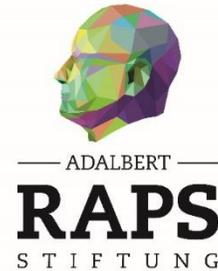


«OPTIMIERUNG DER AROMA- UND GESCHMACKEIGENSCHAFTEN VON PFLANZLICHEN EI-ALTERNATIVEN MIT CLEAN-LABEL-ANSATZ»

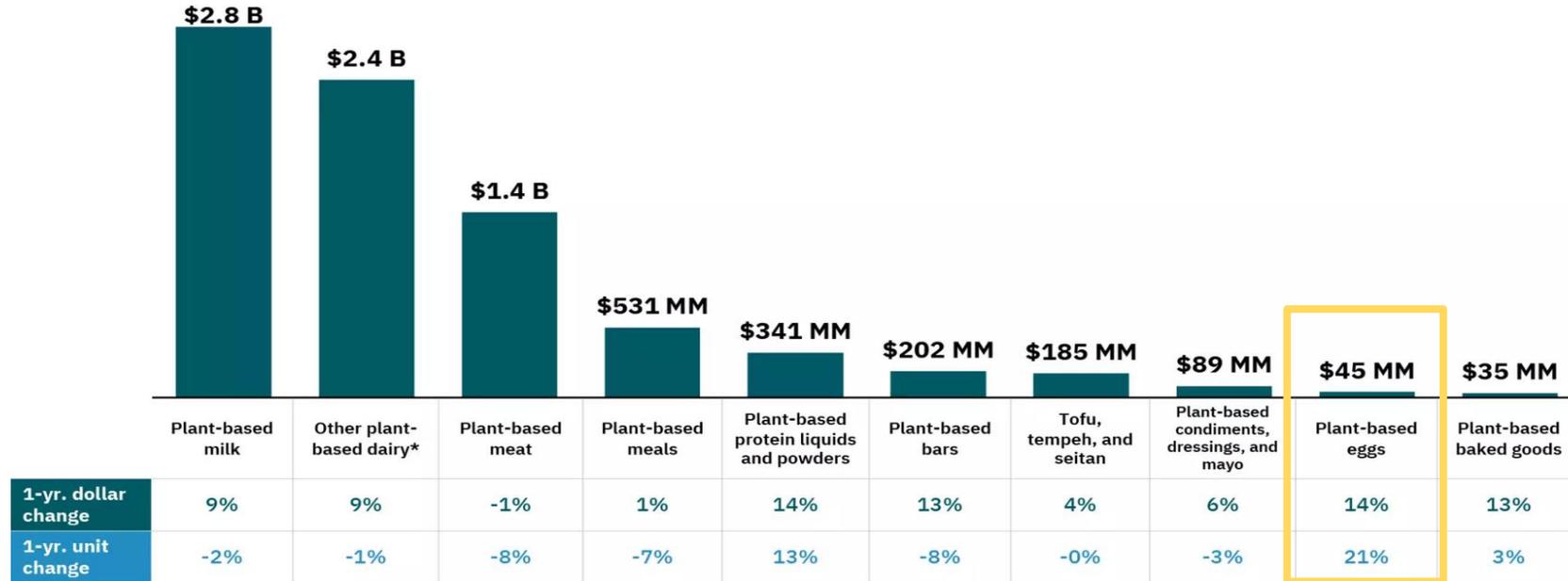


Regenerative Lebensmittelherstellung

Wädenswil, 31.1.2024



Marktdaten: Pflanzenbasierte Alternativprodukte



Sales data note: The data presented in this graph is based on custom GFI and PBFA plant-based categories that were created by refining standard SPINS categories. Due to the custom nature of these categories, the presented data will not align with standard SPINS categories.

*Other plant-based dairy includes the following plant-based categories: creamer, ice cream and frozen novelty, yogurt, cheese, butter, ready-to-drink beverages, and cream cheese/sour cream/spreads.

Source: SPINS Natural Grocery Channel, SPINS Conventional Multi Outlet Channel (powered by Circana, formerly IRI & NPD) | 52 Weeks Ending 1-1-2023

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Abbildung 1. Plant-based food dollar sales and dollar sales growth by category (2023) (Good Food Institute, 2023)

Gründe für pflanzenbasierte Eiprodukte

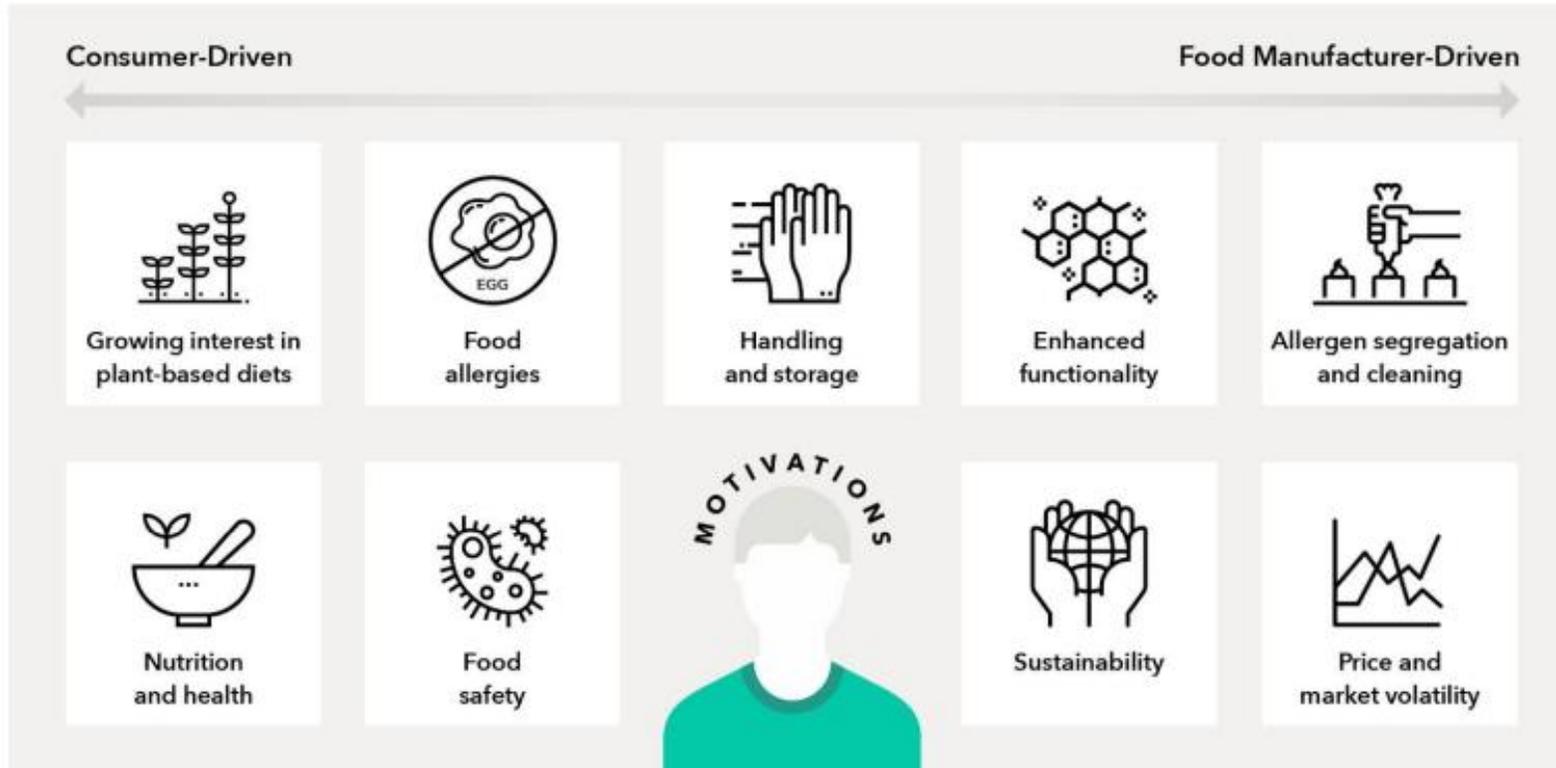
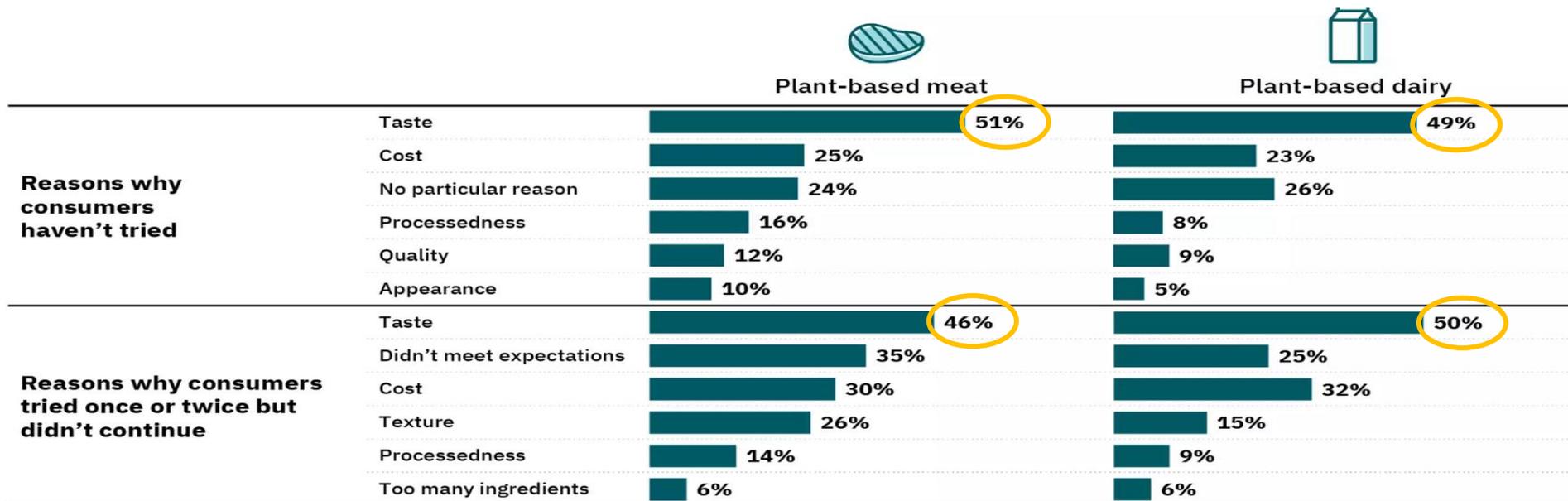


Abbildung 2: aus «Plant-based egg alternatives Optimizing for functional properties and applications», 2021

Pflanzenbasierte Produkte & Geschmackseigenschaften

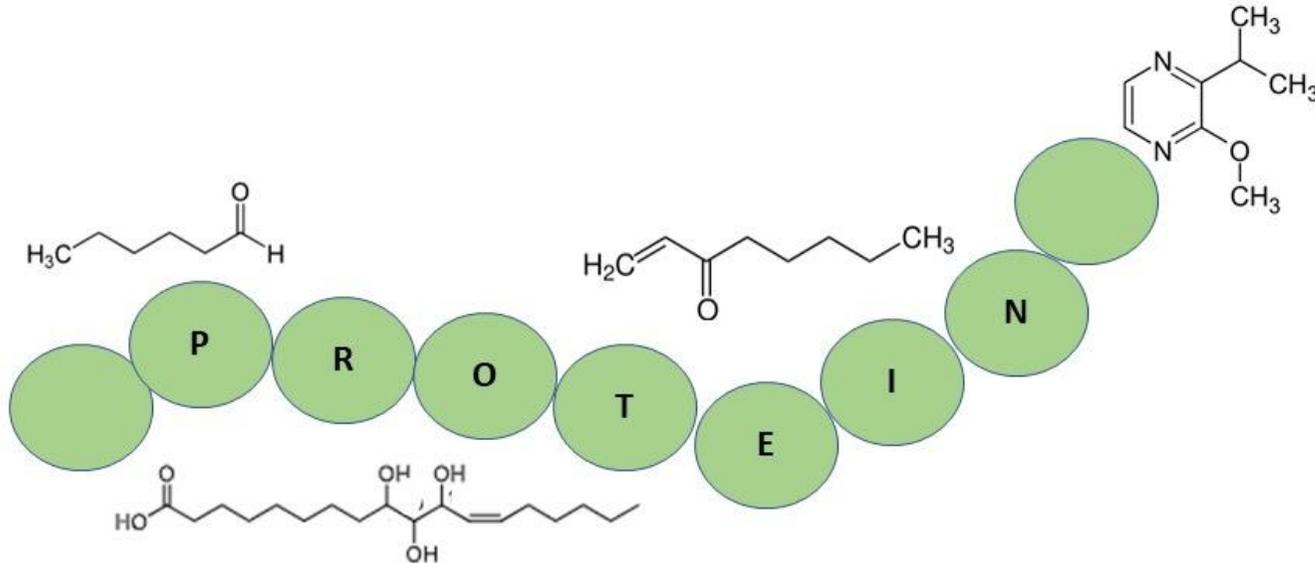


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Abbildung 3: aus *The power of Plant-Based Foods and Beverages 2022*, Good Food Institute, Inc.

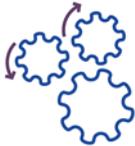
Pflanzenbasierte Produkte: Aroma- und Geschmackseigenschaften



Off-flavours:

- grüne & erbsige Geruchsqualitäten
- Bitterkeit & Adstringenz

Strategien zur Minimierung:

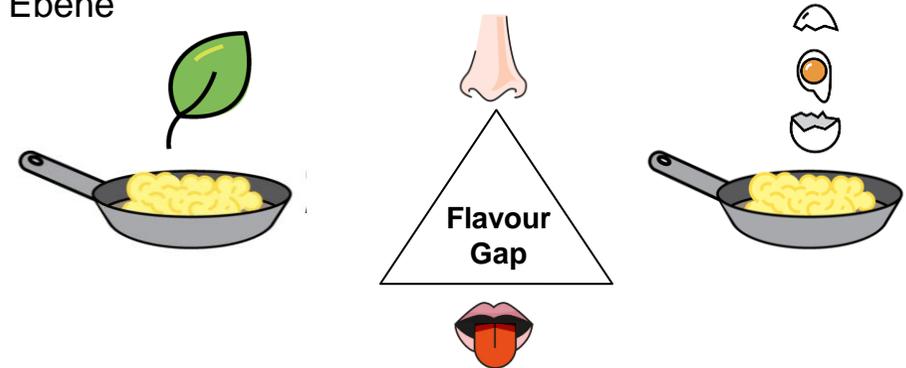
- Optimierung der Prozessierung 
- Fermentation 
- Einsatz von Flavours 

Optimierung von Aroma- und Geschmackseigenschaften von pflanzlichen Ei-Alternativen



Ziele des Projektes:

- Optimierung der Aroma- & Geschmackseigenschaften von pflanzenbasiertem Ei
- Definition des «Flavour Gaps» zwischen Hühner-Rührei & pflanzenbasiertem Rührei auf molekularer Ebene



Optimierung von Aroma- und Geschmackseigenschaften von pflanzlichen Ei-Alternativen



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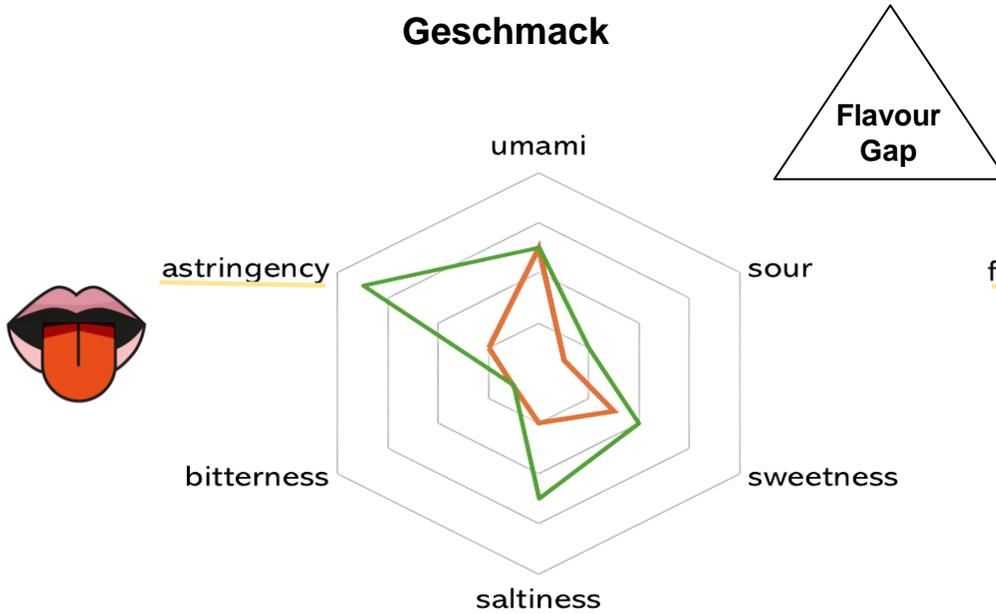
- Imitation des typischen «Hühnereiaromas»
- Minimierung des untypischen «Hühnereinoten»

Mit Clean-Label Ansatz

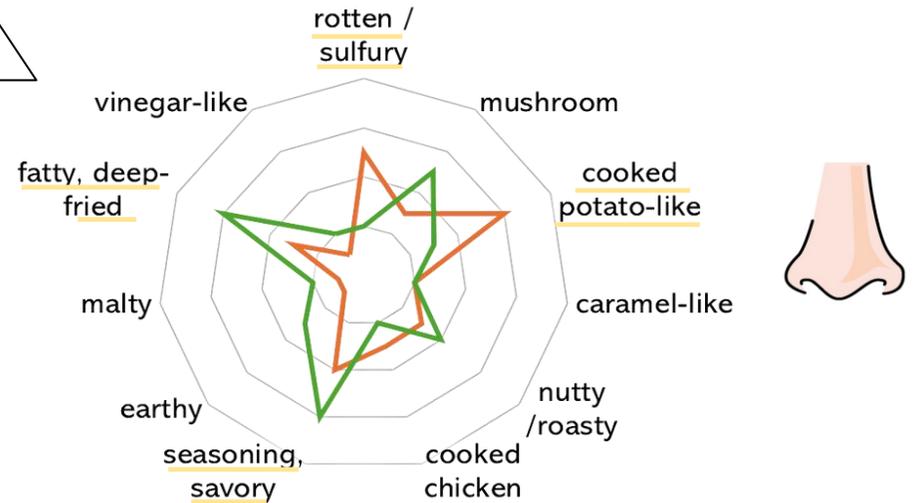


Aroma- und Geschmackseigenschaften: pflanzenbasiertes Rührei vs. Hühner-Rührei

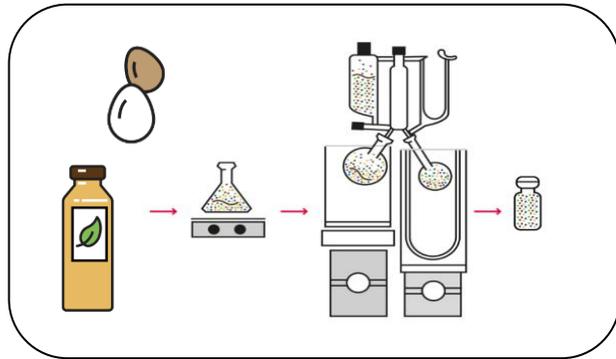
Geschmack



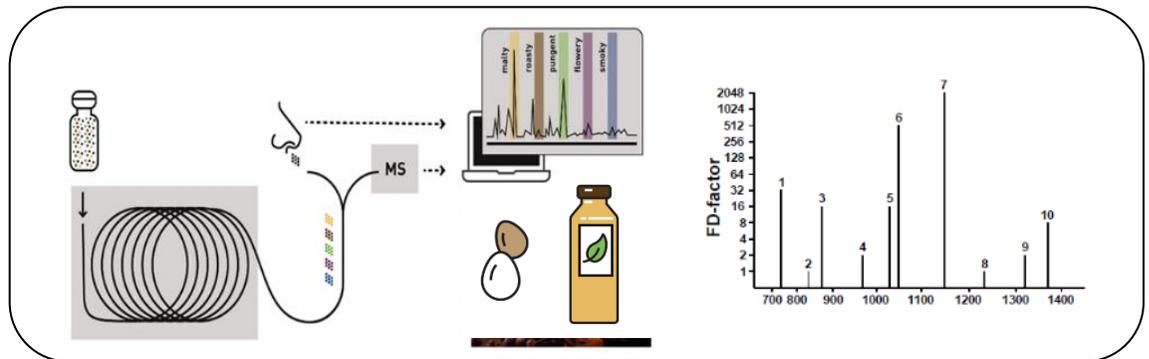
Aroma



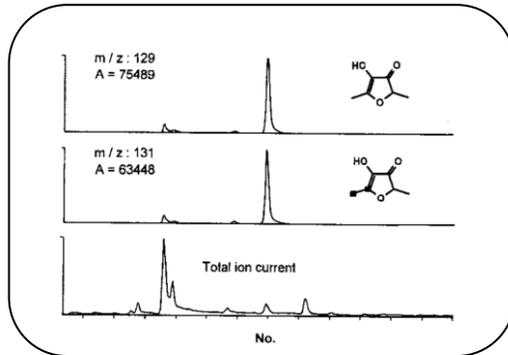
Molekulare Definition des Aroma- und Geschmacksunterschiedes zwischen pflanzlichem Rührei und Hühner-Rührei



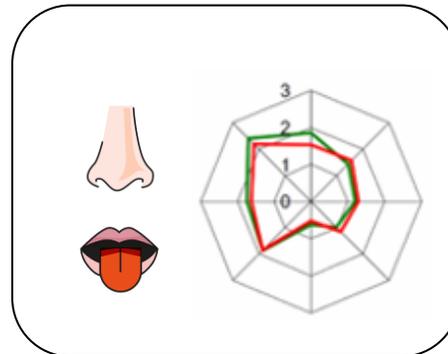
Isolation der flüchtigen Verbindungen über SAFE



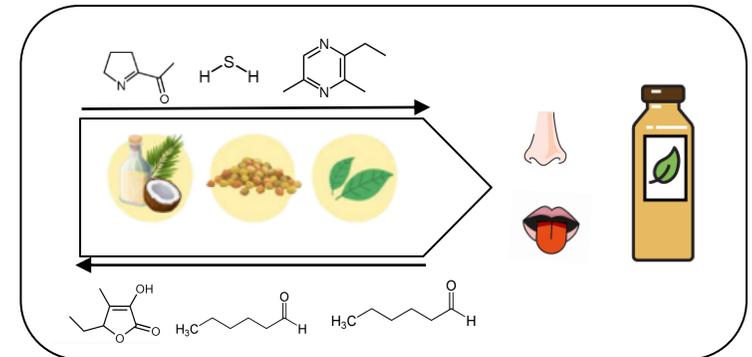
Identifikation der aroma-aktiven Verbindungen über Gaschromatographie - Olfaktometrie



Quantifizierung der wichtigsten Aroma- & Geschmacksstoffe, sowie ihrer Präkursoren

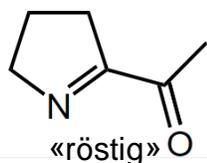
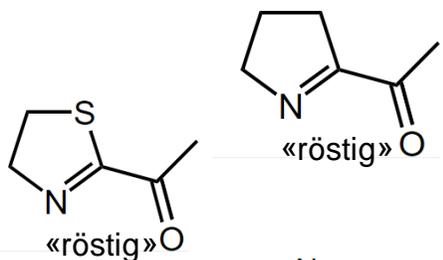


Überprüfung der Relevanz der Aroma- und Geschmacksstoffe

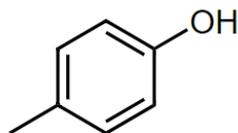
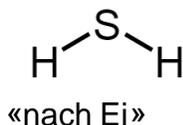
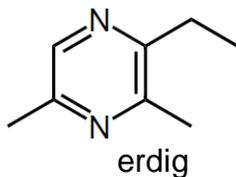


Optimierung des «Flavour Gaps» mit pflanzlichen Zutaten «Clean Label Ansatz»

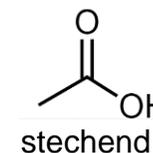
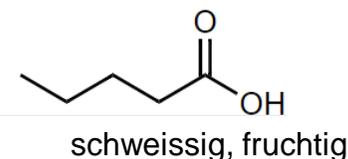
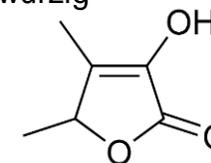
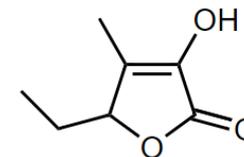
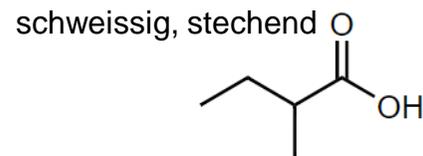
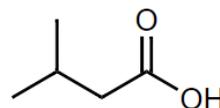
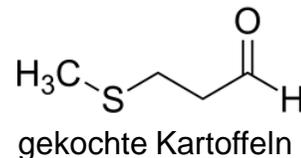
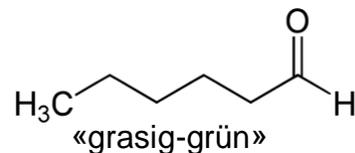
Das «Aroma-Gap» Hühner-Rührei vs. pflanzenbasiertes Rührei



«röstig»



Schlüsselaromastoffe im
Hühner-Rührei

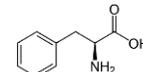
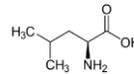
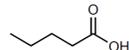
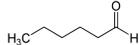
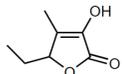
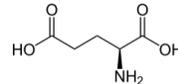
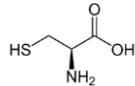
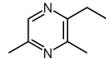


Schlüsselaromastoffe im
pflanzenbasierten Rührei



Optimierung der Aroma- & Geschmackseigenschaften von pflanzenbasiertem Rührei

«Imitation der typischen «Ei-Noten»



«Minimierung der untypischen Ei-Noten»

Vielen Dank

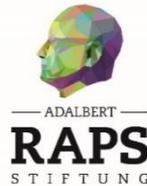
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- Dr. Peter Gläser



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- Josefine Schneider



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- Sarah Bantle

