

NUDGING IN SUPERMARKETS

Measures for increasing purchases
of plant-based protein foods

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Research Idea

Test in-store interventions to increase sales of plant-based proteins

Protein-rich plant-based foods have low climate impacts

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

Dietary guidelines: Eat less meat – choose pulses & vegetables

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

Two studies conducted with two supermarket chains in Denmark

nemlig.com



Real online supermarket

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

The screenshot shows the nemlig.com website interface. At the top, there is a navigation bar with links for 'Erhverv', 'Ansvarlighed', 'Om nemlig.com', 'Kundeservice', 'Log ud', and 'Mit nemlig'. Below this is the nemlig.com logo and a search bar containing the text 'Søg blandt mere end 9.000 varer og opskrifter'. To the right of the search bar, there is a delivery time selector and a price indicator '0,00 kr.' with a shopping cart icon. A dark green navigation bar contains categories: 'DAGLIGVARER', 'TILBUD', 'VIN OG SPIRITUS', 'MÅLTIDSKASSER', 'GÅRD- OG SPECIALBUTIKKER', 'FAVORITTER', 'OPSKRIFTER', 'KAMPKLAR', 'SOMMER', and 'GRILL'. A dropdown menu is open under 'DAGLIGVARER', listing various food categories. The 'Plantebaseret m.m.' category is highlighted with a blue arrow pointing from the text 'Meat substitutes' on the left. Other categories in the dropdown include 'Nye varer og inspiration', 'Frukt og grønt', 'Kød og fisk', 'Pålæg', 'Mejeri', 'Middagsretter', 'Frost', 'Brød, kiks og kager', 'Kolonial', 'Drikkevarer', 'Blomster og planter', and 'Slik og snacks'. The main content area features a large image of a meal with the text 'ge til Sankt hans' and 'g fristende opskrifter'. A circular orange badge on the right says 'Sankt Hans 23. Juni'. At the bottom right, there is a 'Kontakt os' button. The browser's address bar shows 'https://www.nemlig.com/dagligvarer'.

Meat substitutes

Legumes

nemlig.com
DAGLIGVARER NÅR DET PASSER DIG

Søg blandt mere end 9.000 varer og opskrifter

Vælg leveringstid
Se leveringsgebyrer

0,00 kr.
+Tillæg og gebyrer

DAGLIGVARER TILBUD VIN OG SPIRITUS MÅLTIDSKASSER GÅRD- OG SPECIALBUTIKKER FAVORITTER OPSKRIFTER KAMPKLAR SOMMER GRILL

Nye varer og inspiration >
Frukt og grønt >
Kød og fisk >
Plantebaseret m.m. >
Pålæg >
Mejeri >
Middagsretter >
Frost >
Brød, kiks og kager >
Kolonial >
Drikkevarer >
Blomster og planter >
Slik og snacks >

ge til Sankt hans
g fristende opskrifter

Sankt Hans 23. Juni

Kontakt os

https://www.nemlig.com/dagligvarer

Placement interventions

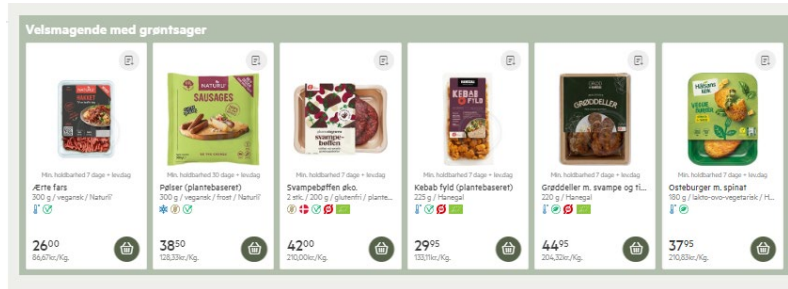
How effective are placement interventions in different sections of the store?

Method Field experiments in real online store in summer 2023 with A/B testing



Design Placement of plant-based foods in different supermarket sections

Meat substitutes



Round 1

Meat section



“Tasty alternatives”

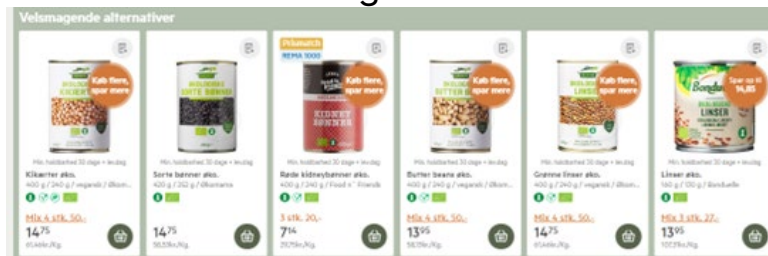
Round 2

Vegetable section



“Tasty with vegetables”

Legumes



Vegetable section



“Tasty with vegetables”

Meat section



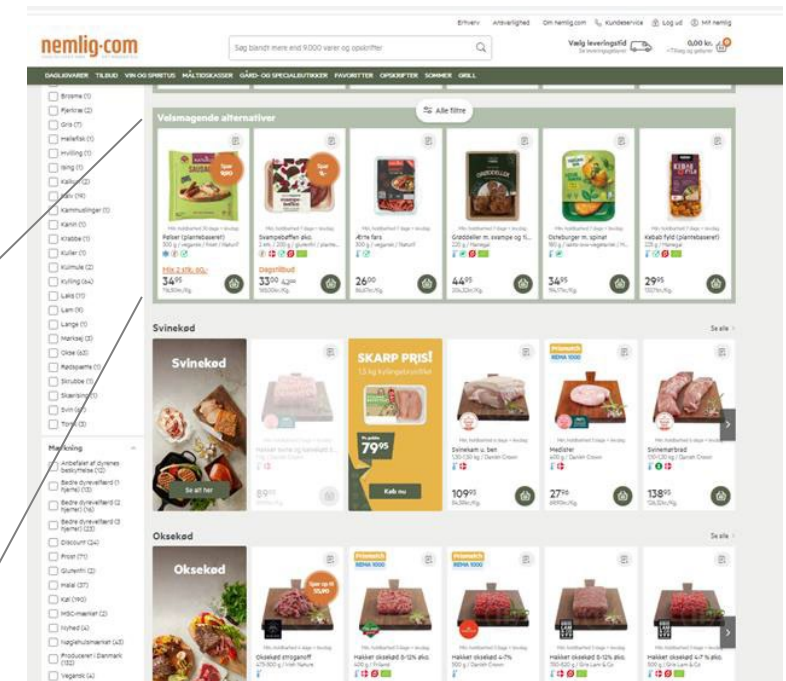
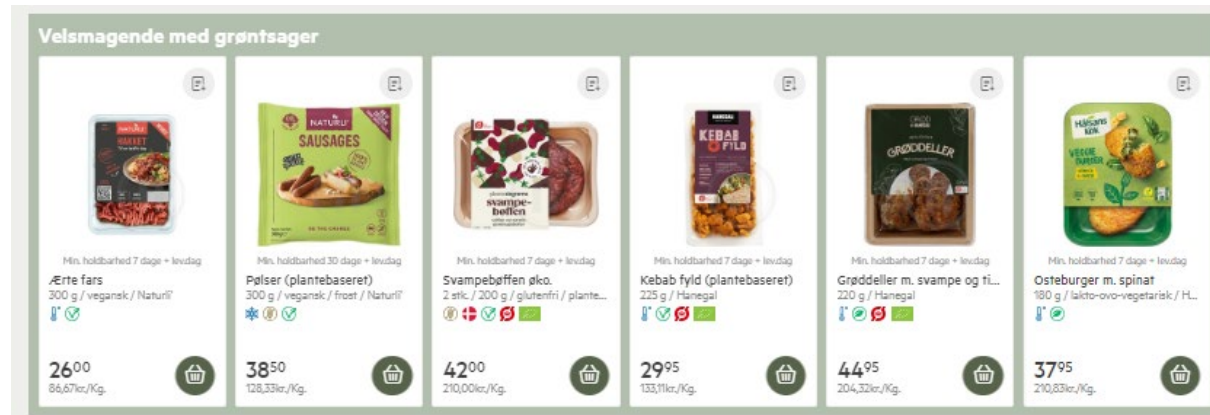
“Tasty alternatives”

Results – Meat substitutes in the **meat section**

A/B testing over three-week period in June 2023

	Control group = normal meat page	Treatment group = meat page with meat substitutes
Sessions	10,754	9,930
Orders with a target product	6	12
# of target products sold	10	19

100% increase but no significant effect
(proportions z-test)



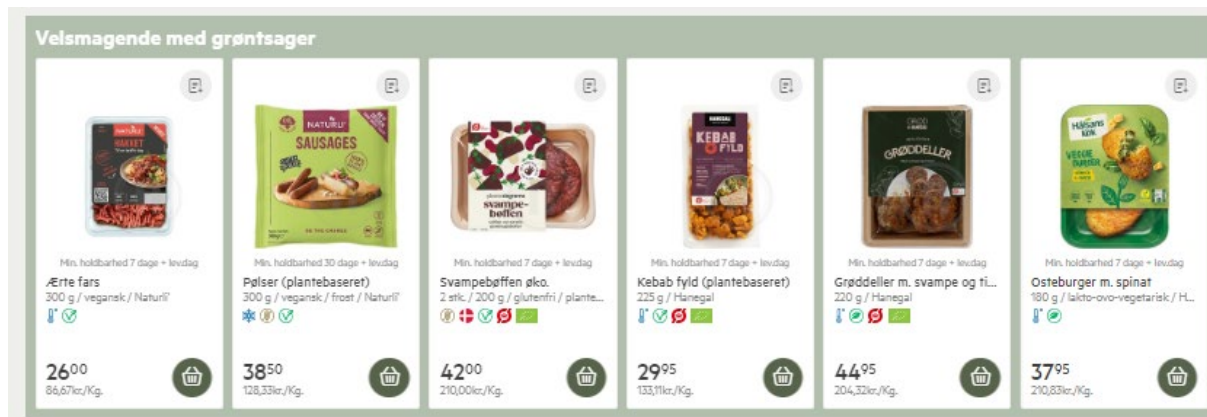
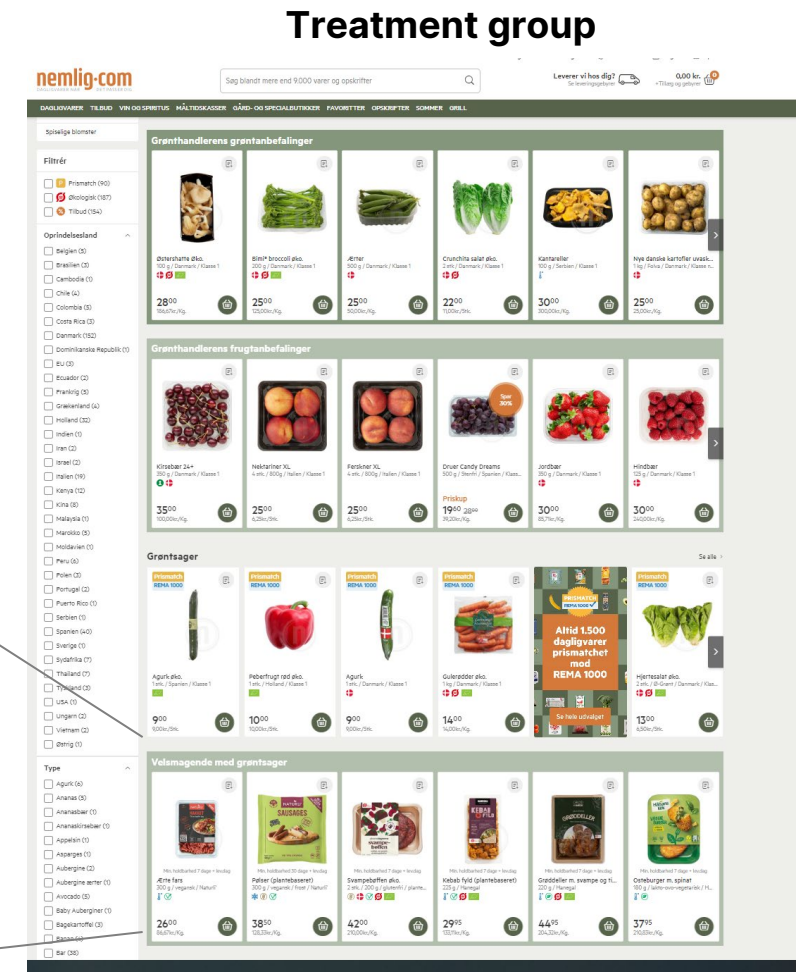
Treatment group

Results – Meat substitutes in the vegetable section

A/B testing over three-week period in August 2023

	Control group = normal vegetable page	Treatment group = vegetable page w/ meat substitutes
Sessions	12,770	11,689
Orders with a target product	10	17
# of target products sold	21	24

no significant effect (proportions z-test)

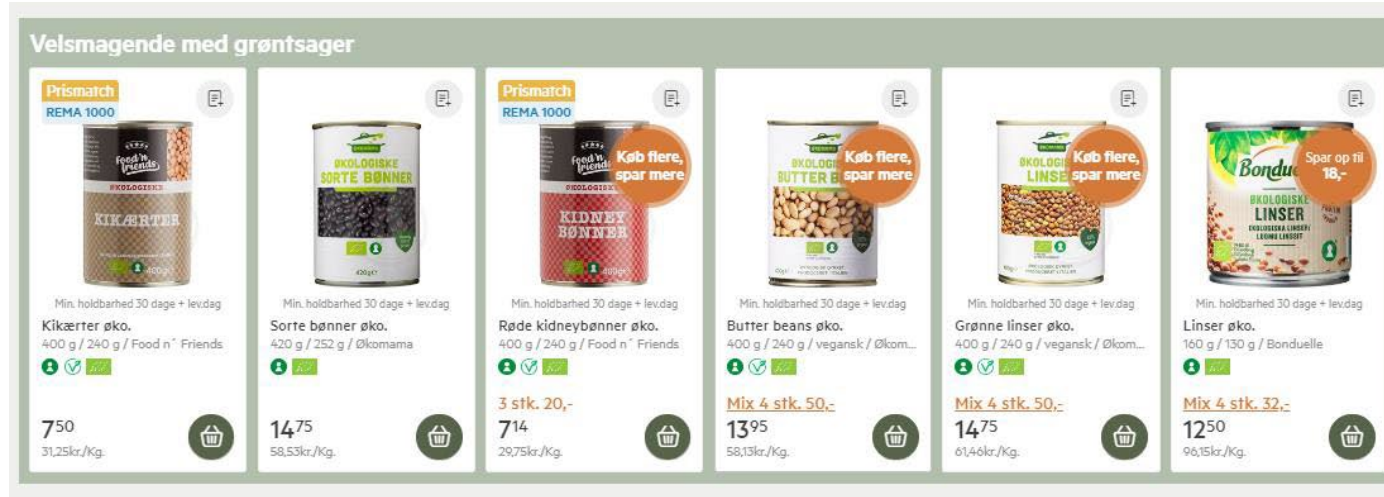
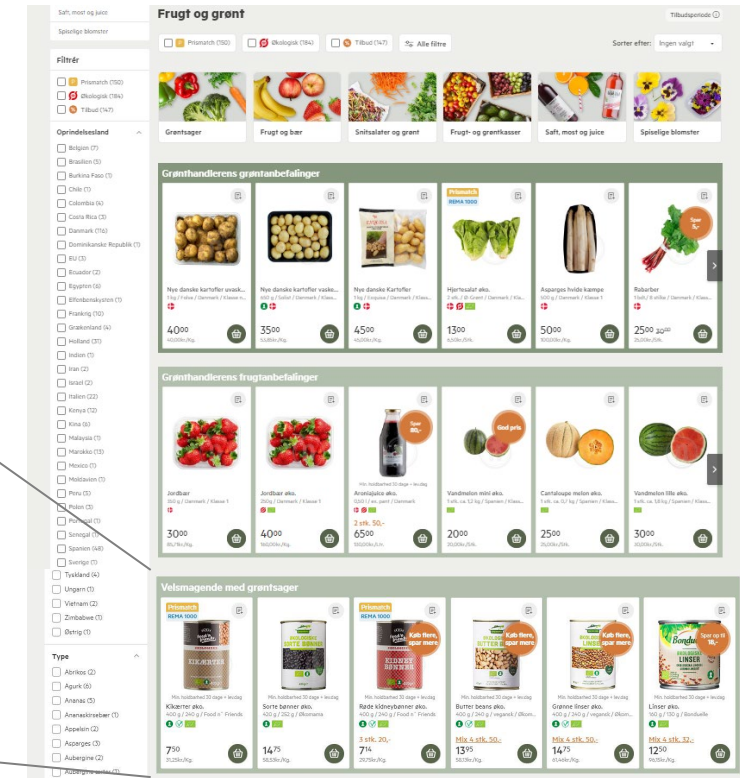


Results - Legumes in the vegetable section

A/B testing over three-week period in June 2023

	Control group = normal vegetable page	Treatment group = vegetable page with legumes
Sessions	22,642	23,678
Orders	4,513	4,573

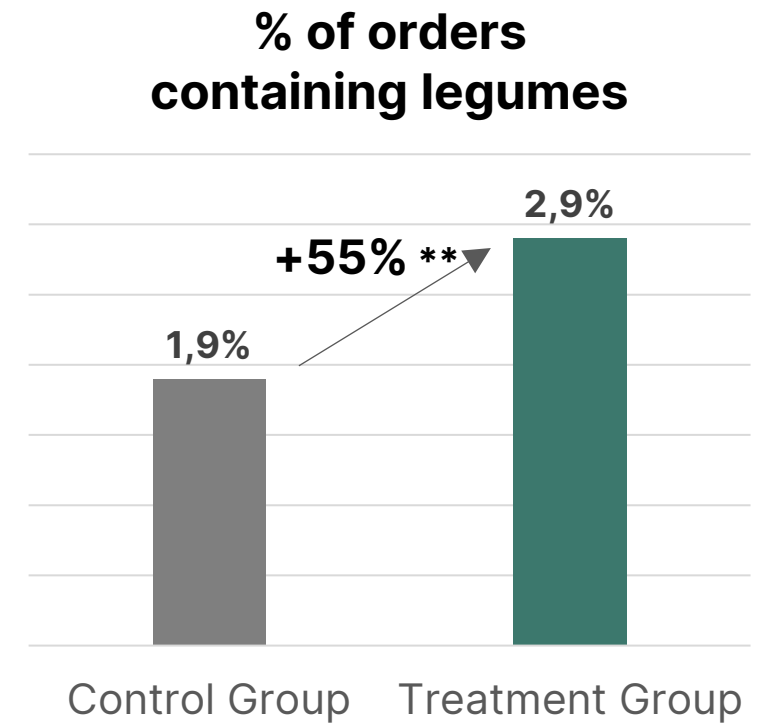
Treatment group



Results – Legumes in the vegetable section

A/B testing over three-week period in June 2023

	Control group = normal vegetable page	Treatment group = vegetable page with legumes
Sessions	22,642	23,678
Orders	4,513	4,573
Orders with a target product	84	132
# of target products sold	195	300
% of orders with a target product	1.9% **	2.9% **

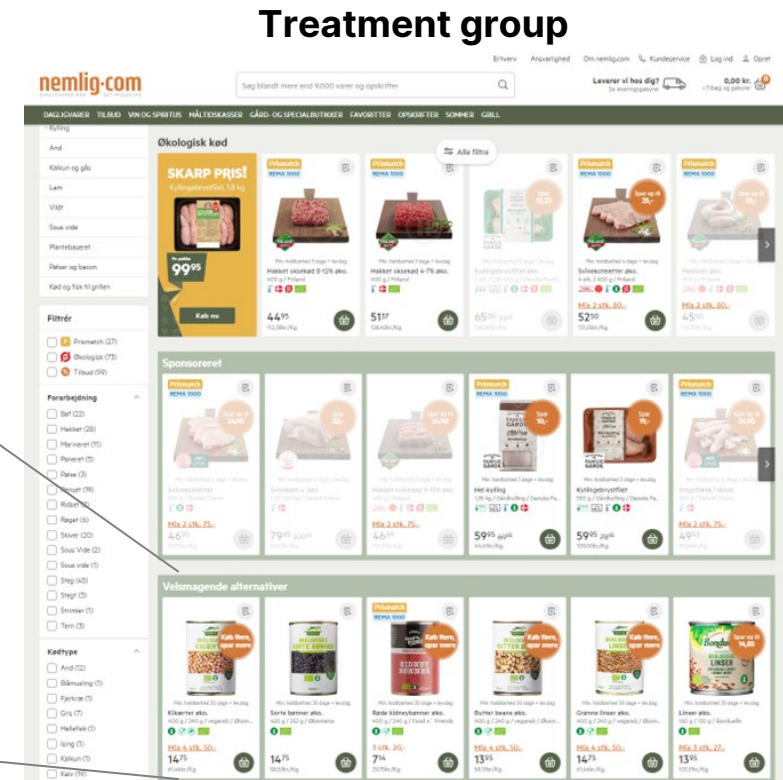
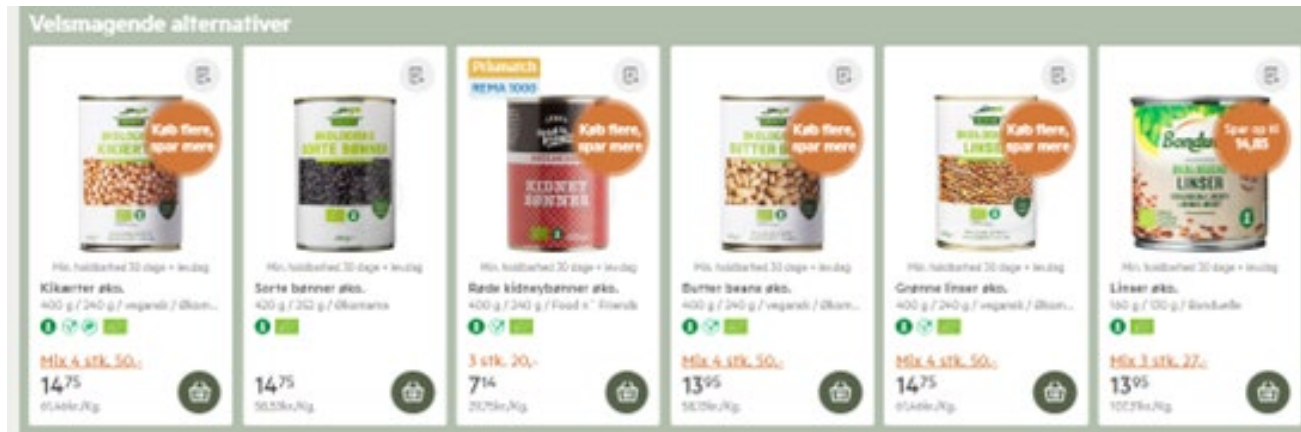


** Significant increase (z-test $p < 0.01$)

Results - Legumes in the meat section

A/B testing over three-week period in August 2023

	Control group = normal vegetable page	Treatment group = vegetable page with legumes
Sessions	21,350	20,702
Orders	4,342	4,364

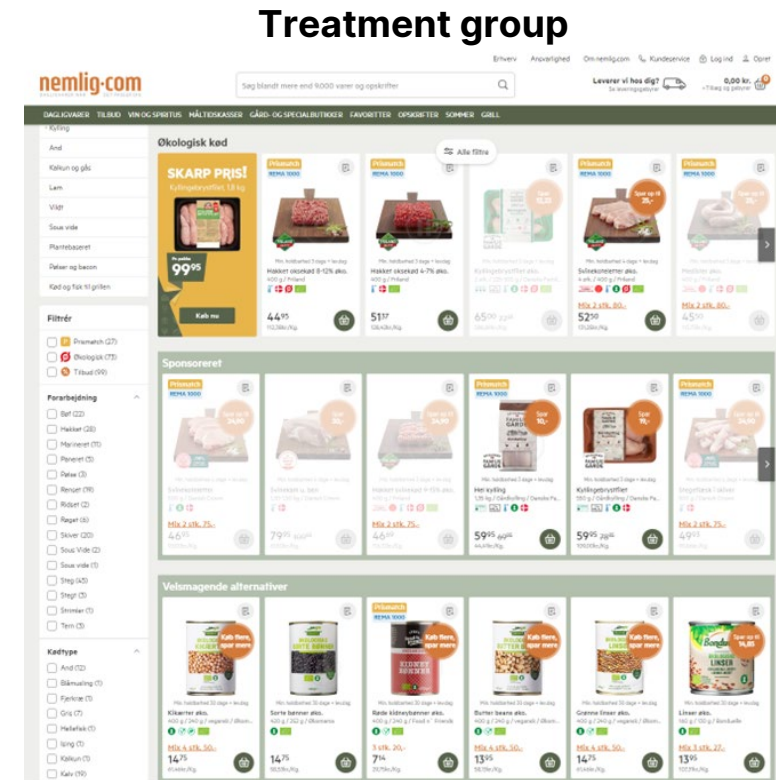


Results – Legumes in the **meat** section

A/B testing over three-week period in August 2023

	Control group = normal vegetable page	Treatment group = vegetable page with legumes
Sessions	21,350	20,702
Orders	4,342	4,364
Orders with a target product	116	112
# of target products sold	257	257
% of orders with a target product	2.7%	2.6%
% of orders with a meat product	39.9%	39.7%

No significant differences



Conclusions

Placement of legumes in vegetable section effective
for increasing sales with legumes

The tested interventions had only small effects – but
the interventions were also only very subtle

**What would be the effects of more far-reaching
interventions?** To be tested in future research projects



PROJECT REPORTS & PUBLICATIONS



<https://mgmt.au.dk/plantpro/publications>

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