@scenoprot

Consumption behavior as an enabler of transition

Antti Isokangas, Makery Oy

During the project, consumer attitudes and market behaviour have been studied from a variety of perspectives

2016
- Focus group interviews (7 kpl) in Finland (n=50)
- Online-survey (FI, SE, DE, UK), n=~500 respondents/ country (total n=2015)
- Market Analysis, 9 European countries

2017
- Concept research on various food concepts' feasibility & appeal (online) in Finland(n=305)
- Surveys conducted parallel to the Intervention study (3 kpl) + Exprience diaries

2018
- In-depth interviews with 14-18-year-olds (n=6)
- Online survey targeted to the young in Finland (n=300)
- Market potential analysis, (FI, SE, DE, UK)

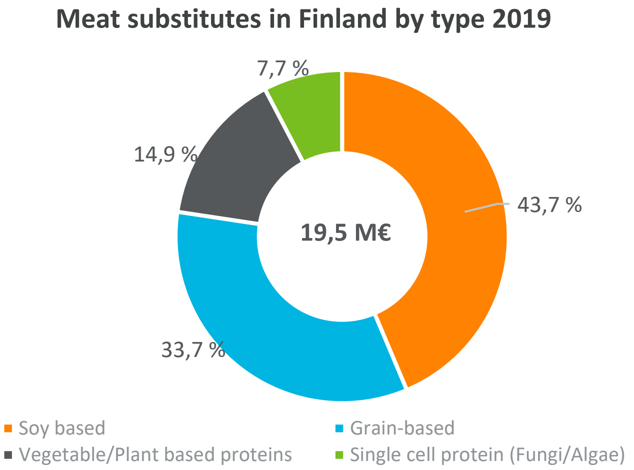
2019
- Intervention follow-up survey
- Online survey in Finland, Sweden, Germany and the UK, ~ 500 respondents/ country (total n=2005)
- Overview of the market for vegetable protein products (FI, SE, DE, DK; RUS, UK, FR)

2020
- Summary of clinical study surveys
- Change in purchasing behaviour:
- Shopper n=45
- *Online=500, Finland,*

Overview of the market in numbers - meat substitutes

Country	Sector	2015~M €	2019~M €	CAGR 2015-2019, %	2021~M €	2025~M €	CAGR 2019-2025, %
Finland	Meat Substitutes	11,03	19,54	12,1 %	22,97	30,31	5,7 %
Germany	Meat Substitutes	136,32	242,39	12,2 %	326,4	600,63	13,0 %
Sweden	Meat Substitutes	61,51	63,41	0,6 %	69,21	82,79	3,6 %
UK	Meat Substitutes	466,4	538,11	2,9 %	568,91	704,83	4,4 %

Country	Sector	2015~MKg	2019~MKg	CAGR 2015-2019, %	2021~MKg	2025~MKg	CAGR 2019-2025, %
Finland	Meat Substitutes	0,52	0,93	12,3 %	1,03	1,19	2,9 %
Germany	Meat Substitutes	8,38	12,63	8,6 %	15,72	24,01	8,8 %
Sweden	Meat Substitutes	3,4	3,79	2,2 %	4,07	4,38	1,5 %
UK	Meat Substitutes	28,72	38,16	5,8 %	41,12	48,32	3,3 %



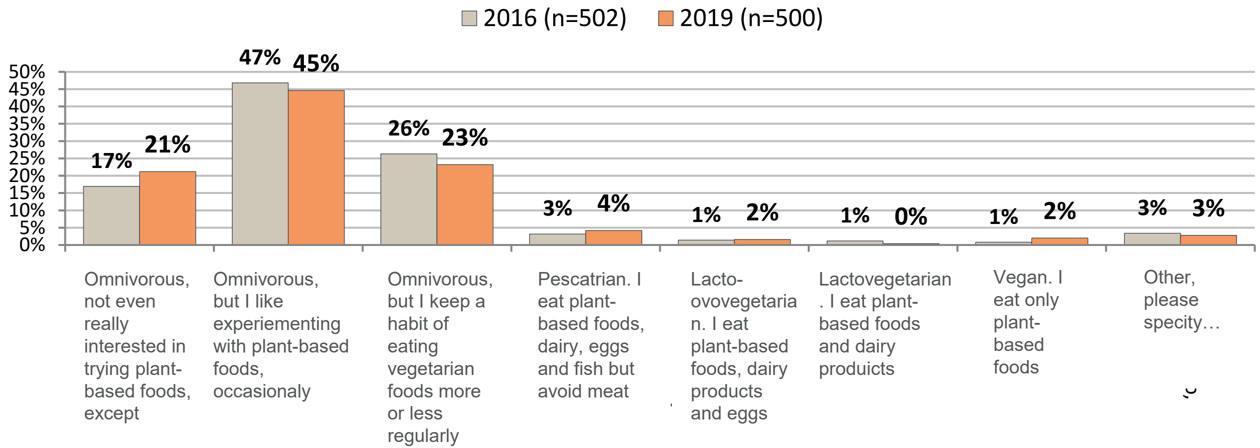
The market for plant-based (protein) applications in Finland has boomed and shows little signs of slower growth. Convenient applications are available from many ingredient bases and for many situations. Plant-based alternatives have become a category much like any else.

Yet, Meat Substitutes represent a mere ~**1 %** of the value of the Meat markets.

Diets as whole change slowly, even if there are changes in behaviour – Diet is often part of identity

The proportion of vegans and other types of vegetarians has increased only slightly, while at the same time the proportion of the non-interested has also increased.

Mikä seuraavista kuvaa parhaiten omaa ruokavaliotasi?*



- Plant-based diets have increased among the young, while older groups (45+) are heavier in e.g. pescovegetarian diets.
- On the public level, vegan/vegetarian diets accounted for some **7 %** of all answers.
- Interest towards plant-based diets was strongest among the **young (18-24)** and **the older** age groups (55+).

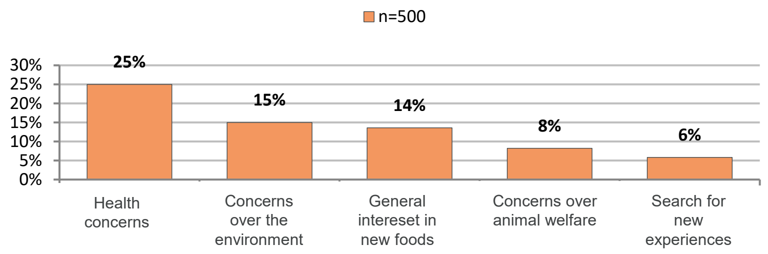
* Otokset aikuisväestöä edustavasti iän, sukupuolen ja asuinalueen suhteen.

Drivers to decreasing meat consumption and increasing plant-based eating have grown more societal over time, while barriers remain unchanged

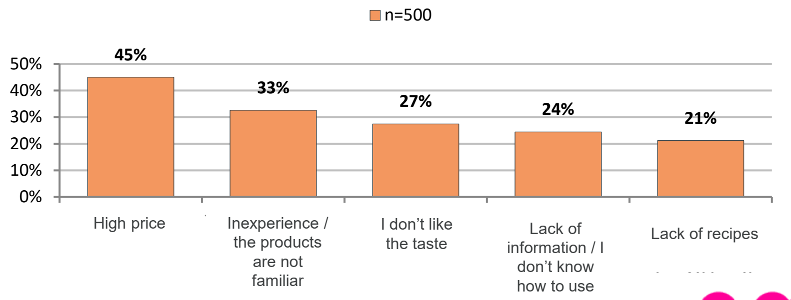
- As the main reasons for switching to a more plant-based diet, consumers most often think about their own personal health and willingness to experiment, but also the importance of environmental and animal rights issues has increased in recent years.
  - ***Environmental*** and ***ethical*** issues concern young people, parents emphasize ***health***

- The biggest challenges for the increased use of plant protein products - especially meat substitutes - are the relatively ***high price***, but also ***lack of information***, but there is also space for improvement in the organoleptic characteristics of the products.

What is the most important driver for you to use plant-based protein?



Mieti mitkä asiat mahdollisesti rajoittavat kasvipohjaisten proteiinipitoisten tuotteiden käyttöä itselläsi? Valitse kaikki sopivat



Pinpointing & monitoring the everyday challenges through an intervention study

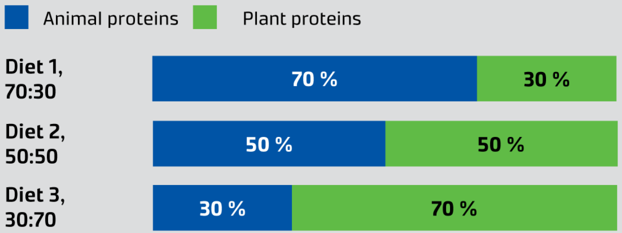
- Intervention study supporting research

- To understand the impact of diet change in an individual's everyday life, a series of surveys and diary-based data collection was conducted alongside the clinical *intervention study* conducted by the University of Helsinki (WP5).

- The respondents' **attititudes** and **opinions** were surveyed *before* the clinical study, *upon finising* the intervention period and *2 years after* finishing

- During their study period, the participants were asked to make notes of the food they eat, how they feel in general, experiences linked to food choices, cooking, etc.

Protein sources of the diets



Animal proteins: Dairy products, fish, meat, egg

Plant proteins 30 %: Grain products, potato, rice

Plant proteins 50 ja 70 %: Faba bean, oat, soy (tofu), quinoa, pea, nuts and seeds, grain products, potato, rice

Timeline of intervention studies in WP6

- **Initial measurement (before intervention)** — 12/2016-3/2017
  - **Baseline survey**: Perceptions of nutrient intake, wellbeing and General Health Interest
- **Intervention (12 week)** — 1/2017-6/2017
  - **Experience diaries**: Opportunity to freely comment on all experiences and ideas on intervention
- **Final measurement (end of the intervention period)** — 4/2017-6/2017
  - **Ending survey**: General Health Interest. Effects during the intervention period
- **3 months after finishing the intervention period** — 9/2017
  - **Post-intervention survey**: General Health Interest. Effects of the intervention period that have persited over short-term
- **2 years after the interventinon period** — 6/2019
  - **Follow-up survey**: Effects of the intervention period that have persited over long-term

Many respondents found changes in their everyday lives even after two years after participation in the intervention study

What changes did the study bring in life *	n=93
Use of vegetables and plant proteins increased	34 %
New items/ingredients accepted in regular diets	27 %
Meat consumption decreased / Sources of protein more versatile than before	24 %
Increased attention paid to the nutritional composition of foods	16 %
Switching from animal to plant-based proteins increased	13 %
Increased regularity in eating / meal times	13 %
Switched to an all plant-based diet	10 %
Interest towards own personal health increased	8 %
Consumption of cereals increased	6 %
Image of ready meals and processed foods improved	4 %
General awareness towards food and eating incrased	4 %
No changes **	29 %

Others mentioned:

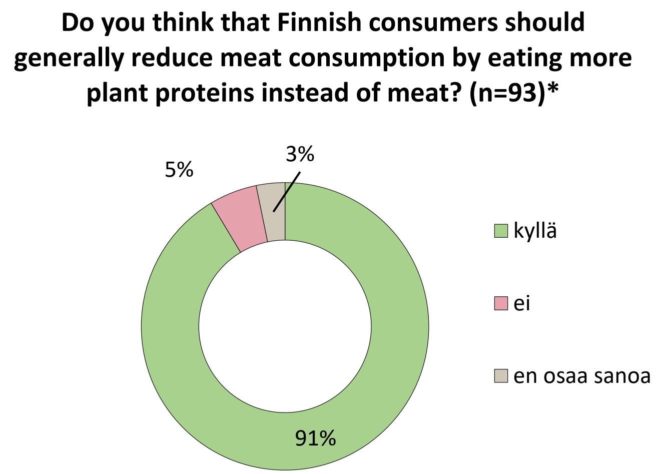
- Interest towards cooking increased as new things were learned.
- Physical wellbeing improved
- Interest increased towards personal ecology
- Decreased use of processed foods
- More attention paid to origin of the food

** 29% of respondents felt that participation in intervention had not brought about any change. Some noted that the research diet was similar to their regular diet. Some had returned to their own previous diet, which could include, for example, less meat and more fish on a research diet.

*Open-ended question: " *If you compare this moment to the time before the study, do you feel that there have been changes in your eating habits (when, what, and how you eat) or, for example, in your food choices, due in part or in whole to your participation in this study? If so, what changes did participation in the study bring?* " The answers are categorized.

strategicRESEARCH ScenoProt

Most respondents think that Finns should increase the use of plant proteins



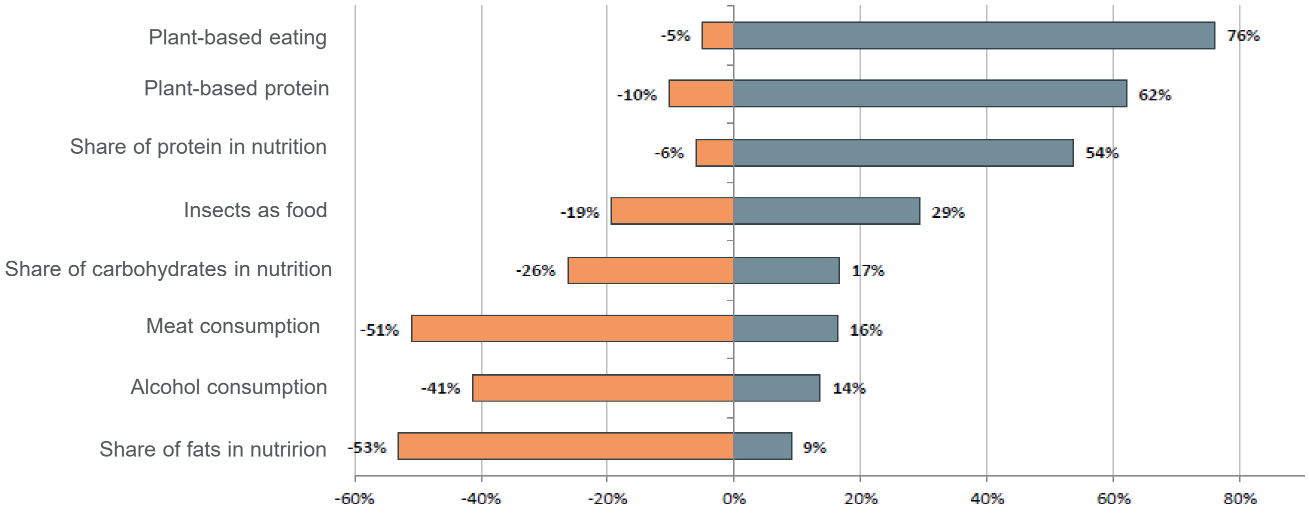
Means or factors mentioned by respondents*	N=85
Pricing (e.g. higher meat price, lower price of vegetable proteins, taxation e.g. by health)	45 %
Development of plant-based products (e.g. improvement of taste/ texture, flavouring, products suitable for different situations)	25 %
Raising information/ "raising awareness" through objective communication, encouraging	22 %
Better supply of vegetable protein products in mass catering (e.g. at a workplace or school lunch restaurant)	20 %
Provision of recipes and ideas for use (e.g. on packaging of products, online, television, magazines, etc.)	18 %
Teaching and getting used to children and young people (e.g. teaching manufacturing and telling about the origins of raw materials)	13 %
Various advertising campaigns/fact sheets (marketed positively)	11 %
Tastings and presentations, for example, in shops	11 %
Products communicate clearly e.g. product benefits (e.g. protein content, ethics, healthiness)	11 %
Ease of use of plant-based products	8 %
Better visibility/ discoverability/ more attractive presentation in stores	8 %
Better availability/ bigger selection in stores	8 %

**Respondents who answered 'yes' (n=85) were asked an open question "What do you think might encourage Finns to reduce meat consumption and eat more plant proteins instead?". Open answers are categorized.*

The Future looks Bright - Plant-based proteins are well known and viewed positively

- Online research with young consumers (aged 16-22), n=300, 2018

Imagine yourself in the future. From the provided list, select the ones that you believe are going to increase/decrease in your personal life over the upcoming ten years, (n=300)

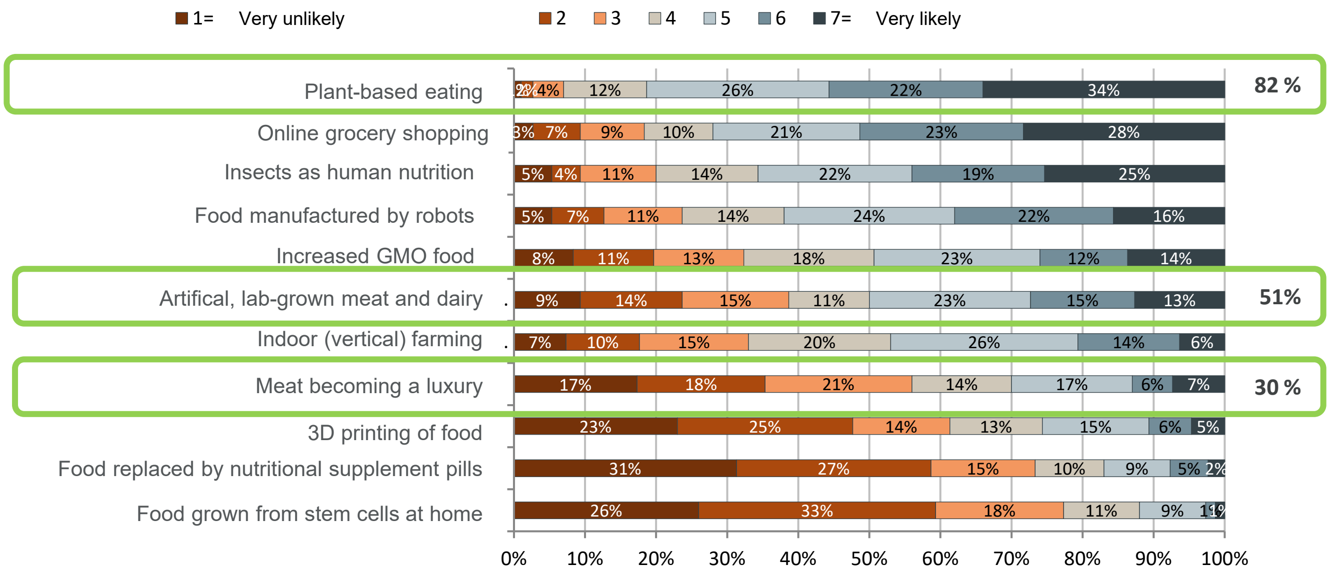


Young people believe that vegetables and vegetable proteins will play a larger role in their diet in the future. Meat consumption is expected to decrease.

Young consumers are expecting changes in their personal consumption behaviour

- Online research with young consumers (aged 16-22), n=300, 2018

On a scale of 1-7, how likely do you think the following phenomena will be common over the next 10 years?



- When asked about the likelihood of changes in the consumption and production of food on a general level, plant-based eating was the most likely phenomenon to gain ground.
- Lab-grown meat/dairy increasing was considered more likely than not
- Few thought meat was going to be a luxury product in the future

Attitudes and intentions are put into practice, if their implementation is made sufficiently easy

- Replacing liquid dairy products with plant-based alternatives seems to be easier than replacing meat. The cultural status of meat as part of the diet is strong and there is little desire to give it up altogether
- The supply of products is generally good, but more space for convenient alternatives to consumers' everyday lives and other consumption situations.
  - *Domesticity increases willingness to pay.*
- With new products, experiments are most often carried out at home, but at the same time consumers see public catering and food service as effective means to lower the threshold for experimenting with plant-based foods
- Confrontation and dietary blame are perceived as problems and should be avoided. The excessive meat-likeness of plant protein products also arouses partly conflicting feelings in vegetarians and mixed eaters alike.
  - On the other hand, positioning as 'meat-like' clarifies the possibilities of using products for the consumer and brings them closer to the habits used.