Response to Reviewer 2 Comments

Authors present results of works on assessing packaging efficiency evaluation method for loss prevention in fresh vegetables cold chain. Topic is certainly of growing importance in the view of current research trends and awareness of societies on importance of food quality but certain issues arise while reading the manuscript that prevent me from accepting the work.

Response 1:

Thank you for your comments to this manuscript. And we have revised the issues you mentioned below carefully.

It is through the investigation in real cold chain that makes us really focus on the settlement of this practical issue, which is in line with the development direction of scientific research trends for sustainable production.

New problems generally arouse in the paper’s writing, in the process of solving current issues, but this is the reason why we try. And some mistakes are inevitable, especially in the efforts to demonstrate and express our thoughts and solutions about the emerging question. These necessary revisions indeed improve the quality of this manuscript, so that the topic of this paper can be perceived easily by the readers. Please check.

English needs strong revision, there numerous mistakes both of grammar and editorial character – this remark is for the entire manuscript.

Response 2:

We have checked all the manuscript carefully and improved the English in this paper. Indeed, poor English affects the expression of the theme of this manuscript, affects the quality of the paper and result in confusion for you and other readers. Mistakes you mentioned have been carefully considered and revised. Please review and check them.

Abstract is non-informative, it is too general and presents only positive sites (in Authors’ opinion) of solution presented.

Response 3:

The Abstract has been revised and reorganized. It was rephrased by the comprehensive, in-depth and strong sentences, especially in the specific expressions related to the results and discussion, including the disadvantages and shortcomings of the proposed assessment method. Besides, we have added and underscored the scientific value in abstract. (in red in the manuscript)

Introduction is too long and diluted, more strong sentences would do the job of informing readers. Authors write and give references to some generalized sentences but more details are needed.

Response 4:

We have reorganized and refined the introduction, as possible as we can, by more related sentences in order to introduce the readers the necessary research backgrounds. And more detailed information and related reference have been added, which better covers the topic of this paper. Please check and read.

Line 37: in developed countries as well.
Response 5:
This has been removed. And we have added the corresponding references.

Line 57: explain MAP acronym at first use.
Response 6:
We have checked and explained it.

Line 78: which indicators?
Response 7:
We have added the indicators, namely, temperature and humidity. And we have taken some gas indicators in packaging microenvironment into consideration for holistic packaging efficiency evaluation.

Line 112: as presented…
Response 8: We have revised it.

2.1.: was any other way of transportation compared to this standardized cool chain in styrofoam?
Response 9: We have improved the way for expression. Please check in the section 2.1. Properties of the fresh vegetables cold chain investigated.
There are also small-scale packaging modes and other packaging practices mentioned in Introduction for transport. We chose it because it is a typical way in fresh produce cold chain, which described as commercial and practical in real cold chain in China. And this part is mainly introduced as a research field and methodology background, through the introduction of the characteristics of the fresh vegetables cold chain investigated.

Lines 221-223: I do not understand the meaning of this sentence, please rephrase.
Response 10: We have checked and revised it. Please check it.

Table 1: what papers are used in transport? Are the plastics used reusable?
Response 11:
We have revised them. The paper used as an active paper/hydroscopic paper (for control the costs), and the preservative film (PE, 50um, customized by the company).
The characteristics of these materials, such as recyclability and safety, are discussed in 3.2 PE2 (Packaging materials performances) evaluation. And the reusability is an essential packaging efficiency assessment part of the proposed methodology in this paper, which can facilitate sustainable production from the packaging materials.

Table 3: what were assumptions to give such weighs to given parameters?
Response 12: The assumption is that the material usage of various materials and the role of the packaging have different values. In this manuscript, we just do the preliminary quantitative analysis, and subsequent research will further strengthen the rationalization and do optimization of the weights to given parameters.

Lines 356-367: I do not understand the meaning of this paragraph, please rephrase.
Response 13: We have modified and reorganized, please check.

Results (despite lack of some information) are sound and justify conclusions taken.
Response 14: Thank you for your comments.

Conclusions lack significant pointing drawbacks and disadvantages of methodology proposed in the manuscript, please elaborate on that.
Response 15: We have revised the conclusions. The deficiencies and shortcomings of the proposed methodology have been clarified in Conclusions to facilitate others for the subsequent research. Please check in the manuscript for details.