



The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Preliminary data on consumer acceptance of novel proteins

Prof. Dr. Ir. Armando Perez-Cueto – WP6 Leader on behalf of the WP participants University of Copenhagen, ProVeg, Ghent University Teagasc, AgResearch



www.smartproteinproject.eu

"The question is, are we happy to suppose that our grandchildren may never be able to see an elephant except in a picture book?."

Sir David Attenborough



- Evaluate levels of trust, marketability and consumer acceptance for alternative protein sources and products.
- Map out the revenue generated and the products and players operating in the plant-based space at present, split by category, to determine lucrative, high-impact, differentiated market entry strategies
- Investigate new markets for alternative proteins and plant-based food products
- Develop interventions to endorse the consumer preference for plantbased foods in foodservice and retail operations

WP6 Tasks

Task 6.1: Consumer trends and benchmarking study

Task 6.2: Pan-European Consumer Survey on trust and acceptance of alternative proteins Task 6.3: Consumer acceptance of the industrially- validated new plant-based food prototypes

Task 6.4: Behavioural interventions towards plant-based foods

Pan EU Suvey



Task 6.2: Pan-European Consumer Survey on trust and acceptance of alternative proteins

- 6.2.1 Pan EU Survey
 - Launched between 15-19 March and data collected by end of May (2021)
 - Webinar held November 2021 and reports were made available open access
- 6.2.2 China Survey
 - Translated version will be applied in China (cities: Hangzhoud and Fuzhou) and circulated via WeChat – Teagasc

WP6 have agreed on a publication strategy that coincides with the dissemination work but we will prioritise quality above speed – more impact

• Deliverable D6.2 Pan-European survey on consumer readiness and trust towards alternative plant-based proteins and food products M36 +6





The Smart Protein project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862957

Subtask 6.2.1: Pan-European Survey

Confidential - Unpublished data

www.smartproteinproject.eu

Who identify with diet lifestyle in EU?

- **Omnivore**: Men, older and with lesser education
- **Flexitarian**: Women, with university education
- Pescatarian: Women, "other"
- Vegetarian: Women, younger, with MSc degree
- Vegan: Women, younger
- Caution: models have poor fit, so this needs to remain as preliminary





About men in meatless diet



Contents lists available at ScienceDirect

International Journal of Gastronomy and Food Science

journal homepage: www.elsevier.com/locate/ijgfs



Why do men choose and adhere to a meatless diet?

```
Akvile Banyte<sup>a</sup>, Irene Valentina Di Lauro<sup>a</sup>, Anelia Mitova<sup>a</sup>, Clara Schauman<sup>a</sup>, Elena Simoniello<sup>a</sup>, Federico J.A. Perez-Cueto<sup>b,*</sup>
```

Barriers

Lack of cooking & nutrition skills - taste Preparation time Unavailable options eating out **Overcoming Barriers**

Lonely riders fail! Provision of information - evidence

Reduction level on foods of animal origin

Compared to a year ago, how much meat (e.g. beef, pork, chicken) are you eating now? Please choose one only.



- A lot less (a change of more than 50%)
- Slightly less (a change of less than 50%)
- No change
- Slightly more (a change of less than 50%)
- A lot more (a change of more than 50%)



Food behaviour

CHART 11: CONSUMPTION FREQUENCY OF ANIMAL-BASED FOODS (TOTAL SAMPLE)



Question: Which statement best describes how frequently you have consumed the following foods in the last 12 months?

Food behaviour

CHART 12. CONSUMPTION FREQUENCE OF PLANT-DASED FOODS (TOTAL SAMPLE)



Question: Which statement best describes how frequently you have consumed the following foods in the last 12 months?

Examples: 1: lentils, beans 2: PB* burger/mince 3: PB* chicken strips/chunks

1: PB* sausage/pulled pork 5: PB* fish sticks/fish burger/tuna 6: soya almond/oat/coconut/rice/pea milk

7: soya/almond/oat/coconut yoghurt 8: PB* cream cheese/cheese slices/grated cheese

Trust in plant-based foods and proteins



Determinants of trust in plant based foods and proteins

Positive association Plant-based dietary lifestyles Consumption frequency of PBF Scoring high in the FCM

Living in rural areas



Negative association Financial status Barriers - Nutrition beliefs about PBD Barriers - Personal beliefs about PBD





Mean score choice motives

tastes good	4,31
is fresh	4,22
is healthy	4,07
has a pleasant texture	3,99
makes me feel good	3,97
has no additives and/or no artificial ingredients	3,85
is easy to prepare	3,77
is minimally processed	3,74
is produced in a way that no animals are	3,74
has the country of origin clearly marked	3,73
is environmentally and climate friendly	3,72
is cheap	3,72
is produced in a way that promotes equal	3,63
opportunities, human rights, and fair trade	3,6
is locally produced	3,59
has a short ingredient list	3,58
is familiar	3,54
is low in calories	3,47
is organic	3,46
is unique and innovative	3,23

Confidential



EU first and second choice n=7578



Trust towards alternative proteins

Preferred plant protein sources





Main barriers towards plant-based eating

- Don't want to change habits/routine
- PBF won't be tasty enough
- Limited choice when eating out
- Unsupportive partner/spouse
- Perception that PBF are expensive
- Lack of sufficient information



So what?



- Women are still leading the plant-based way
- Mainstream consumers are reducing their consumption of ASF
- PBF are incipient market business opportunity
- Trust is high, but lay beliefs should be challenged
- Deliver tasty, fresh, pleasant & feel good as KSP for PBF
- PB protein the most trusted, insect protein the most distrusted
- Familiar raw materials are preferred as protein sources
- Many barriers can be overcome with improved information and communication



"Eat plant rich, varied and not too much"

Danish recommendations for sustainable healthy eating 2021