Tanimura & Antle a LGMA member has following concerns and comments related to proposed “Harvest equipment sanitation and design, Packaging Materials and infrastructure (field sanitation):

**Concerns:**

1. This proposal is based on very specific type of harvest equipment (used to harvest raw materials used in salad processing) and does not apply on majority of harvest equipment used by LGMA membership. Majority of harvest equipment used for leafy green commodity harvesting are just moving platforms (in general, termed as harvest machines) and vastly different than clean and core, trim or tail or mechanical harvest machines, that were used to develop this document proposal.
2. Proposal also includes packaging materials and infrastructures that are not even part of harvest equipment and were not part of original LGMA mandate discussed for the working group.
3. Considering significant variations, practices and requirements for different leafy green crops, it is not practical to suggest specific design for harvest equipment.
4. Considering significant variations in equipment design and their use, this proposal should be a guidance document rather than a prescriptive requirement.
5. This proposal is not based on risk assessment related to harvest equipment so that effective and appropriate cleaning and sanitation SOPs are developed for target harvest equipment by LGMA members.
6. Overall, the proposal is confusing and not implementable for majority of harvest equipment used by LGMA members.

**Comments/ suggestions:**

 **In order to make this proposal workable, one of the following two options need to be adopted:**

**Option 1**: Clearly specify intent of the proposal and make following changes in the title and make this proposal an **addendum** to original harvest sanitation document:

“Harvest equipment Sanitation and Design, Packaging materials and infrastructure for Clean/ core, trim/ tail and mechanical harvesting operations in the field”.

**Option 2**: In order to include commodity produce along with clean/core, field trim and mechanical harvesting in this proposal, make following changes in the proposal:

1. Page 15, Line 74-76: In proposal title, remove Packaging and infrastructure related language and the title should be “Harvest Equipment Cleaning and Sanitation.”
2. Page 15, Line 81. Place following risk assessment guidance Table between line 81 and 82 so that realistic harvest equipment cleaning and sanitation plans for various types of equipment are developed.

**Table 1: Harvest equipment risk assessment guidance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Equipment category** | **Products/ process** | **Food contact surfaces** | **Possible contamination to products** | **Risk level** | **Suggested frequency for sanitation** |
| Category 1 | Equipment used for Clean and core lettuce, top and tail romaine and mechanical harvesting of leafy greens | Belts with/ without cleats, mechanical blades, coring rings, knives, cutting boards | Due to lettuce juice (latex\*), soil, outer leaves commingling and contamination to open wounds of product. Latex can spill on hard to reach areas. | High\* | Constant sanitation by spraying high volume and high conc. sanitation solution to remove latex and soil on all contact surfaces, harvest knives and coring rings to be sanitized during every break. Detailed cleaning and sanitation of adjacent areas and food contact and adjacent surfaces at the end of harvest shift. |
| Category 2 | Equipment used for whole head commodities. | Stationary food contact surfaces used for packing, harvest knives | There is only one cut at butt or non-edible area per plant and there is minimum product contact with surfaces.  | Low | Frequent cleaning of food contact surfaces and sanitation of food contact surfaces at the end of the shift. Hand knives to be sanitized during every break. |
| Category 3 | Harvest equipment does not come in direct contact of produce | No food contact surfaces, tractors, trailers, forklifts, water tanks | No direct product contact or only if products are placed directly on the trailer surfaces | Very low | Frequent inspection of areas that may be adjacent to crop or product. If there is plant or soil debris, it should be cleaned as needed basis. |

**\***Per Dr. Mike Doyle and Dr. Brandle research, Latex helps in faster multiplication of pathogens during harvest process (references attached).

1. Page 15, line 87-105. This section is related to equipment category 1 only. To clarify that this section is related to Equipment category 1, the paragraph should start with the following text:

“For harvest equipment category 1, at least annually …………………….”

1. Page 16 line 50-55: reading as “Following the preparation steps in Table 5 and the 7 steps of cleaning …………..cross contamination” This section must be removed from this document and placed in reference document section because it is too prescriptive and does not apply on majority of harvest equipment. This section should be replaced as following:

“Develop cleaning and sanitation Sops according to Harvest equipment risk assessment guidance table 1 above”.

1. Page 17, line 59-62: This section should be removed and replaced with the following:

“Develop cleaning and sanitation SOPs according to Harvest equipment risk assessment guidance Table 1” above.

1. Section 8.2, page 17, Line 90-112: Package materials: This section must be removed from this document as this does not belong to Harvest equipment cleaning and sanitation document.
2. Section 8.3, page 18, 113-125 – Infrastructure: This section must be removed from this document as this section does not belong to this document.
3. Page 18-21, lines 126- , Table 5 and 6 should be removed from this section and placed in reference section as guidance document. These tables are prescriptive and mostly apply on Harvest equipment category 1 only.
4. Considering significant variability in leafy green crops harvest practices, type of harvest equipment used and risk levels, this document should be a guidance document rather than prescriptive to avoid confusion and contradiction at audit level.

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VP R&D and Food Safety

Tanimura & Antle