Reviewer's report

Title: Perceptions of flatulence from bean consumption among adults in 3 feeding studies

Version: 2 Date: 5 July 2011

Reviewer: Paula Brauer

Reviewer's report:

Major compulsory revisions
1. Introduction - This study is generally well written and the results will be of interest to nutritionists and dietitians who are involved in advising and counselling to increase legume consumption. I believe the explanation of the rationale for the study and the approach could be improved, by deleting Lines 55-68. Assessment of perception is most relevant to consumer acceptability, rather than objective measures, although such reports must be interpreted cautiously, as stated. The content of this paragraph can be dealt with in the Discussion and detracts from the Rationale. It may be possible to encourage increased consumption if symptoms can be expected to decline over time, with certain types of legumes or if legumes can be promoted to certain sub-groups in the population. The rationale should conclude with the specific objectives of the study.

2. Results You created a summary variable (see lines 157-167) and then did not have any detailed results in either tabular or graph form, only in the text (from my reading of lines 209-220). The text results suggest that symptoms were very mild overall. I could not find the summary variable results for the parallel trial of pinto beans. These results should be presented in graphic form for all studies. This is critical data relevant to consumers and summarizes participant experience overall.

Minor essential revisions

Introduction
3. Line 20 increases insulin sensitivity
4. Line 70 daily – ADD 8-12 weeks.
5. Line 72 – mention clinical results of the primary studies in 1-2 sentences – were they positive and therefore support promotion of legumes?

Methods –
6. Line 80 The GI questionnaire was newly developed and there are few in the literature – indicate access from authors or provide the questions in a figure, appendix or online.

Results
7. Line 54 – stated that physiological mechanisms for bloating and flatulence are different. Were experiences of bloating and flatulence associated in individuals?
That is, did a subset of people with flatulence have bloating in addition, or were they different groups, in line with expectations from the physiological mechanisms?

8. There are too many tables, with limited interesting data once you provide the summary data in graph form. In my opinion, since flatulence and bloating were most prominent, you could still present the detailed results for these factors as graphs, and only mention stool frequency in the text. In my opinion, alteration in the presentation of results would strengthen conclusions regarding the mildness and time limited nature of most symptoms.

Discussion

9. Line 269 – A small percentage of people experienced increased and persistent flatulence – no predictors were found consistently – e.g. men vs. women, and this should be stated. Some previous data have suggested more women experience persistent issues.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'