

Beans & Greens: Development and Expert Evaluation of an Innovative Fava Bean Recipe Book to Promote Sustainable Diets

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INTRODUCTION

Promoting sustainable dietary patterns requires strategies beyond product development, including educational and dissemination tools.

Fava beans are nutritionally valuable but underused, partly due to perceptions of limited culinary versatility. This study aimed to develop a recipe book with innovative fava bean-based preparations to enhance the ingredient's appeal, versatility, and applicability.

KEY FEATURES

20 recipes

7 expert evaluations

EXPERT EVALUATION

No.	Question	Question type
Q1	The recipes in this book look appealing and inspire me to try them.	Rating (1-5)
Q2	The variety of recipes (types of dishes, preparation methods, occasions) is sufficient for this material to be useful.	Rating (1-5)
Q3	The nutritional information provided for each recipe is clear and easy to understand.	Rating (1-5)
Q4	The recipes clearly communicate that they are nutritionally balanced and health oriented.	Rating (1-5)
Q5	It is clear from the recipes that they prioritize locally sourced and seasonal ingredients.	Rating (1-5)
Q6	I noticed the specific claims about daily recommended intake of protein and/or legumes.	Rating (1-5)
Q7	The information about meeting daily protein/legume recommendations is credible and useful for my professional practice.	Rating (1-5)
Q8	After reading this book, I feel more inclined to include fava bean-based recipes in my own diet.	Rating (1-5)
Q9	After reading this book, I feel more inclined to include fava bean-based recipes in my professional work (e.g., menu planning, product development, counselling).	Rating (1-5)
Q10	Overall, I consider this recipe book a useful resource for promoting the consumption of fava beans.	Rating (1-5)
Q11	What did you like the most about this recipe book?	Open
Q12	What would you improve (content, layout, clarity of information, claims, etc.)?	Open
Q13	Do you have any additional comments or suggestions?	Open

Table 1: Questions used for the expert evaluation of the recipe book Beans & Greens

METHODS

- 1 Initial review of existing fava bean recipes worldwide
- 2 Six brainstorming & culinary adaptation sessions (~2 h) with a professional chef
- 3 Four (~6 h) cooking sessions for recipes testing, refinement and photography
- 4 Selection of recipes with nutritional value using Portuguese National Food Composition Tables
- 5 Expert stakeholders reviewed the book online

EXPERT RESPONSES

Item-level Content Validity Index (I-CVI) establishes an acceptable content validity threshold for a panel of 7 experts:
 $I-CVI \geq 0.78$

Question	Median (IQR)	I-CVI
Q1	5(5-5)	1.00
Q2	5 (4.5-5)	0.86
Q3	4 (2.5-5)	0.57
Q4	4 (2-4)	0.57
Q5	4 (3-4)	0.57
Q6	5 (4.5-5)	0.86
Q7	5 (4.5-5)	1.00
Q8	5 (4-5)	1.00
Q9	5 (4.4-5)	0.86
Q10	5 (4.5-5)	1.00

Table 2: Results of the online (I-CVI) expert evaluation of the recipe book Beans & Greens

No evaluator selected "Strongly disagree" for any item.

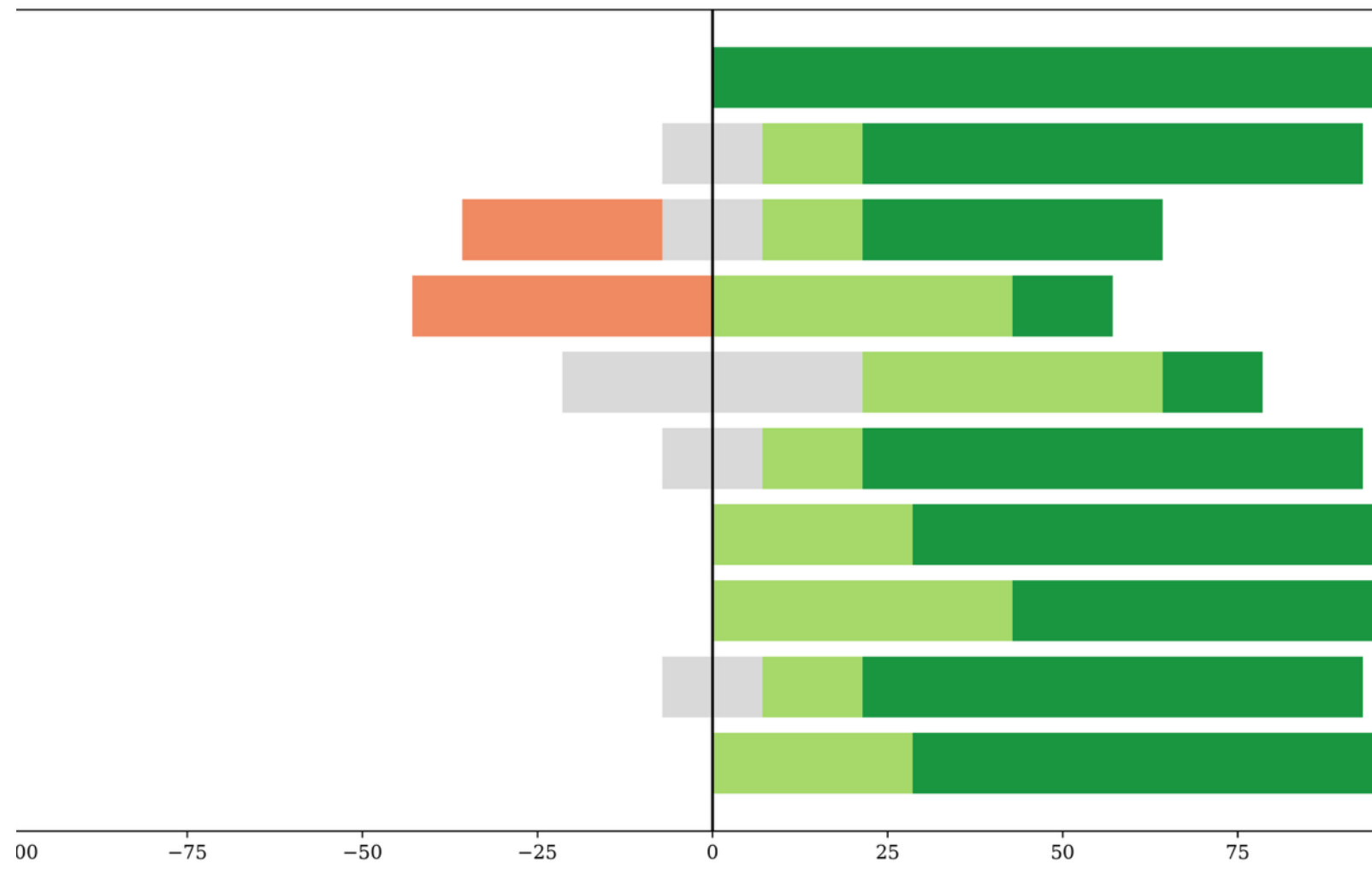


Figure 2: Diverging Likert bar chart for the expert evaluation of the book Beans & Greens

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THE RECIPE BOOK

Course-menu structure from starters to mains and one-pot dishes.

Figure 1: Recipe content of the book Beans & Greens

RESULTS

The book features locally sourced and seasonal Portuguese ingredients, recipe-specific nutrition, allergens, dietary statements, and information on favism.

Its strongest features were recipe visuals, protein and legume intake information, and usefulness for professional practice. Recipe variety, local and seasonal ingredients, and willingness to incorporate fava bean recipes into daily diets were also highly appreciated.

Areas for improvement included clearer nutritional information and communication of nutritional balance and healthfulness. Some experts felt that recipes using cream, butter or deep-frying may not align with the focus on healthy foods.

CONCLUSION

These findings support Beans & Greens as a relevant educational and knowledge translation resource, although behavioural effectiveness was not demonstrated.

Expert feedback highlighted its visual appeal, photo quality and recipe simplicity, while suggesting more recipes and clearer nutritional tables.

The study provides preliminary evidence of perceived usefulness and content validity; future work should assess acceptability, usability, feasibility and impact on fava bean consumption. Future work could include the translation of this book into other languages for broader dissemination.

GRAB THE BOOK!
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