INDIVIDUAL VARIATION IN FOOD PERCEPTION AND IMPLICATIONS IN CONSUMER PREFERENCE OF SUSTAINABLE PRODUCTS

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STATE OF THE ART

Population growth, urbanization and ageing contribute to climate change (e.g., extreme temperatures, floods, storms) caused mainly by the increase of greenhouse gases (FAO, 2017). This will lead, in the near future, to negative consequences on population's diet such as limited access to nutritious food as well as higher demand for fast-food and energy dense foods which contribute to increase the incidence of non-communicable diseases (e.g., obesity and overweight). This scenario clearly indicates that consumers have a huge impact on climate change and strategies should be foreseen to foster the transition to sustainable and healthy diets. Unfortunately, healthy foods are often disliked or rejected by consumers because ingredients such as polyphenols and fibers are perceived as unpalatable being characterized by bitterness and astringency (Bucalossi et al., 2020; Laureati et al., 2016). In this context, the application of sensory and consumer science can make significant contributions in promoting healthy and sustainable diets (Witzel et al., 2019; Hartmann & Siegrist, 2017) through the optimization of innovative functional foods as well as the implementation of population-based educational interventions.

AIM OF THE PROJECT

The aim of the PhD project will be to explore consumers' attitude, expectations and perception of healthy, sustainable and plant-based foods including local and organic products, minor crops, and alternative protein sources with the purpose to make these products more acceptable to consumers. A further goal is to explore cross national differences in the determinants of acceptance and rejection of such products in different European countries.

EXPERIMENTAL PROCEDURE, OBJECTIVES & MILESTONES

Different flours from minor crops will be used to enrich plant-based food formulations. Sensory attributes, expectations and acceptability will be evaluated by a representative group of consumers. Sensory data will be also related to instrumental analysis for a comprehensive characterization of the products, as depicted below and alongside.

Tartary buckwheat and legumes flours → Corn based gluten-free food formulations → Consumers' acceptability and segmentation → Relation between sensory and chemical-physical data




STUDY OF MINOR CROPS

PSEUDOCEREALS	ALTERNATIVE PROTEIN SOURCES	ORGANIC PRODUCTS	CROSS-NATIONAL STUDIES	WRITING AND EDITING
• Evaluation of consumer's acceptability • Consumer segmentation and characterization • Relation of sensory data with instrumental analysis	• Evaluation of the effect of sustainable information on consumers' expectations • Evaluation of sustanability commitment on consumer acceptability • Relation of sensory data with instrumental analysis	• Evaluation of sensory properties trough innovative methods • Evaluation of consumer's acceptability • Relation of sensory data with instrumental analysis	• Exploration of attitudes towards the consumption of meat substitutes, organic and functional foods with high nutritional value in consumers of different nationalities	• PhD thesis • Scientific papers • Oral and / or communications
EXPECTED RESULTS: Sensory optimization of new functional and sustainable food formulations	EXPECTED RESULTS: Sensory optimization of new functional and insight on consumers' expectations of sustainable food formulations	EXPECTED RESULTS: Development of new sensory approaches to explore products' charachteristics	EXPECTED RESULTS: Insights on cross-national differences in consumers' attitudes and acceptance of sustainable food formulations	

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