Review of: "Microbiological analysis of commonly consumed vegetable: A review on the ongoing studies"

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Potential competing interests: No potential competing interests to declare.

Ava and Noor, “Microbiological analysis of commonly consumed vegetable: A review on the ongoing studies”

Presumably, the authors receive a salary from their university. They should list this as a source of funding. If they receive any outside grants pertaining to food science or agriculture, those also should be listed.

This paper is offered as a review, so it bears the burden of providing a comprehensive overview that updates or expands existing reviews. The authors should search for recent reviews on the same topic and highlight how their work provides additional value to the scientific literature.

English usage is awkward but always comprehensible. An apparent weakness of*Qeios* is the lack of opportunity for “editorial” contribution to grammar and style, which would greatly improve readability and citability of this work.

I wish *Qeios* required line numbers, as they greatly facilitate peer review.

Latin species names for bacteria, fungi, and crop plants are traditionally italicized. I’m not sure whether this convention extends to *Qeios*.
We also need to figure out how to clearly and consistently express exponents for scientific notation, e.g., if we can’t use superscript, 104 (meaning 10000) might be more clearly expressed as 10e4.

p 2, ll 9-20 Introduction paragraph 2 opens with a huge sentence comprising a list of 27 human pathogens that can colonize fresh produce. Although I usually don’t like to read data tables, a tabular format probably would be more effective in presenting this list.

p 3, ll 11-12 Perhaps it’s a difference in language, but while food spoilage associates with food waste, nutrition insecurity, and economic loss, spoilage, *per se*, is largely unrelated to foodborne illness. If you mean fungal toxin contamination, specify this.

p 3, l 13 Foodborne illness is not equivalent terminology with foodborne infection. As the authors detail

subsequently, much foodborne illness is caused by intoxination in the absence of infection.

p 3, ll 33-34 While pathogenic strains of *B.c.* can produce diarrheal enterotoxins during vegetative growth in the small intestine, the cereulide emetic toxin is produced during growth in food. Some *B.c.* strains produce both toxin types.

p 4, ll 6-9 The authors repeat this information at p7, ll 2-9.
Combine the information here with the more detailed information in p7, ll 2-9.

p 4, l 12 We should list growth alongside transmission, as a risk.

p 4, ll 16-22 Again, we have a long list here, that would communicate more effectively as a table. When doing so, group the entries logically according to similar type or technology.

p 4, ll 25-28 I'd like to see more about risk assessment for opportunistic pathogens, especially compared to risk from pathogens commonly related to outbreaks. This might be a good place to discuss the difference between US and EU *Listeria* standards.

p 4, ll 29-35 Again, spoilage sometimes is associated with pathogen contamination, but not usually. However, you may want to mention that insect damage can facilitate growth and intoxination of fungi.

p 5, ll 11 Do you mean *Solanum lycopersicum*?

p 5, ll 11-32 In each of the next three paragraphs, you say a lot about quantitation of mesophilic aerophiles, and then you talk about prevalence for pathogens. While these variables often correlate (albeit often weakly), we need to state this, and provide a reference to support this paradigm.

It's important to note whether these studies used samples taken directly from the field by scientists, from professionally harvested produce, or from crops immediately after washing and bagging, from a storage or distribution facility, or from a wholesale or retail market.

p 6, l 18 Most fecal coliforms are not pathogens, not does the presence of fecal coliforms uniformly correlate with presence of pathogens. On the other hand, their presence signals likely exposure to feces, and this would be a good place to discuss the related observation that runoff from animal production often associates with pathogen contamination of leafy greens.

p 6, l 22 If we title this short section "Prevalence," we should give some numbers for prevalence.

p 7 ¶1 Some of us hold out hope that food contamination also might be decreased through educating producers

about best practices, including FSMA, and educating processors and consumers about proper sanitation, handling, cooking, and cooling (“Clean, Separate, Cook, Chill”).

Here, again, we have a long list that would communicate better as a table. That table might include organization type, jurisdiction (geographical and commodities), and/or extent of regulatory authority (mandatory recall or not).

In the US, only USDA (mostly the USDA agencies AMS and FSIS) and HHS (FDA) are authorized to regulate food. And food regulation is an executive function, not legislation. NGOs have no regulatory authority, but they often influence consumer behavior.

p 7, ¶2 The first sentence in this paragraph is too long and needs better organization. It may benefit from breaking apart into three or more separate sentences.

Who is responsible for controlling risk of foodborne illness, for conducting risk assessments? What tools are available (e.g., HACCP, PMP, Appendix 1 and 2, etc.)?

I counted 55 references. These focus more on recent contributions and the state of the art, rather than providing historical context. To me, this is a feature, not a problem. My spot check of citations and links did not identify any problems. :-)