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Supplemental Document to the CA LGMA Priority Setting Report

March 4, 2024



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All Priority Topics and Comments Submitted:

Priority # 1: Harvest Equipment Sanitation

Comment 1: Review of HFC to determine if equipment sanitation metrics need to be updated.

- Recent microbial positives found on harvest equipment which led to the FDA harvest equipment sampling plan have identified potential areas that need improvement in equipment sanitation and hygienic design.

Comment 2: Harvest Equipment Sanitation

- Equipment sanitation has not formally been reviewed since 2020 and has recently been the focus of special sampling projects with the FDA.
- Reviewing our industry best practices to ensure the most effective sanitation practices is of urgent need. Equipment used during harvest has the potential to cross-contaminate produce on a large scale, therefore the potential positive impact is great.

Comment 3: Harvest Equipment Sanitation

- Sanitation of our harvesting equipment has shown to be a harborage point for pathogens of concern. We need to take cleaning and the hygienic design of this equipment seriously and make robust requirements for both.

Comment 4: Cleaning and Sanitation of Harvest Equipment

- While C&S has been a focus historically, and improvements in knowledge by industry have been made, there is still a calibration that needs to occur industrywide.

Comment 5: Review Sanitation requirements (Realistically for an outside environment)

- Review Sanitation requirements of harvesting equipment many things are being asked from harvesting companies and or suppliers, but these requirements are being developed by people who do not have any harvest experience as their experience is processing plants. Also Harvest machine cleaning companies have been trying to influence certain shippers as to what is needed with regards to sanitation because this will increase their bottom line by spending more time cleaning the machines. The same goes with Chemical companies why are there companies that supply chemicals involved in creating the sanitation procedures and trying to sell their products?
- The impact would be a realistic Sanitation Program that is not influenced by outside groups of interest.

Comment 6: Standards and performance criteria for field harvest equipment cleaning and sanitation

Comment 7: Harvest Machine Sanitation

- Create a dedicated section of the metrics to harvest equipment and tools sanitation.
- Also add sanitation of other items (water storage, containers, bathrooms, etc) for better alignment of cleaning and sanitizing protocols)

Comment 8: Harvest Sanitation

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- Updating the metrics from having to have an “SOP” as it is now to taking the next step of defining what must be in a “daily SOP” and how, what, and when execution looks like.
- Putting the more complicated concepts of PEC/PIC and sanitary design would be a future step but requiring an equipment sanitary design review might not be unreasonable.
- Some other elements that to some degrees are already in place for many companies would be:
 - Seven steps of sanitation.
 - Chemical concentrations needed per chemical and verification checks of chemical concentrations.
 - Rinse from top to bottom.
 - Color code system for sanitation tools for food contact vs. non-food contact areas.
 - Employee proficiency testing program.

Topic # 2 Ag Water Standards

Comment 1: Review of water standards

- With the Ag Water rule soon to be released and 2 + years of requirement water treatment for open water sources it would be beneficial to review the water metrics and assess for any needed modifications/changes.

Comment 2: Water Review

- It has been 5 years since the LGMA's have reviewed the water section after the significant water changes were adopted. There are parts of the water section that could be clearer and areas that could be combined to make the section less overwhelming to individuals implementing the practices. As well as streamlining the metrics to limit interpretation errors while maintaining effective water quality assessments.
- With the FDA FSMA water updates pending, this section review might need to be held off until that update is published; but it should be a key area to be reviewed once that is released.

Comment 3: Agricultural Water

- The area of water sampling and assessment has resurfaced repeatedly. Progress needs to be made concerning the scientific evidence available to the industry. Subpart E (proposed) shifts the industry away from testing, which may have large implications.

Comment 4: Meaningful science-based water quality risk assessment and corrective measures standards and metrics for Type A and Type B to A

- Current systems are not using the knowledge we know for validation of Type A water and verification of source and distribution/conveyances following major storm and flood events.

Comment 5: Water Metrics

- Integrate high-volume sampling using dead-end ultrafiltration following FDA methodology by the FDA's SOP for Dead End Ultrafiltration in the Field for Bacterial Pathogens Issue August 19, 2021, Rev 7

Comment 6: Regarding Type A water

Not all water sampling needs to be converted to filter sampling, but this is how the FDA does it and their method will soon be published as the official BAM method we would be remiss to not take a step forward to start incorporating this into LGMA metrics. Some example concepts here that could be incorporated into existing requirements are annual (preseason) filter sampling (3-100 L samples) and analysis (ECC, TCC) of wells to verify type A status. To get this going, may consider requiring one well per ranch (with alternating wells for the next season). All wells are considered Type A unless they fail. SOP for water sampling shall include the use of filter sampling and implemented for at least one per ranch per season. Annual water distribution system filter sampling (3-100 L samples) and analysis (ECC, TCC). Once per ranch at preseason.

Topic #3: Preharvest testing for leafy greens.

Comment 1: Pre-Harvest Pathogen Testing requirement for all leafy greens

- So much talk and debate regarding this topic, yet we know 90% of the industry is doing it. We must try to standardize to make our methods, procedures, and thus our results as relevant as possible. I know we have the test now, but we need to just move forward with having this as a requirement for every leafy green under LGMA's domain.

Comment 2: Pre-harvest Sampling and Testing

- Enhance the requirement based on already accepted practices such as Canada's requirements.

Topic #4 Tissue test standards

Comment 1: Establishing tissue testing standards and equivalency across platforms.

- Data aggregation and data analysis towards meaningful and useful predictive models require this be established.

Topic #5: Buffer distances and adjacent land use

Comment 1: Re-Assessment of buffer distances

- FDA has highlighted neighboring/adjacent land in outbreak recaps. It would be beneficial to review current buffer distances to ensure they are still adequate.

Comment 2: Adjacent land Atmospheric Deposition

- Recent research has elevated the discussion regarding the potential impacts of rouge dust from adjacent land activities to produce farms. Additional research is needed in this area as well as communications for industry.

Topic # 6 Flooding

Comment 1: Flooding

- Arizona did not have time to take this topic up during the last review after the special project research was published, largely because of the timing of the release of the research and when our new season began. We'd like the opportunity to reopen that discussion and make necessary updates to that section. Considering the recent wet weather in growing regions over the past 2 seasons, the impact would be significant, and ensure we are applying the recent scientific findings.

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Topic # 7: LGMA Metrics Review

Comment 1: Modernization of LGMA Metrics

- How many versions of other standards have come out in the last 15 years? (GFSI as an example). While we add new requirements to the metrics, we need a complete refresher of how it is stored, organized, and the relevant topics. It is time to have a LGMA metric version 2.0.

Comment 2: Review of CA LGMA

- Review the CALGMA to clean it up as it is very confusing with all the additions and changes that were made several times. Review should also include clarifying what is being asked for as a lot of people do not understand it.

Comment #3: Metric Reorganization and Update

- Review best practices and update (Add needed best practices and remove practices considered not necessary or impactful to food safety)
- Re-format the metrics (Re-organize the document so it is more user-friendly and easier to read)

Topic # 8 Soil amendment and soil Inputs

Comment 1: Strong guidance for all uses of biofertilizers, bio stimulants, and other zoonotic pathogen amplification potential from any source used for fertigation.

- Too much evidence for the introduction of contamination with these inputs or amplification of otherwise minimal risk environmental contamination.

Comment 2: There are multiple areas suggested for review including but not limited to:

- Adding EHEC along with STEC
- Adding Listeria Mono for certain inputs
- Not allowing 0-day application intervals for some products (no less than 7 days)

Comment 3: Compost sampling depth and moisture content

- Integrate a finished compost moisture content minimum as part of processing validation records.
- Assure compost sampling requirements for depth of sample meet best practices.

Topic #9: Well Assessment

Comment 1: Assure all parts of the well are managed and maintained to prevent contamination of the water. Including:

- Periodic backflows check valve review when well is off or issues are noted
- Well vent assessment to assure they are properly designed and sloped so they are protected and protect the water source.
- *Might include best practice language when well is possibly compromised by standing water, flooding, or other events

Topic # 10 Alignment with Arizona Metrics:

Comment 1: Align requirements for CA and AZ LGMA-accepted food safety guidelines.

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- Remove the requirement to document assigned food safety approved for sign-off documentation.

Meeting # 1 Slide Deck:



Agenda

- Welcome
- Priority-Setting Process Overview
- Priority Discussions
- Next steps

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Participants	
Name	Role/ Affiliation
California	
Greg Komar	CA LGMA Technical Director CA LGMA Staff
Chato Valdes	Sabor Farms CA LGMA Technical Committee Member
Tony Banegas	Bounduelle CA LGMA Technical Committee Member
Trevor Suslow	UC Davis CA Subject Matter Expert
Arizona	
Teresa Lopez	AZ LGMA Program Administrator
Kami Van Horm	AZ LGMA Technical Assistant AZ LGMA Staff
Megan Chedwick	Church Brothers AZ LGMA Technical Subcommittee
Matt Burke	Tanimura & Antle AZ LGMA Technical Subcommittee
Channah Rock	University of Arizona AZ Subject Matter Expert
Facilitator	
Gustavo Reyes	Western Growers Facilitator

Amendment Process Overview		
Event	Dates	Details
Priority Setting: (WE ARE HERE)		
"Priority Setting Committee" sets topics for the 2024 amendment process	By March 1 st	CA LGMA selects the Priority Setting Committee. WG hosts discussions. 2024 priority is set.
Priority Working Group: – 2 months		
Priority working group meets to work on proposed changes for topics selected by the Priority Setting Committee	By May 1 st	WG and CA LGMA select SMEs for the Priority working group. WG facilitates working group meetings. The priority working group proposes science-based changes for the set priority.
Comment Period: May – 30-days		
Opening Webinar – Overview of comment submission process and timelines	May 1 st	WG hosts a seminar to do a comment submission walkthrough. Proponents of changes (such as the Priority Working Group or others)
30 day – comment period	May 1 st - May 31 st	The public submits comments through the www.leafygreenguidance.com website
Metric Revision: June		
Webinar- Review comments and proposed changes	June 5 th	WG hosts a webinar. Public comments are reviewed and vetted.
Final Report	June 15 th	WG prepares a report of comments and public vetting for the CA LGMA board to consider and discuss with the CA LGMA Technical Committee



Priority-Setting Process



Goal: Set priority for the 2024 LGMA Amendment Process

1. A few days before the first meeting members submit their priorities through an online poll. **DONE**
2. First meeting: committee members discuss submitted priorities (5 minutes per priority)
 - a. What is the urgency of this priority?
 - b. What is the impact of this priority?
3. Following the first meeting:
 - a. Meeting minutes will be distributed to the committee
 - b. Each of the members of the committee will vote for each priority based on their impact and urgency (1-4 Scale).
4. Second meeting: voting results. Focus on top priorities. Set priority.



Priority Discussion



Goal: Set priority for the 2024 LGMA Amendment Process

Committee members discuss submitted priorities (**5 minutes per priority**)

- a. What is the urgency of this priority?
- b. What is the impact of this priority?

WG will keep track of time and take notes.

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Priority # 1



#	Priority topic Name	Summarized Comments:
1	Harvest Equipment Sanitation	<p>Review and update metrics: Multiple comments emphasize the need for a review and potential update of sanitation metrics and practices. These comments suggest a recognition that current practices may be insufficient or outdated, and there's a desire to improve and align with industry best practices.</p> <p>Highlights urgency and timelines</p> <ul style="list-style-type: none"> - Equipment sanitation has not been formally reviewed since 2020. - Harvesting equipment has been the focus of FDA sampling projects. - Many requirements from shippers are in place, however there is no standardized approach. - Harvesting equipment suppliers, and chemical companies influencing requirements. <p>Impact on food safety: Comments express concerns about the potential for equipment to act as a source of contamination for harvested produce. This indicates a recognition of the significant impact that inadequate sanitation practices can have on food safety and highlights the urgency of addressing this issue.</p> <p>Suggestions for enhancements: Comments propose various suggestions for enhancing sanitation requirements, such as incorporating hygienic design principles, defining daily SOPs instead of a single SOP, and considering more complex concepts like PEC/PIC. This suggests a recognition that improving sanitation practices requires more than just basic cleaning procedures and may involve implementing more rigorous standards and protocols.</p>



Priority # 2



#	Priority topic Name	Summarized Comments:
2	Ag Water Standards	<p>Review and update Metrics: The comments collectively emphasize the need to review and update water standards and metrics in anticipation of regulatory changes. There's a recognition of the importance of ensuring water quality assessments are effective and aligned with industry best practices.</p> <p>Highlights to urgency and timelines:</p> <ul style="list-style-type: none"> - The release of the ag water rule - Subpart E shifting the industry away from testing. - 5 years since the LGMA reviewed the water section. <p>Identified concerns:</p> <ul style="list-style-type: none"> - Concerns are raised regarding the clarity and complexity of existing water standards, emphasizing the importance of making them clearer and more manageable for implementation. - The need for science-based water quality assessment and corrective measures standard and measures for Type A and Type B to A Water - Incorporation of high-volume sampling following FDA's methodology. <p>Suggestions for enhancements: Suggestions include integrating high-volume sampling methods following FDA methodology filter sampling (DEUF) These include pre-season filter sampling, on-filter sample per ranch per season, annual distribution system sampling, and analysis</p>

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Priority # 3



#	Priority topic Name	Summarized Comments:
3	Preharvest testing for leafy greens	<p>Preharvest testing requirements: The comments suggest standardization of methods, procedures, and results to make them as relevant as possible. Most of the industry is testing, the industry needs to move forward with having this as a requirement under the LGMA domain.</p> <p>Enhance requirements: Enhance requirements based on what is already accepted practices such as Canada's requirements.</p>



Priority # 4



#	Priority topic Name	Summarized Comments:
4	Tissue testing standards	<p>Establishing Tissue testing standards and equivalency across platforms. This would meaningfully improve the usefulness of data aggregation, data analysis, and predictive models.</p>

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Priority # 5



#	Priority topic Name	Summarized Comments:
5	Buffer Distances/Adjacent land use	<p>Review current buffer distances for adjacent land use to make sure they are still adequate.</p> <p>Rouge dust from adjacent land activities: review the impact of rouge dust from adjacent land activities to produce farms. There is a need for additional research and communication with the industry</p>



Priority # 6



#	Priority topic Name	Summarized Comments:
6	Flooding	<p>Arizona did not have time to take this topic up during the last review after the special project research was published, largely because of the timing of the release of the research and when our new season began. We'd like the opportunity to reopen that discussion and make necessary updates to that section. Considering the recent wet weather in growing regions over the past 2 seasons, the impact would be significant, and ensure we are applying the recent scientific findings.</p>

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Priority # 7



#	Priority topic Name	Summarized Comments:
7	LGMA Metrics Review	<p>The comments suggest that the current LGMA metrics be reorganized and updated. Suggestions include:</p> <ul style="list-style-type: none">- All the additions have made the document confusing and difficult to interpret. The update needs to clarify what is being asked.- Refresher on how it is sorted.- Organization/reformat to be more user-friendly and easier to read.- Review of best practices and update based on necessity and impact

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Priority # 8



#	Priority topic Name	Summarized Comments:
8	Soil amendments and soil inputs	<p>The comments highlight concerns regarding the potential amplification of zoonotic pathogens using biofertilizers and other inputs in fertigation processes.</p> <ul style="list-style-type: none">- the need for stringent guidance due to substantial evidence indicating contamination risks associated with these inputs. <p>Other criteria:</p> <ul style="list-style-type: none">- including EHEC along with STEC and Listeria Monocytogenes as part of certain input requirements- Not allowing 0-day application intervals for some products (no less than 7 days) <p>Sampling depth and moisture content requirements:</p> <ul style="list-style-type: none">- Integrate a finished compost moisture content minimum as part of processing validation records.- Assure compost sampling requirements for depth of sample meet best practices.

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Priority # 9



#	Priority topic Name	Summarized Comments:
9	Well Assessment	Assure all parts of the well are managed and maintained to prevent contamination of the water. Including: <ul style="list-style-type: none">- Periodic backflows check valve review when the well is off, or issues are noted.- Well vent assessment to ensure they are properly designed and sloped so they are protected and protect the water source.- *Might include best practice language when the well is possibly compromised by standing water, flooding, or other events



Priority # 10



#	Priority topic Name	Summarized Comments:
10	Alignment with Arizona Metrics	Align requirements for CA and AZ LGMA-accepted food safety guidelines. <ul style="list-style-type: none">- Remove the requirement to document assigned food safety approved for sign off documentation.

Meeting # 2 Slide Deck



Agenda

- Welcome
- Voting Results
- Open Discussion



Process



Today's Steps

- Review of methods and results (5 minutes)
- Review top points for top priorities (10 minutes)
- Open discussion for the group to determine priority based on results (15 minutes)
- If no consensus, a vote (zoom poll) will be conducted to determine priority. (The priority with the most votes will be selected)
- Specifics for the priority.



Voting Results



Voting Process

- Each of you rated priority based on urgency and impact
- We use the following priority matrix to get the overall score per committee member

		Impact			
		1 Lower	2	3	4 Higher
Urgency	1 Lower	1	2	3	4
	2	2	4	6	8
	3	3	6	9	12
	4 Higher	4	8	12	16

- Average overall score for the group per priority

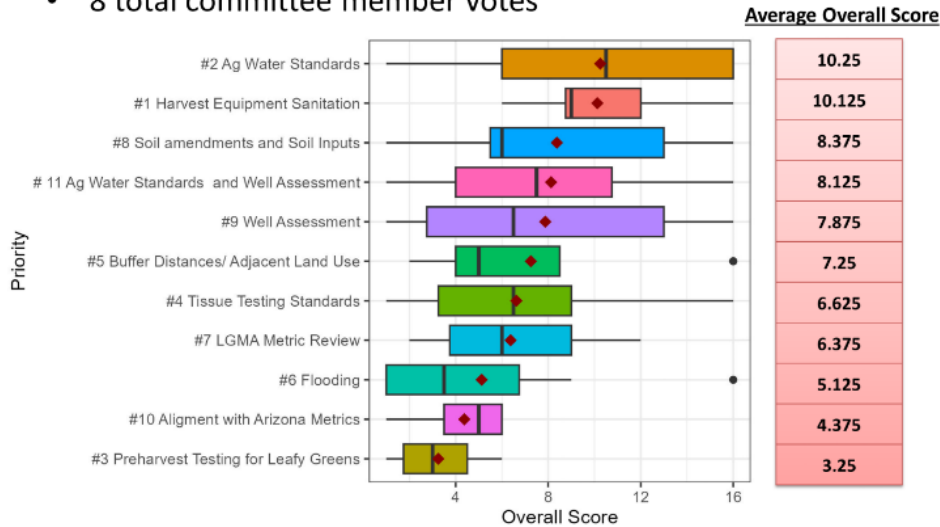
$$\text{Average Overall Score} = \frac{\text{sum of overall scores}}{8 \text{ votes}}$$

Overall Score ↑

Voting Results

Results

- 8 total committee member votes



Voting Results

Results

- Top 2 Priorities: Ag Water Standards and Harvest Equipment Sanitation

Priority	Urgency	Importance	Overall Priority Score
#2 Ag Water Standards	2.875	3.25	10.25
#1 Harvest Equipment Sanitation	3	3.375	10.125
#8 Soil amendments and Soil Inputs	2.5	3	8.375
#11 Ag Water Standards and Well Assessment	2.75	2.625	8.125
#9 Well Assessment	2.75	2.5	7.875
#5 Buffer Distances/ Adjacent Land Use	2.5	2.625	7.25
#4 Tissue Testing Standards	2.375	2.375	6.625
#7 LGMA Metric Review	2.125	2.875	6.375
#6 Flooding	1.875	2.125	5.125
#10 Alignment with Arizona Metrics	1.875	2.25	4.375
#3 Preharvest Testing for Leafy Greens	1.375	2.25	3.25

← More variable responses

← Includes priority # 1



Key Considerations from Monday



Priority #2 Ag Water Standards

Concerns

- Concerns for this priority were raised regarding the Ag water rule timeline. However, proposed ag water rule is not as specific as LGMA guidelines
- FDA Metrics may still require LGMA to do multiple revisions if this priority is selected

Specific Topics

- Review Type B -> A Metrics, note if standards are still adequate.
 - Is that level of testing still necessary
 - Changes to the water treatment section
- Systems-based approach to testing B->A Water. Testing requirements for similar systems
 - Observational response criteria (e.g. turbidity)
 - Using historical data to reduce sampling frequency.



Key Considerations from Monday



Priority #1 Harvest Equipment Sanitation

Concerns

- Concerns for this priority were raised regarding the timeline, and outcome of **CPS-funded, another research**. Updates coming this summer.
- A stepwise approach could be considered. Address additional changes as more data is released.

Specific Topics

- Need to consider complexities around equipment dismantling (downtime + expenses)
- Need to consider the type of equipment that will be included in the metrics
- More specific equipment design metrics
- Defining sanitation requirements (what are the practical realities)



Key Considerations from Monday



Priority #8 Soil Amendments and Inputs Concerns

Specific Topics

- COAs; data/rigor of testing requirements. Testing criteria (weight/volume)
- Evaluate the handling, storage, and management of these products.
- Guidance to prevent/prevent amplification and blooming in product or the environment where they are applied
- Process Authority



Key Considerations from Monday



Priority #11 Ag Water Standards and Well Assessment

Specific Topics

- All wells are different
- Evaluation that type A water is type A water
- High volume filtration + distribution system that allows compliance to type A water
- Performance criteria on validation and verification of wells



Open Discussion – Reach Consensus



Consider the following areas

- Urgency and Impact
- Availability of information
- Upcoming information
- Industry need



Amendment Process Next Steps



- Priority working group needs to be formed.
 - SMEs + Industry Representatives + LGMA Staff
- Working group works on changes to metrics (hands-on meetings)
- Working group proposes changes
- 30-day public comment period



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