

ENCOURAGING LEGUME CONSUMPTION

Results of a Nudging Experiment in Rema1000 stores

Revised version, December 2024

PlantPro: Accelerating an efficient green consumer transition |
Funded by Innovation Fund Denmark | grant nr 0224-00044B



Research Idea

Test in-store interventions to increase sales of legumes

Food consumption high adverse impacts on climate & environment

(Rockström et al., 2009)

Protein-rich plant-based foods have low climate impacts

e.g., beef produces 35 times the emissions of legumes, per kilogram

(Poore and Nemecek, 2018; Martini et al., 2021; Reynolds et al., 2023)

Dietary guidelines: Eat less meat – choose pulses, vegetables & fish

Big gap: e.g. 100g/day of legumes recommended *versus* 4g/day consumed

Create opportunities in supermarkets for consumers who are not actively looking for plant-based foods



Brick-and-mortar store

How to create opportunities for customers who are not actively looking for plant-based foods?

Placement intervention in the vegetable section to target customers who are not actively searching for legumes

Combining bundling placement with recipe poster to overcome barriers to consumption of legumes (lack of cooking skills, lack of inspiration, food neophobia, etc.)

Bundling placement reduces search efforts and requires less information processing (Harris & Blair, 2006); increases sales and value perception (Moran et al. 2019; Sharpe & Staelin, 2010)

REMA 1000
Meget mere discount!

Pasta pesto med kikærter

Pasta
+
Kikærter
+
Pesto
+
Røde peberfrugter
+
Cucumber
=
Find opskriften her

Study design

Pilot round of data collection

12 Test stores, 10 Control stores

3 types of interventions:

- Bundling placement with recipe poster
- Bundling placement without recipe poster
- Recipe poster without bundling placement

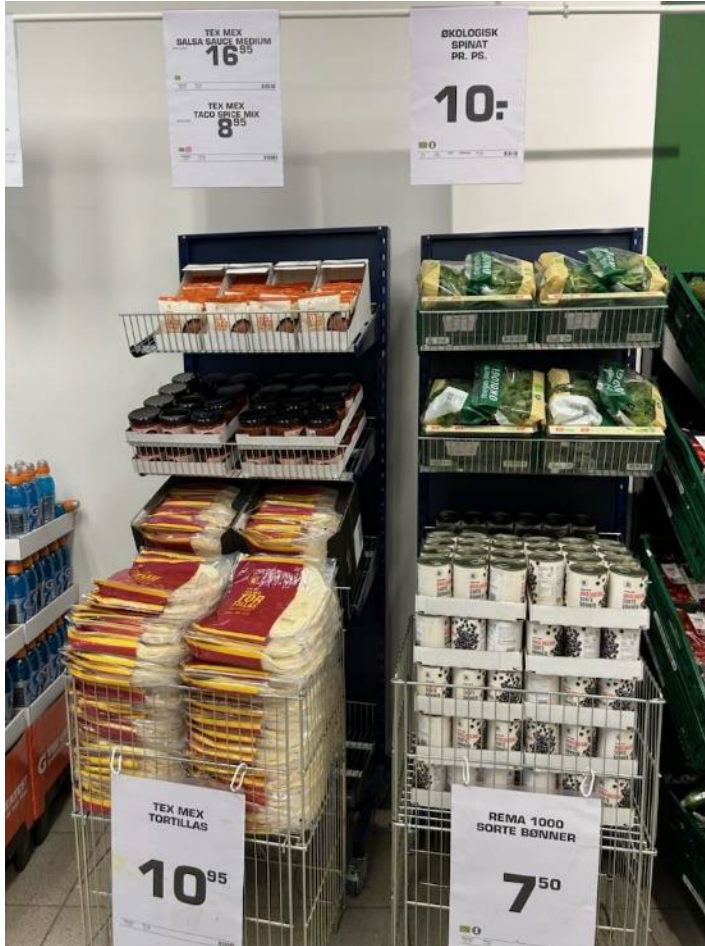
Test period: 1 week (7 days) in September 2023



Bundling placement plus recipe poster



Bundling Placement without poster



Results of pilot round – Sales of beans



Bundling Placement

142% increase in sold cans

7.0 more cans per shop per day ($p=0.040$)

Bundling Placement + Recipe Poster

67% increase in sold cans

2.7 more cans per shop per day ($p=0.087$)

Recipe Poster

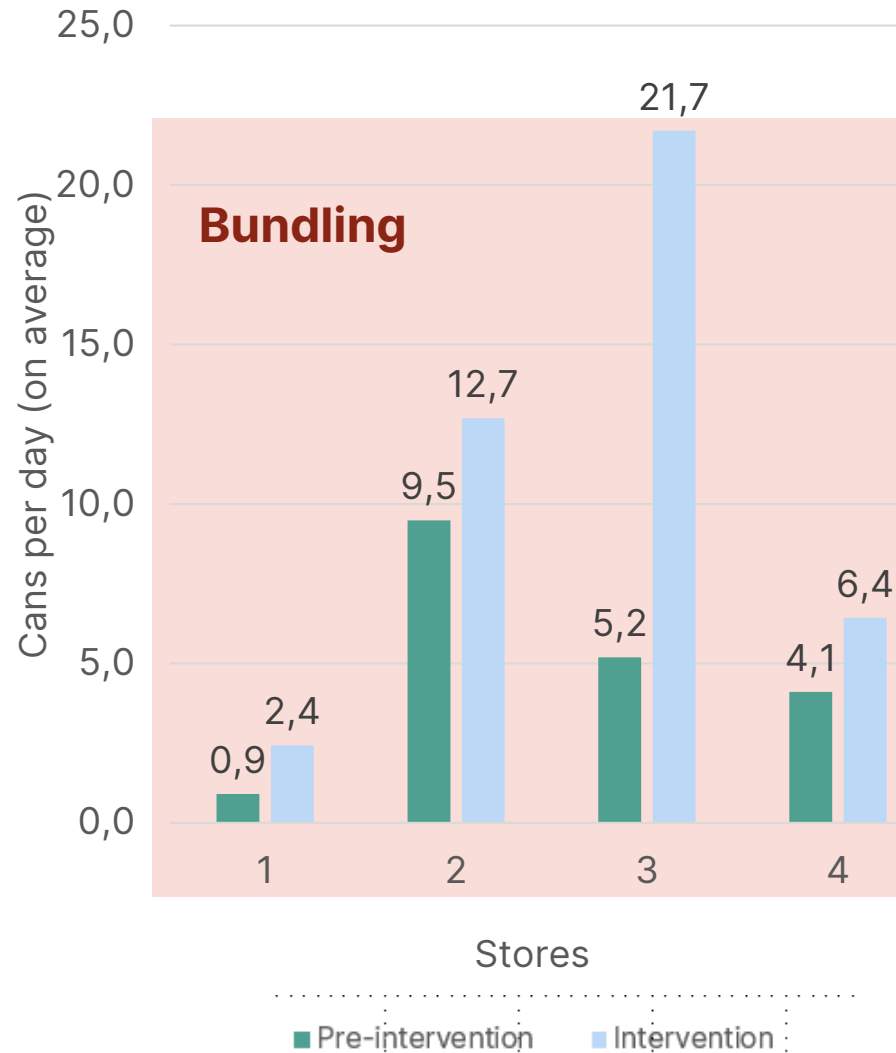
no significant effect

Careful

with comparing the results between the two groups:

large variations in how the bundling placement and the poster was set up

Differences between stores



Store 1



Store 2



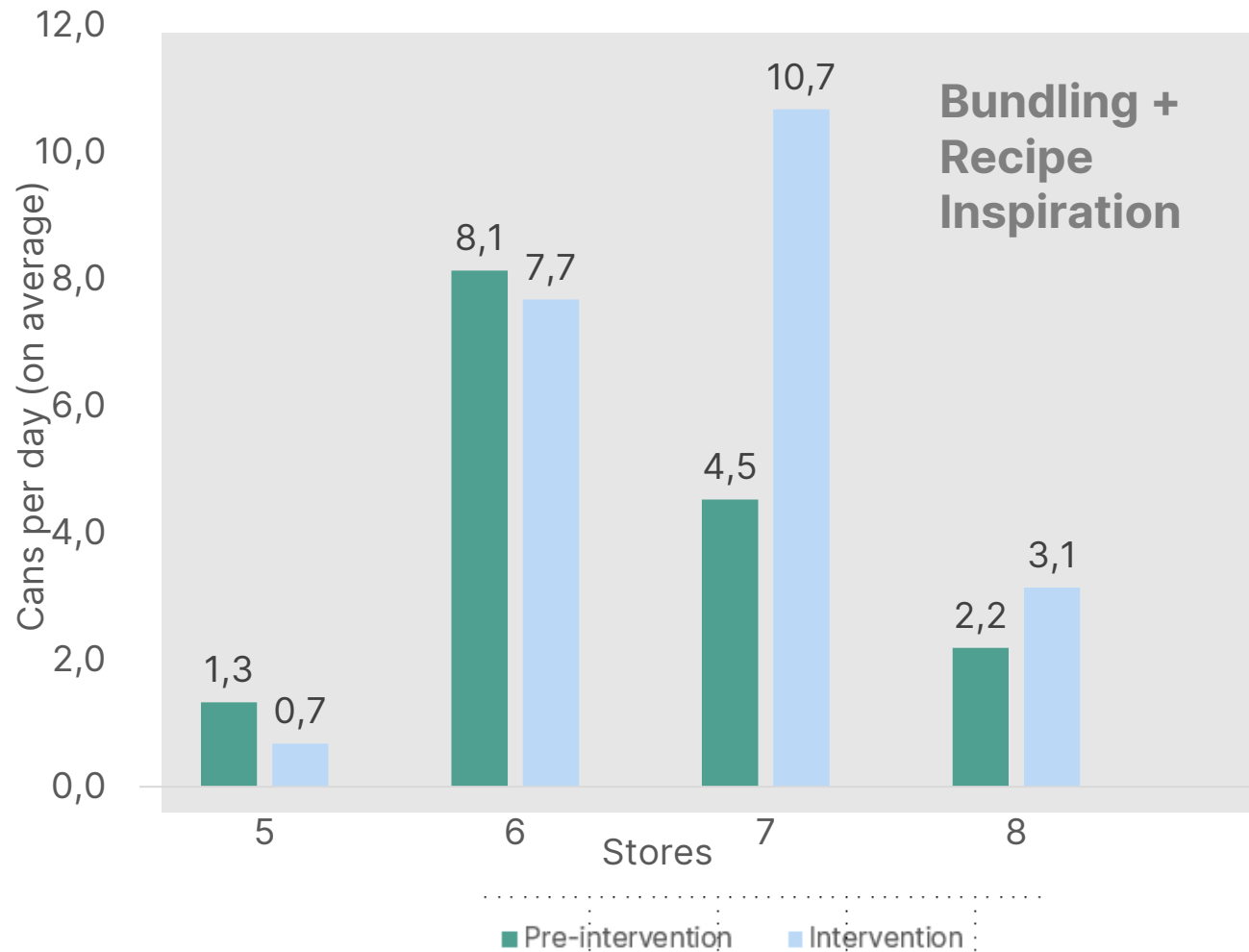
Store 3



Store 4



Differences between stores



Store 5



Store 6



Store 7



Store 8



Main round of data collection

9 Test stores, 13 Control stores

Bundling placement with recipe poster in all test stores

Test period: 1 week (7 days) in November 2023

Pasta pesto med kikærter



The poster features a vertical list of ingredients on the left, each preceded by a green plus sign, and a final green equals sign at the bottom. The ingredients are: a package of 'PASTA SKIVER', a can of 'KIKÆRTER', a jar of 'RED PESTO', two red bell peppers, and a cucumber. To the right of this list is a photograph of a plate of pasta with chickpeas, tomatoes, and basil. In the bottom right corner of the poster, there is a QR code with the text 'Find opskriften her' (Find the recipe here) next to it.

Examples main round of data collection



Study 2

Results main round – Effect of intervention

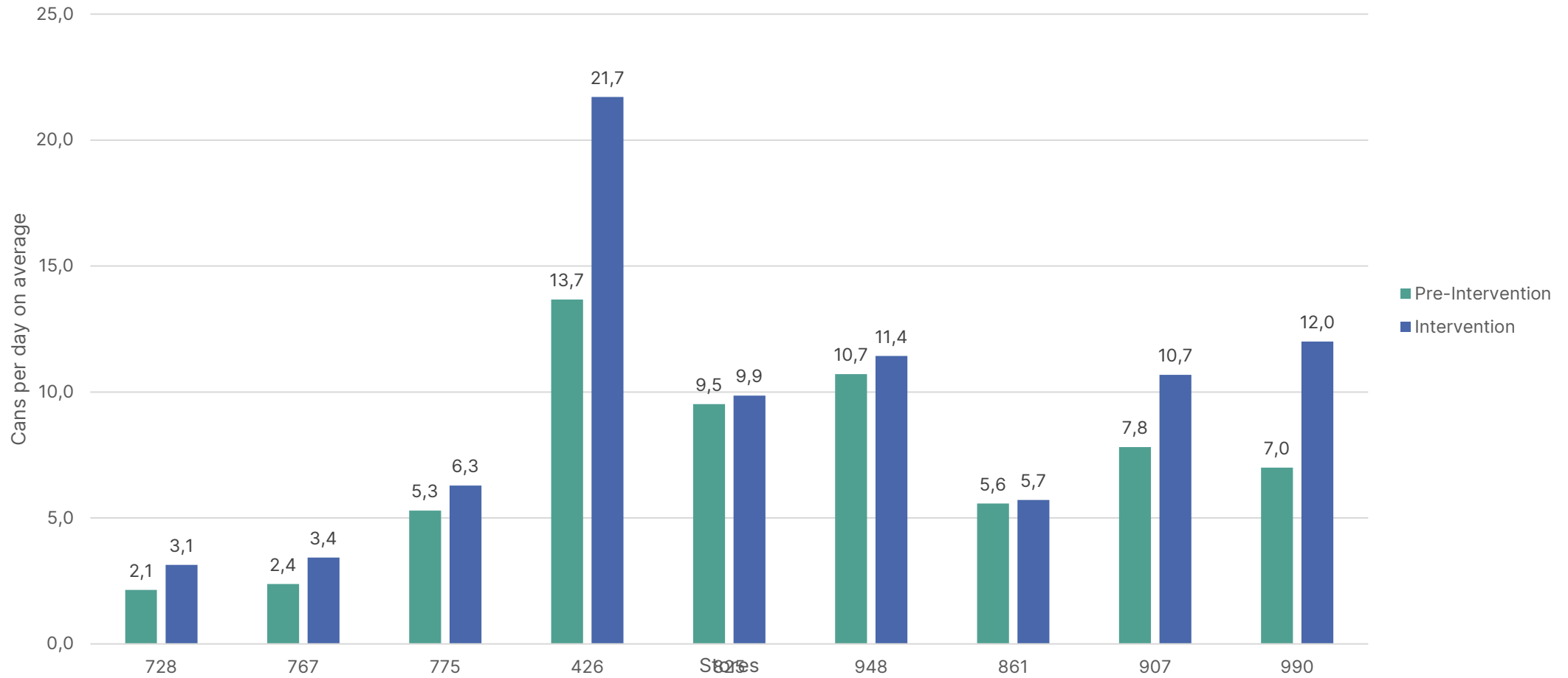
+3.7 cans of chickpeas more per store per day

significant increase of 52%



Difference-in-difference model with standard errors clustered on the store level, no further control variables included.

Differences between stores



Best practice examples



Store 1



Store 4



Store 9

Results of additional in-store customer survey

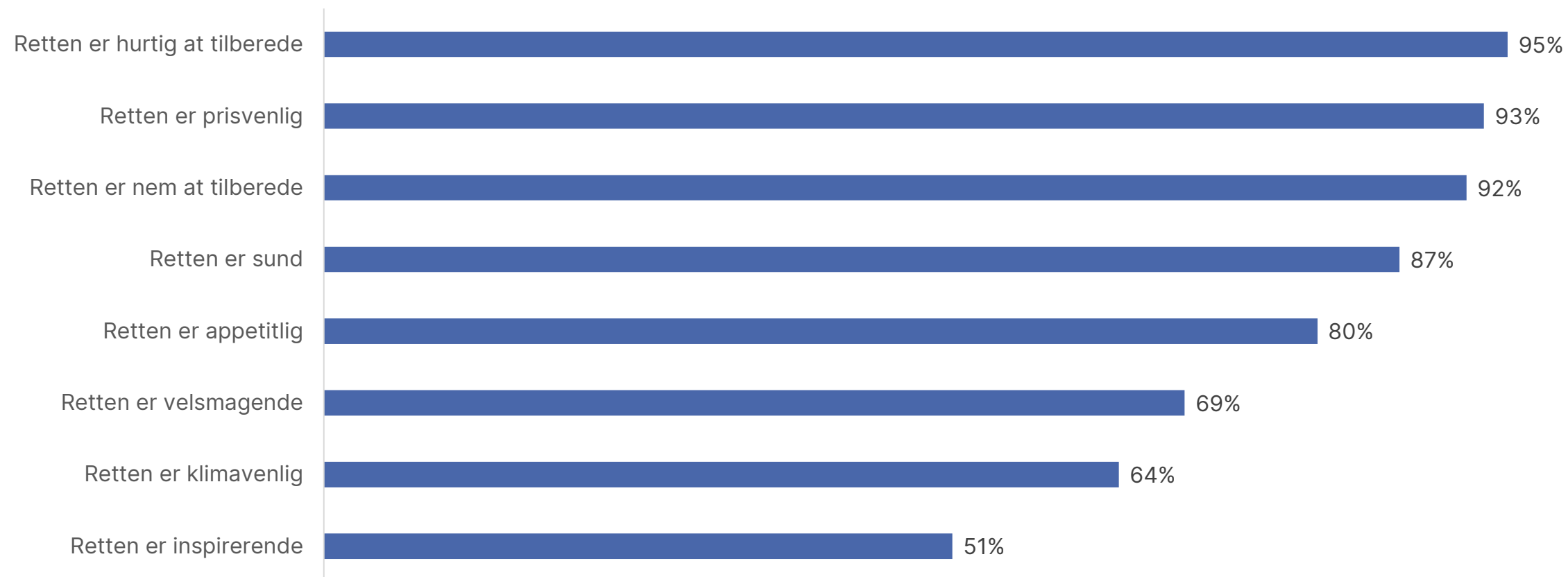


Results of additional in-store customer survey



Sum: "meget enig" & "enig", N=78 customers

Results of additional in-store customer survey



Sum: "meget enig" & "enig", N=78 customers

Results from the qual interviews

Positive perceptions towards the campaign:

- Convenient and practical for those unsure about meal planning
- Bundling a meal with legumes
- Good placement near the entrance
- Budget-friendly

"Fint, hvis man ikke selv kan finde ud af at sammensætte det"

"Det er en rigtig god ide at sætte alle produkter til en ret ja sammen og jeg tænker det gør forbrugsoplevelsen nemmere hvis man ikke skal hele butikken rundt"

"Det er også en god måde at vise hvordan man kan sammensætte bælgfrugter sammen i en ret"

Negative perceptions towards the campaign:

- Lack of awareness and understanding about campaign's purpose
- Invisibility or unnoticed signage
- Not organic & local produce
- Simple and boring dish
- Only somewhat healthy

"Jeg kiggede faktisk på det, fordi jeg var i tvivl om der var et slags tilbud"

"Jeg lagde mærke til, at det ikke plejer at være der. Og at der var en kombination, men jeg så ikke pasta pesto skiltet"

"Jeg foretrækker at handle økologisk"

"God idé med bundling, men kedelig opskrift. Og ikke særlig sundt med hvid pasta"

Conclusions

- Making consumers aware of the potential of legumes is promising
- Bundling and bundling with an additional recipe inspiration poster works well
- Just showing a recipe inspiration has no effect on sales
- Improve attractiveness and make campaign easily understandable for customers



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Project reports
& publications



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