National Food Safety Guidelines for Cantaloupe and Netted Melons

Appendix A: Environmental Assessments for Netted Melon Production

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TABLE OF CONTENTS

ABBREVIATIONS AND DEFINITIONS . . . 3
INTRODUCTION . . . 4
Enviromental Assessment . . . 4
TYPES OF ENVIRONMENTAL ASSESSMENTS . . . 5
Figure 1. The five types of environmental assessments covered in the National Cantaloupe Guidelines . . . 5
Site Selection Assessment . . . 6
Pre-Planting Assessment . . . 6
Table 1. Crop land and water source adjacent and nearby land use . . . 6
PRESEASON ASSESSMENT OF AGRICULTURAL WATER . . . 8
Assessment of Wildlife and Domesticated Animal Activity . . . 9
Table 2. Risk categories for wildlife and domesticated animal activities . . . 9
Table 3. Factors to be considered in the assessment of wildlife and domesticated animal activity . . . 10
Table 4. When evidence of animal intrusion in a production block occurs . . . 11
Preharvest Assessment . . . 12
Weather Factors to Consider in Environmental Assessments . . . 12
Conducting A Root Cause Analysis (RCA) . . . 13
Templates . . . 14
Template A. Site selection assessment checklist . . . 14
Template B. Pre-planting assessment (also review during preharvest assessment) . . . 17

ABBREVIATIONS AND DEFINITIONS

Terminology	Definitions
adjacent and nearby land	Land within a proximity that could potentially affect safe production of netted melons.
animal feeding operations (AFO)	Agricultural operations where animals are kept and raised in confined situations. An AFO is a lot or facility (other than an aquatic animal production facility) where the following conditions are met: - animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and - crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Generally, less than 1,000 animal units, which does not meet the requirements of a CAFO.
agricultural water (as used in this document based on FDA FSMA PSR)	Water used for preparing crop sprays, and water used for growing) and in harvesting, packing, and holding activities (including water used for washing or cooling harvested netted melons.
concentrated animal feeding operation (CAFO)	A lot or facility where animals have been, are or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. In addition, there must be more than 1,000 'animal units' (as defined in 40 CFR 122.23) confined at the facility; or more than 300 animal units confined at the facility if either one of the following conditions are met: pollutants are discharged into navigable waters through a man-made ditch, flushing system or other similar man-made device; or pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.
ultraviolet (UV)	A measure of the solar ultraviolet intensity at the Earth's surface; indicates the day's exposure to ultraviolet rays. The UV index is measured around noon for a one-hour period and rated on a scale of 0-15.

INTRODUCTION

Environmental assessments, covered in section 6.1 and 6.10 of the National Food Safety Guidelines for Cantaloupe and Netted Melons (the Guidelines), are a foundational component of food safety programs for netted melon production. These assessments help growers identify, evaluate, and manage biological, chemical, and physical risks in the production environment, including water sources, wildlife activity, and land use patterns that may contribute to crop contamination (Figure 1). A thorough, timely, and recurring environmental assessment process supports proactive decision-making and continuous improvement in risk mitigation.

Environmental Assessments

The purpose of an environmental assessment is to:

- Identify and document potential sources of contamination.
- Evaluate the likelihood of contamination occurring (risk) based on proximity, timing, and environmental dynamics.
- Inform decisions about preventive measures, monitoring practices, and mitigation strategies.
- Serve as a foundation for verification activities and food safety plan updates.

Observations made during an environmental assessment should be documented and monitored throughout the growing season and prior to harvest. Any corrective actions conducted/enacted to mitigate potential risk should be verified to ensure they are performing as intended. There are noted times (see Figure 1) when each type of assessment occurs. However, when a change occurs (e.g., a major storm with heavy rain or compost is spread on an adjacent field), the affected fields should be reassessed.

TYPES OF ENVIRONMENTAL ASSESSMENTS

Figure 1. The five types of environmental assessments covered in the National Cantaloupe Guidelines

Production Site Selection Assessment

(conducted before season begins)

- A site selection assessment for melon production is a structured evaluation of whether a particular location has the right conditions for safely growing netted melons.

Pre-Planting Assessment

(conducted as close as possible to planting)

- A pre-planting assessment for melon production is more immediate and practical than the broader site selection. It's like a final "go/no-go" check before you put seed or transplants in the ground.
- Check that conditions have not changed since the site selection assessment.

Pre-season Assessment of Agricultural Water

(conducted as close as possible to planting)

- Pre-season assessment of agricultural water is an evaluation of water that will contact melons (e.g., irrigation water) to determine if it is safe, reliable, and compliant with food safety standards before the season starts.

Assessment of Wildlife and Domesticated Animal Activity

(conducted prior to planting, prior to harvest and during harvesting)

- This assessment evaluates the frequency and types of animal activities that might increase the risk of contamination in or near the production area.

Preharvest Assessment

(conducted prior to harvest)

- A preharvest assessment evaluates the field, adjacent land, and food-contact surfaces on harvesting equipment for physical, chemical, and microbiological hazards that may pose a contamination risk to netted melons during harvest.
- Review findings from the preplanting environmental assessment for any changes to conditions.

Site Selection Assessment

The site selection assessment of the production environment is covered in section 6.1.1 in the Guidelines. When selecting a site for netted melon production, assess the field under consideration and adjacent and nearby land for potential sources of hazards and the likelihood of contamination from current and prior use. Also, evaluate hazards associated with "in-proximity" land uses and features, water sources and waterways. A general recommendation is to review records covering the past 10 years for all uses. If raw manure has been applied to the site, allow at least one year interim before planting netted melons. Table 1 lists examples of adjacent and nearby land uses that may pose contamination risks, and Template A, in the "Template" section below, provides an example of a checklist to assess potential hazards as part of the production site selection assessment.

Pre-Planting Assessment

The pre-planting assessment of the production environment is covered in section 6.1.2 in the Guidelines. A pre-planting assessment should be conducted immediately before and as close as possible to seeding or transplanting to verify that the production site and agricultural inputs are suitable, safe, and compliant with food safety requirements. This step serves as the final validation that conditions in the field do not present unacceptable risks to netted melon crops and that corrective measures have been taken when needed. Table 1 lists examples of adjacent and nearby land uses that may pose contamination risks, and Template B, in the "Template" section below, provides an example of a checklist to assess potential hazards as part of the pre-planting assessment.

Table 1. Crop land and water source adjacent and nearby land use

Adjacent and nearby land uses	Examples	Potential risk factors	Potential mitigation/ corrective actions
Animal operations	AFOs, CAFOs, grazing lands, domestic animals or hobby farms	Distance, topography, water runoff, number of animals, operation management practices, prevailing and counter-prevailing wind direction and seasonal patterns (wind speed, wind run, diurnal characteristics) land use history	Water treatment, vegetative buffers, barriers, increased buffer distances, animal and insect monitoring, communicating with neighbors to coordinate activities
Compost/Soil amendment operations	Compost operations, non-synthetic soil amendment pile (with or without animal product)	Distance, timing of production, production process, volume, storage, topography, water runoff, wind direction, history, method of application	Preventive barriers, process and documentation verification, controlled storage
Hazardous waste sites	Dumps, manufacturing facilities (abandoned & functioning), waste treatment facilities	Distance, production processes, storage, topography, runoff, wind direction	

Adjacent and nearby land uses	Examples	Potential risk factors	Potential mitigation/ corrective actions
Other crop cultivation	Cover crops, perennial crops, other; timing of cultivation and harvesting activities	History of risk identification, distance from adjacent operation, topography, crop production timeline, foreign objects, animal/bird attractant, grazing animals, harvest practices, adjacent non-covered crop pest harborage.	Communication with neighbors, timing of soil amendments application and other practices, increased monitoring, physical barriers.
Water source	Well-head or surface water	Aquifer characteristics, well casing design, integrity, and depths of extraction, history of risk identification, distance from adjacent operation, topography, opportunity for water run off through or from untreated manure, or composting operations, soil leaching, pastures, feedlots.	Adjacent operation management practices, increased monitoring, preventive barriers, type of system (closed vs open), water treatment.
Water storage and conveyance	Stagnant/pooled water (non-flooding or rain-related); reservoirs; lagoons, integrity of the storage, conveyance and distribution systems.	History of risk identification, distance from an adjacent operation, topography, flooding, animal intrusion, trash and debris, excessive vegetation, the integrity of water storage, conveyance, and distribution.	Adjacent operation management practices, increased monitoring, type of system (closed vs open), water treatment.
Urban and rural setting	Homes or buildings with septic leach field	Age and maintenance of leach field, history of risk identification, distance, topography, leach field status (active vs inactive), runoff. Presence of domesticated animals.	Preventive barriers, monitoring for septic leach field issues, outreach to community.
Other environmental considerations	Habitat/riparian areas	History of risk identification, distance from potential risk, topography, potential for animal intrusion, physical hazards	Preventive barriers, increased monitoring

PRESEASON ASSESSMENT OF AGRICULTURAL WATER

The preseason assessment of agricultural water is covered in section 6.1.3 in the Guidelines. Tracking the microbiological quality of agricultural water over time provides critical data for understanding the baseline and detecting changes in quality. Agricultural water assessments are covered more thoroughly in Appendix C. In brief, growers are encouraged to:

- For all agricultural water sources, identify, map, and document potential sources of hazards, when they occur, etc.
  - Type of water (surface, deep well, shallow well, recycled, etc.)
  - Slotting or screening of well casing in vadose zone (above saturated aquifer)
  - Type of distribution system (open, closed, or combined)
  - Identify types of hazards associated with each water source.
  - Cross-connections and any opportunity for cross-contamination (e.g., wells, pumps, storage, backflow, air gaps)
- Assess and document agricultural water practices.
  - Type of application method (e.g., surface or subsurface drip, furrow, overhead, etc.)
    - Methods should minimize netted melons contact with water. (e.g., raised beds, plastic mulch combined with subsurface drip irrigation).
    - If applied water could potentially contact netted melons, water quality requirements may need to be adjusted (e.g., more stringent) to minimize risk to the crop.
  - A description of the water treatment process, if applicable (e.g., type, physical filter pore size, etc.), and measurable treatment parameters (pH, turbidity, flow rate, antimicrobial concentration, UV treatment dose, etc.)
- If you encounter any issues with your water source during the preseason assessment of agricultural water, perform corrective actions as described in Appendix C for groundwater and surface water sources.
- **Baseline assessment:** Before planting, if the water source has no historical water quality data, establish a baseline microbial profile for each water source by:
  - Conducting a series of microbiological tests (e.g., for total coliforms and/or generic *E. coli* as the indicator organisms) under normal environmental and operational conditions.
    - Guidance for baseline testing is provided in section 6.1.3 of the Guidelines for indicator organisms such as total coliform and/or generic *E. coli* and water sample volumes. The goal of this testing is to understand the water quality of your system under normal conditions versus meeting an acceptable criterion.
    - It is worth noting that collecting more samples generally increases confidence in the results. However, there is no fixed or "magic" number of samples that guarantees accuracy. The appropriate sample number depends on the level of confidence you wish to achieve for your system, as well as the resources and capabilities available to you.
  - Sampling each distinct water source (e.g., well, surface reservoir, canal) independently to allow you to follow and trend each water source over time.
  - Using standardized sampling points, sample volumes (100 mL minimum), and sampling intervals (e.g., over several weeks/months).

- **Record and organize data consistently**
  - Consistent recordkeeping is essential for meaningful analysis and trending. For each water test, document:
    - Date and time of sampling
    - Water source type and location
    - Point of collection (e.g., pump discharge, field inlet, filter outlet)
    - Intended application method (e.g., drip, furrow, foliar spray)
    - Note weather conditions at the preceding time of sampling
    - Sampling personnel
    - Laboratory results (with method used, detection limits, and reporting units)
  - Use a spreadsheet or digital platform to consolidate and track the results over time (as illustrated in Appendix B). Consider color-coding outliers or flagging exceedances relative to baseline values or regulatory limits.

Assessment of Wildlife and Domesticated Animal Activity

Section 6.1.4 of the Guidelines covers the assessment of wildlife and domesticated animal activity. To evaluate the contamination risk posed by wildlife and domesticated animal activity in netted melon production areas, a structured risk ranking system, as depicted in Table 2, enables growers to categorize observations based on the type, intensity, and location of activity (see Table 3 for more detail and examples and Table 4 for potential corrective actions). This supports consistent decision-making, prioritization of mitigation measures, and documentation for audits or investigations.

Table 2. Risk categories for wildlife and domesticated animal activities

Risk Level	Description	General Criteria & Examples	Example Observations
Low	Minimal likelihood of contamination	No signs of animals or fecal matter No crop damage Preventive controls (e.g., fencing, deterrents) in place and effective	No fresh tracks or scat No recent sightings Routine monitoring only
Medium	Potential for contamination if conditions persist	Animal signs or access noted but infrequent or minor Some proximity to the crop, but no direct contact or fecal contamination observed	Tracks or scat near, but not in, crop rows Minor crop nibbling without contamination Bird activity above field

Risk Level	Description	General Criteria & Examples	Example Observations
High	Likely risk of contamination	Direct animal intrusion - Fecal matter or urine present in the crop zone. Animal behaviors (e.g., high density flocking/herding) likely to spread contamination	Feces in bed or furrow Damaged fruit with fecal smearing Livestock breach or large wildlife presence

Table 3. Factors to be considered in the assessment of wildlife and domesticated animal activity

Factor	Examples
Number of animals	Number of animals observed or indicated by evidence; larger number of animals pose higher risk than one or two.
Frequency of sightings	Repeated or patterned presence (daily, weekly) increases contamination likelihood.
Evidence type	Feces, urine, nesting, and chewing/feeding damage have different implications; feces in direct contact with produce or harvestable zones are the highest risk.
Proximity to crop	Animal signs in outer field margins may be moderate risk; in-bed signs present higher risk.
Environmental conditions	Animal signs in outer field margins may be moderate risk; in-bed signs present higher risk

Table 4. When evidence of animal intrusion in a production block occurs**.**

Issue	Variables	Potential Corrective Actions
Evidence of Intrusion	• Physical observation of animals in the field • Downed fences • Animal tracks in production block • Animal feces or urine in production block • Damaged or eaten plants in production block • Animal feces or urine in production block • Damaged or eaten plants in production block	• If there is evidence of intrusion by animals, the production block should undergo a detailed food safety assessment by appropriately trained food safety personnel prior to harvest. • Use Table 2 to categorize the risk level from animal intrusion events as low, medium, or high. • Corrective actions for "low" or "medium" risk level animal intrusion should be carried out according to the company SOP. • When a "high" risk level animal intrusion occurs, it is recommended not to harvest any netted melons found within a minimum 3-foot radius buffer distance around a do not-harvest area where the impacted crop has been isolated unless another corrective action can be found that adequately controls the risk. Buffer distances can be modified based on the risk factors identified (see Table 3 for examples of risk factors). • If evidence of fecal material is found (high risk level), do not harvest any crop found within a minimum 5-foot radius buffer distance from the spot of the contamination unless another corrective action can be found that adequately controls the risk. • Do not harvest any netted melons that have come into direct contact with fecal material. • If cover actions, such as appropriate no harvest buffers, cannot be formulated to control or eliminate the identified risk, do not harvest, and consider destroying the contaminated netted melons in the field. • Any equipment used to destroy unharvested netted melons must be cleaned and sanitized upon exiting the field. • In developing preventive and corrective actions, consider consulting with wildlife and/or domestic animal experts as appropriate. • Prior to taking action that may affect natural resources, growers should check local, state, and federal laws and regulations that protect riparian habitat and wetland areas, restrict removal of vegetation or habitat, or regulate wildlife deterrence measures, including hazing, harassment, lethal and non- lethal removal, etc. • Document corrective actions and have them available for verification for a period of two years.

Preharvest Assessment

The preharvest assessment is found in section 6.10.1 of the Guidelines document. Within at least one week of harvest, conduct and document a preharvest assessment of fields to be harvested. Create a list (e.g., Template B at the end of this appendix) tailored to the field to be harvested of items to check for potential contamination risk.

- Review records of all previous assessments (especially the preplant assessment) and routine monitoring that were conducted throughout the production period and verify that conditions have not changed.
- Look for new conditions that may have arisen or occurred since the last assessment or monitoring event. For example, if changes in weather conditions occurred, evaluate any adverse events (e.g., discharge/flooding or crop damage) that may impact the field and harvesting operations (see next section on weather factors).
- Evaluate the field for wildlife and domesticated animal activity (e.g., fecal deposits) that may have occurred since the field was last monitored.

Before harvesting begin:

- Inspect harvesting equipment and containers to ensure they are clean and in good repair.
- Visually inspect and check records to ensure all food-contact surfaces have been cleaned and sanitized according to company SSOPs.

Weather Factors to Consider in Environmental Assessments

Weather conditions may make netted melon production areas more susceptible to contamination if human pathogens are present in the environment. Wind and rain may serve to disperse vectors such as dust particles containing human pathogens from nearby sources onto the production area. If human pathogens are airborne on dust particles, precipitation can also deposit pathogens onto production areas. Awareness of these conditions and related potential contamination are an important part of evaluating food safety risks in netted melon production areas during environmental assessments. When conducting routine monitoring and the production site selection, pre-planting, agricultural water, and pre-harvest assessments, include an evaluation of how weather conditions may transport human pathogens to your fields under acute or excessive weather-related environmental circumstances. When assessing weather-related food safety risk in netted melon production areas, consider the following:

- Amount of rainfall in relation to time: Heavy or unusual rain may present a higher risk than lighter precipitation and increase potential opportunities for crop infection by human pathogens. Clean and sanitize equipment before use following exposure to mud and flood waters from heavy rainfall.
- Wind speed and duration: Higher than normal wind speeds may pose a greater food safety risk than lower wind speeds. Consider the wind directional changes to assess the level of risk. Check with your local weather experts to determine what is higher than normal. Clean and sanitize equipment before use following exposure to excessive dust, dirt, and debris from wind.
- Damage to unharvested netted melons: Do not harvest or pack netted melons if hail damages unharvested crop (e.g., rind punctures) as the resulting wounds may provide entry points for pathogens and sites for pathogen survival and multiplication. Handle and dispose of damaged netted melons in a manner that does not pose an increased risk of contamination to other netted melons.

- Time to harvest: Adverse weather conditions associated with rainfall, wind and temperature that occur closer to harvest may present higher risk than earlier in the growing season. Temperature conditions that limit surface drying, including cooler temperatures or temperature changes that promote sustained surface moisture following rainfall or high-humidity events, may prolong the survival of human pathogens if present on netted rinds.
- Water sources: Water quality may be impacted by severe weather conditions and events. Evaluate all water sources to minimize contamination, visually inspect for runoff and excessive turbidity. Consider turbidity (observed or measured) and/or microbial levels as an indicator of water quality.

Conducting A Root Cause Analysis (RCA)

As mentioned earlier in this document, environmental assessments are used to evaluate potential sources and conditions that could contribute to contamination of the production area and, ultimately, netted melons. When the assessment indicates elevated risk or conditions that may introduce hazards, the root cause should be investigated to further identify and evaluate contributing factors.

The objectives of the RCA are:

1. To determine the underlying reason or reasons that caused the unexpected event or incident.
2. Identify the actions needed to eliminate the problem, and to determine if there were multiple co-dependent factors or inter-related issues.
3. To prevent it from happening again.

The RCA builds upon the environmental assessment by following a structured, stepwise process designed to understand how and why event/incident may have occurred. Additional information on how to conduct an RCA can be found in "When To Do Root Cause Analysis - A Decision-Making Guide for the Produce Industry".[1]

[1] Western Growers - RCA_Guidance_for_the_Produce_Industry_When_to_do_RCA_pdf

Templates

Template A. Site selection assessment checklist

Category	What to Check	Notes / Observations	Potential Management Strategies (This is not an exhaustive list; additional information is given in section 6.1.1 of the Guidelines)	Corrective Action(s)
Topography & geographical features	Identify soil type (loamy, sandy, clay); check nearby vegetation that could harbor wildlife or pests.		• Evaluate if there is a need for soil leveling. • Manage border vegetation to reduce wildlife harborage while maintaining erosion control.	
	Assess slope of field and potential for runoff from adjacent land.		• Orient beds to reduce downslope flow. • Increase setback distance from higher-risk adjacent land.	
	Inspect for environmental water sources (drainage ditches, canals, ponds, rivers, public waterbodies).		• Characterize and manage water sources to minimize potential contamination, which may include repairs or other adjustments. • Maintain ditches to prevent overflow into production areas. • Avoid planting in low-lying areas adjacent to surface water.	
	Evaluate flood risk and history of flooding events.		• Avoid planting in fields with recent flooding history. • Consider testing soil for heavy metals and other contaminants.	

Category	What to Check	Notes / Observations	Potential Management Strategies (This is not an exhaustive list; additional information is given in section 6.1.1 of the Guidelines)	Corrective Action(s)
Topography & geographical features	Consider hydrogeological traits (water table depth, groundwater recharge practices, seasonal fluctuations).		• Avoid use of fields with shallow water tables prone to saturation. • Monitor seasonal groundwater rise periods. • Adjust irrigation practices to prevent soil saturation.	
Adjacent & nearby land use	Map and note proximity of adjacent fields, operations, or facilities.		• Maintain documented setback distances. • Increase monitoring frequency near higher-risk neighboring operations.	
	Identify activities that pose contamination risk (e.g., livestock, composting, biosolids application, septic system, industrial).		• Relocate production areas within the ranch when feasible. • Increase pre-harvest field assessments. • Coordinate timing of adjacent activities to reduce exposure.	
	Evaluate potential for drift, runoff, or dust movement into the melon field.		• Suspend harvest during high-risk dust events. • Use windbreaks or vegetative buffers.	
Historical land use	Review records of prior land use (crops grown, past livestock operations, industrial use).		• Maintain land-use history documentation. • Review records covering the past 10 years for all uses.	

Category	What to Check	Notes / Observations	Potential Management Strategies (This is not an exhaustive list; additional information is given in section 6.1.1 of the Guidelines)	Corrective Action(s)
Historical land use	Identify history of hazardous activities (landfills, waste sites, concentrated animal feeding, manure/compost applications).		• For microbial hazards, evaluate historical records over the past 3 years considering any remedial actions taken in the interim. • When raw manure has been applied, allow at least one year interim before planting netted melons. Note: Timeframes are reference points only, not fixed requirements. Site-specific conditions, historical practices, and available information should be considered when determining potential management strategies.	
Climate & weather events	Review regional climate and microclimate conditions.			
	Assess the frequency of heavy rainfall or flooding that could cause standing water, runoff, or splash contamination.		• Delay harvest following significant rain events. • Conduct pre-harvest field condition assessments.	
	Evaluate prevailing winds and potential for dust/ contaminant drift from nearby operations.		• Adjust harvest schedules during high-wind conditions. • Implement dust control measures on nearby roads or fields.	

Category	What to Check	Notes / Observations	Potential Management Strategies (This is not an exhaustive list; additional information is given in section 6.1.1 of the Guidelines)	Corrective Action(s)
Climate & weather events	Consider seasonal high winds or storm patterns that may carry contaminants from outlying sources.			

Template B. Pre-planting assessment (also review during preharvest assessment)

Category	What to Check	Netted Melon-Specific Concern	Risk Present? (Y/N)	Mitigation Needed? (Y/N)	Notes / Corrective Action
Animal operations (AFOs, CAFOs, grazing, hobby farms)	Proximity of animal operations; evidence of runoff or dust movement; manure handling/storage near field or water.	Runoff or windblown contamination can deposit pathogens on fruit rinds that grow on the soil surface.	☐ Yes ☐ No	☐ Yes ☐ No	
Composting & soil amendments	Compost/manure piles near fields or canals; use of untreated amendments; verification of compost treatment logs.	Untreated or poorly managed compost can contaminate unharvested netted melon rinds.	☐ Yes ☐ No	☐ Yes ☐ No	
Biosolids & other inputs	Potential application of biosolids in fields or near water source should not be allowed. For inputs, evaluate compliance with treatment process requirements as indicated in Table 3 of the Guidelines and minimize risk of cross-contamination through proper storage.	Biosolids may contain pathogens or heavy metals; melon rind retains contamination.	☐ Yes ☐ No	☐ Yes ☐ No	

Category	What to Check	Netted Melon-Specific Concern	Risk Present? (Y/N)	Mitigation Needed? (Y/N)	Notes / Corrective Action
Adjacent & nearby land use	Nearby livestock, composting, urban, or industrial activity; risk of runoff, dust, or spray drift.	Contaminants can deposit onto developing fruit or soil where fruit rests.	☐ Yes ☐ No	☐ Yes ☐ No	
Historical land use	Records of prior use (landfills, livestock, untreated manure, hazardous sites); residual contamination testing. Review records covering the past 10 years for all uses.	Pathogens or chemicals can persist in soil, impacting melons grown on the ground.	☐ Yes ☐ No	☐ Yes ☐ No	
Water source, storage & conveyance	Water testing results; condition of wells, canals, reservoirs; evidence of animal intrusion.	Contaminated irrigation water can directly contact melon fruit or soil.	☐ Yes ☐ No	☐ Yes ☐ No	
Surface water & drainage	Distance to canals, ditches, ponds; slope/ runoff direction; flood history; buffer zones.	Flooding or poor drainage can splash pathogens onto melon fruit.	☐ Yes ☐ No	☐ Yes ☐ No	
Urban & human activity	Proximity of residential or commercial/ industrial structures, septic systems, storm drains; trash or discharge risks.	Dust or stormwater can carry microbial and chemical hazards to melon fields.	☐ Yes ☐ No	☐ Yes ☐ No	
Habitat & riparian areas	Wildlife signs (tracks, scat, bird activity); vegetation providing habitat near field or water.	Wildlife feces can contaminate soil and fruit directly in melon fields.	☐ Yes ☐ No	☐ Yes ☐ No	