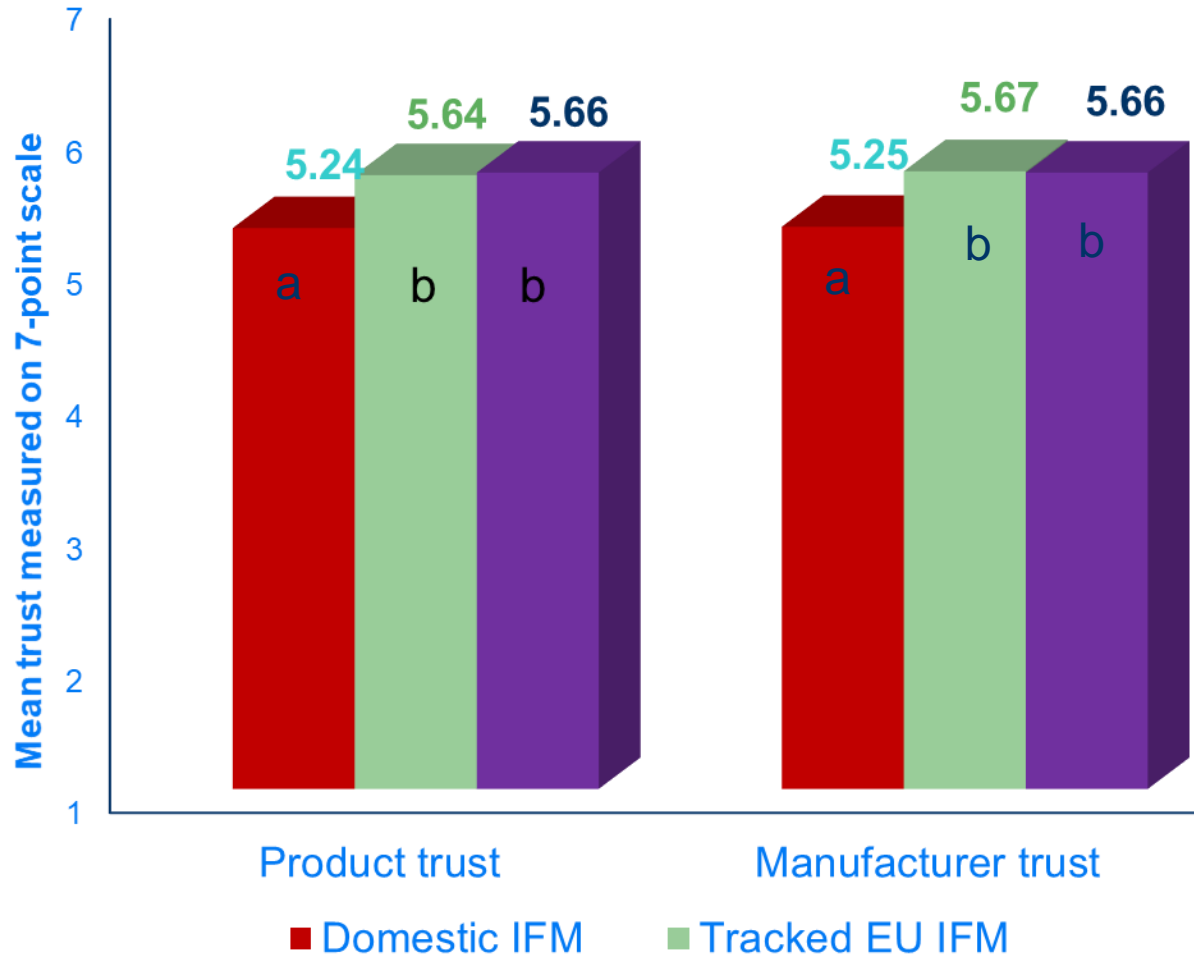


# Beliefs about assuring the origin of EU IFM

- Be beneficial/important/essential.
- Improve product safety, quality and trust, while being beneficial to infants (all items scored above 5.70).
- Benefit the EU reputation and economy (m= 5.65).
- It would also improve their trust in: EU manufacturers (m= 5.70); Chinese retailers (=5.65); Chinese regulators (= 5.66); Chinese government (= 5.66).



# Trust in IFM and its manufacturers





# Purchasing tracked/tested EU IFM

- Purchase intention towards both tracked /tested EU IFM were high and similar (Mean = 5.7)
- Product preference: 2/3 stated a preference for purchasing tracked EU IFM VS 1/3 stated a preference for purchasing tested EU IFM
- The highest price that participants (n = 249; 25%) would be willing to pay for EU IFM was similar (Mean = 391 CNY for tracked; 404 CNY for tested)
- Manufacturer trust was the main determinant of intention to purchase both the tracked and tested IFM ( Adj. R<sup>2</sup> = 70%).



# Processed garlic (grown in China)

N = 570 participants from Germany and the UK

- who purchased processed garlic 3-4 times/year

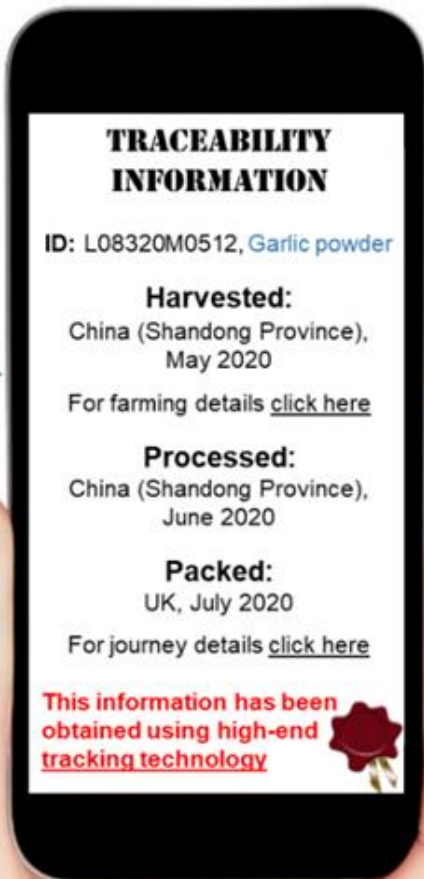
Questionnaire outline:

- Garlic purchasing habits and labelling wants
- Trust (product, manufacturer, farmer)
  - in processed garlic
  - in **traceable** processed garlic (with an **authenticity** assurance)
- Beliefs and purchase intentions toward traceable garlic (vs non-traceable garlic)
- Demographics

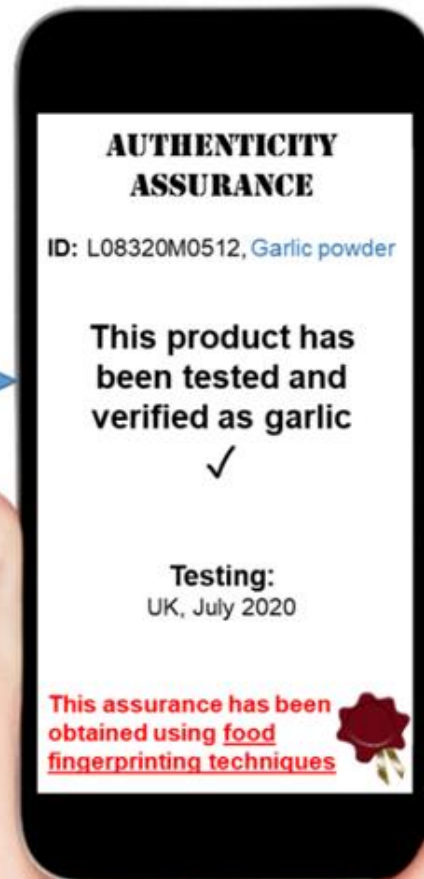




Code Scanned for product history



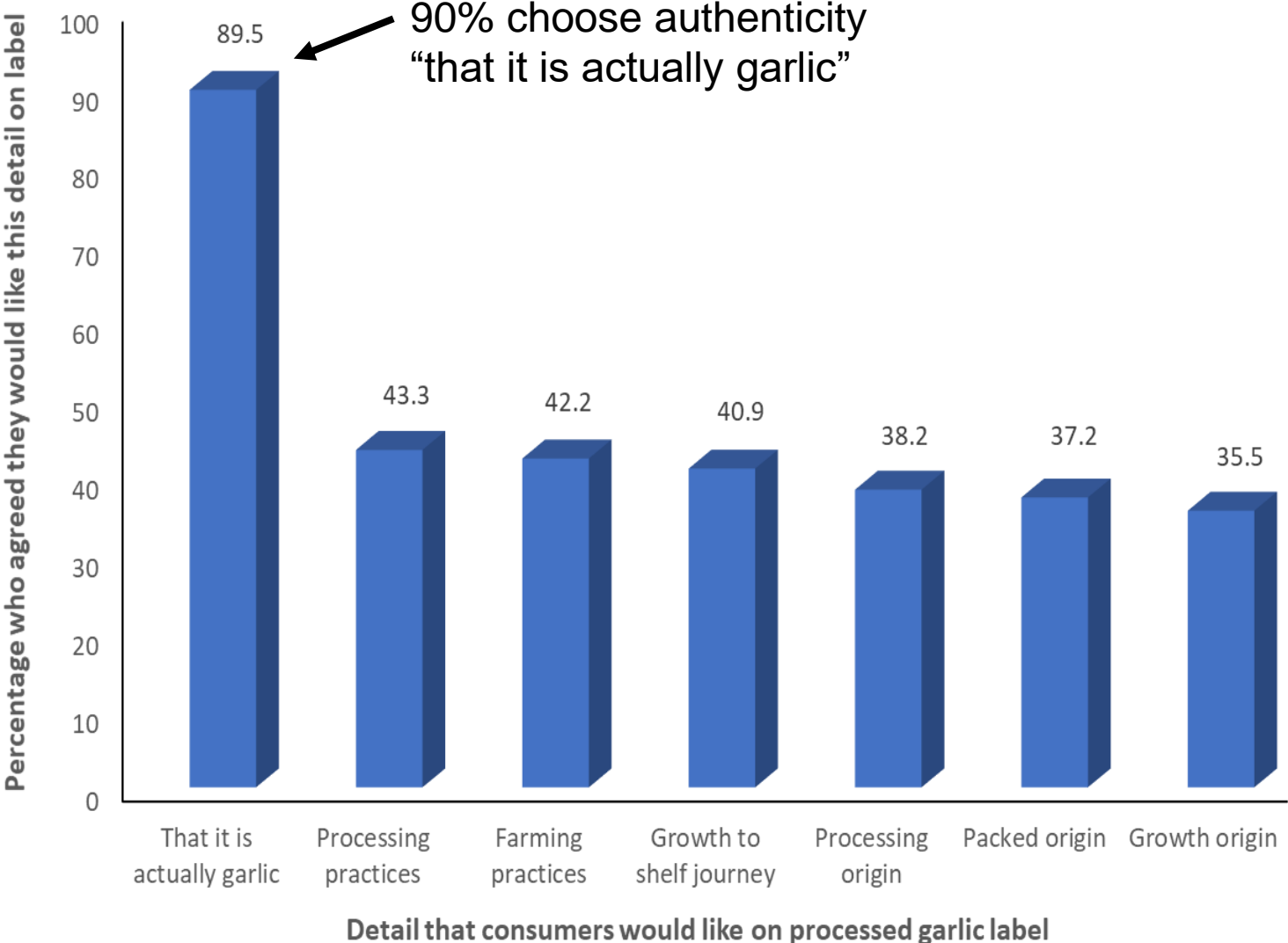
...and an assurance that the product is authentically garlic

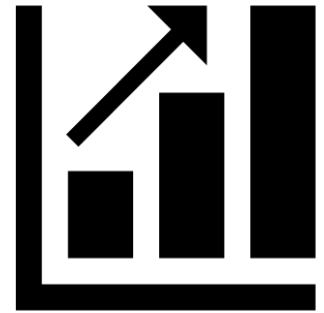


CONTINUE



# What would you like displayed on the label?





# Traceable garlic perceptions

Trust (product, manufacturer, farmer) significantly increased as a result of traceability and authenticity.

- increases in product trust were greater for UK

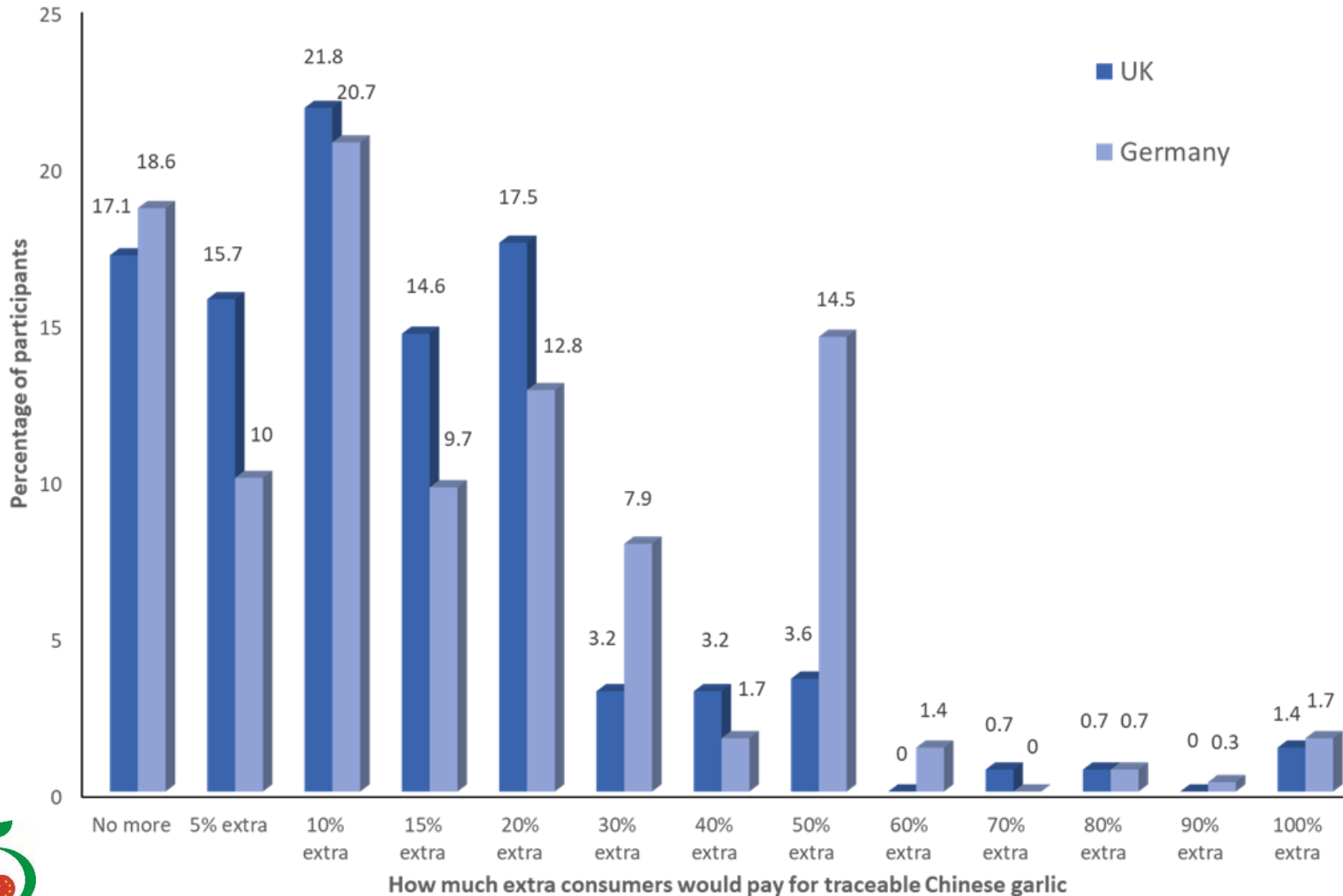
Most positive beliefs were that the traceable product would be more accurately labelled, safer, of better quality, and healthier.

- UK participants expressed more positive beliefs.

73% of German sample / 78% of UK sample would purchase the traceable product (vs non-traceable product) if it became available.



# Would you pay extra for traceable garlic?



## Long-term impact

- A system of convincingly guaranteeing the origin of high end food was well received by consumers and is a worthwhile investment for exporters. However, consumers need exposure and familiarity. Also Technology needs to be independent.
- Trust in products and manufacturers are country dependent. Baseline trust matters.
- Manufacturer trust based on: caring, honest, open and protect
- Provision of traceability and authenticity information is a promising strategy to increase consumer trust, through transparency.



# [www.euchinasafe.eu](http://www.euchinasafe.eu)



*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 727864 and from the Chinese Ministry of Science and Technology (MOST).*

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