



General information	
PPP-number	DFI-AF-19011
Title	Making use of flavours to increase consumer acceptance of novel healthy food products
Theme	Consument & Maatschappij
Implementing institute	Wageningen Food & Biobased Research
Project leader research (name + e-mail address)	Monique Vingerhoeds monique.vingerhoeds@wur.nl
Coordinator (on behalf of private partners)	Daisuke Kaneko d.kaneko@kikkoman.nl
Project-website address	https://www.wur.nl/nl/Onderzoek-Resultaten/Onderzoeksprojecten-LNV/Expertisegebieden/kennisonline/Making-use-of-flavours-to-increase-consumer-acceptance-of-novel-healthy-food-products.htm
Start date	1-8-2019
Final date	31-7-2021

Approval by the coordinator of the consortium	
The annual report must be discussed with the coordinator of the consortium. The "TKI's" appreciate additional comments concerning the annual report.	
Assessment of the report by the coordinator on behalf of the consortium:	<input checked="" type="checkbox"/> X Approved <input type="checkbox"/> Not approved
Additional comments concerning the annual report:	No comments by coordinator

Summary of the project	
Problem definition	In order to help consumers change their diet towards more healthy and sustainable foods, knowledge is required in about how food habits are formed based on the familiarity of the food flavours, and under which circumstances these habits can be changed. This knowledge development is hampered by the limitations of our response measurements. Traditional food testing involves participants that are requested to focus on the products after which they formulate their responses using for example rating scales for liking or sensory attributes, which goes against most normal consumer behaviour. In daily life, most food-related decisions are made automatically, based on situational cues that consumers are hardly ever aware of. Alternative measurements that do not rely on consumers explicit thinking their choices through, need to be developed. Implicit measurements can be employed, such as physiological responses but also observation of specific behavioural responses of the actual choices made in manipulated situations. Recent studies suggest that these measures may better relate to real-life repeated food choices than existing measures.
Project goals	The aim of this project is threefold: 1) to investigate the development of familiarity and acceptance of food products with new flavours (either reduced existing flavours, new flavours or new flavour combinations), 2) to gain insight in the effect of congruent and non-congruent food combinations in food acceptance, and

	3) to further develop a research tool kit consisting of implicit and explicit tests that monitor consumer acceptance during repeated exposures.
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Results	
Planned results 2019	A first study on variables such as consumer expectations, congruency, and neophobia for familiar flavours, modifications of familiar flavours, or combinations of familiar and unfamiliar flavours with existing response measurements.
Achieved results 2019	<p>A consumer study was done to answer the research questions:</p> <ol style="list-style-type: none"> 1. How does (expected) congruity of product-flavour combinations affect hedonic experience /liking? 2. How does prior knowledge about individual products/flavours shape expectations about their combinations? 3. How does expected liking relate to experienced liking? <p>Participants tasted different combinations of flavours and foods. Some of these combinations were more fitting – or more congruent- than others. Prior to tasting, participants received various levels of information regarding the combinations.</p> <p>First preliminary results show that prior knowledge about a congruent product-flavour combination increases expected liking and (assumedly) less congruent product-flavour combinations are expected to taste worse. Liking patterns after tasting differ from anticipated liking patterns (before tasting); the differences in liking between conditions are smaller after tasting.</p>
Planned results 2020	<p>Analysis and preparation of a publication of the study done in 2019.</p> <p>A follow up study aiming to explore relationships between implicit and explicit measures of product emotions elicited by anticipated and actual tastes of unfamiliar congruent and non-congruent flavor-food combinations. Similar product/flavour combinations will be used as in the previous study. However in this study participants’ facial expressions, EEG activity, heart rate and skin conductance will be recorded during the explicit measurements.</p> <p>Prepare and execute a study on longer term development and maintenance of flavour acceptance (~3 months) using the results of the first two phases and the improved response methodologies.</p>

Deliverables/products in 2019 (provide the titles and /or a brief description of the products/deliverables or a link to a website.)
<u>Scientific articles:</u> Too early (project just commenced)
<u>External reports:</u> Too early (project just commenced)
<u>Articles in professional journals/magazines:</u> Too early (project just commenced)
<u>(Poster) presentations at workshops, seminars, or symposia.</u> Too early (project just commenced)
<u>TV/ radio / social media / newspaper:</u> Too early (project just commenced)
<u>Remaining deliverables (techniques, devices, methods, etc.):</u> Too early (project just commenced)