

# Protected Harvest

# Sustainable Citrus

## Certification Standards and Audit Requirements

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Version 2.0

Applies to orange and mandarin production in California

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**Contents**

Contents .....2

Background: Protected Harvest Sustainable Citrus Standard Version 2.0.....3

Introduction: Protected Harvest Sustainable Citrus Standard Version 2.0.....3

1. Nutrient Management.....4

2. Irrigation & Water Management.....6

3. Soil Management.....8

4. Pest Management.....9

5. Materials Handling..... 15

6. Air Quality ..... 17

7. Energy Management..... 19

8. Habitat Management..... 20

9. Social Responsibility..... 21

10. Product Handling & Chain of Custody..... 27

Glossary of Terms..... 29

## **Background: Protected Harvest Sustainable Citrus Standard Version 2.0**

The Protected Harvest Sustainable California Oranges & Mandarins Standard was first developed by Protected Harvest in 2008. The Standard has been applied to orange and mandarin growing operations since 2008.

Version 2.0 is the result of a major revision of the Oranges & Mandarins Standard in the first half of 2019. The revised Standard is now named the Protected Harvest Sustainable Citrus Standard V.2.0.

The revision of the Standard was informed by the following objectives:

1. Update the Standard to reflect state of the art best practice and science in agricultural production; and,
2. Expand the scope of the Standard to include social responsibility and energy management criteria and additional criteria in existing chapters.

Highlights of revisions and updates include:

- Updating of criteria throughout to reflect currently recognized best management practices;
- Addition of Social Responsibility and Energy Management chapters;
- Revision of criteria text to make the language and answer choices more straightforward overall; and,
- Reorganization of criteria, criteria numbering, and chapters to clarify Standard organization and flow.
- Addition of straightforward Audit Requirements to the Standard. Previously, resources and information to support growers in achieving the certification was contained in a separate Companion Document.

Version 2.0 is applicable to orange and mandarin producing operations in California. For detailed information on the Protected Harvest Sustainable Citrus certification process, please see the Sustainable Citrus Certification Manual.

## **Introduction: Protected Harvest Sustainable Citrus Standard Version 2.0**

Version 2.0 contains a total of 155 criteria including three Bonus criteria. Criteria are organized into ten chapters. To achieve certification, an operation must achieve at least 50% of the available points in each chapter as well as 70% or more of available points in all chapters combined. Certified operations must also not exceed a maximum number of pesticide impact points calculated using the pesticide Environmental Assessment System (PEAS). More information is available in the Sustainable Citrus Certification Manual.

Each criterion is listed with its name, full text, points value, and audit requirements. Audit requirements include the specific type of documentation or visual observation that the auditor will need to verify compliance with the individual criteria.

## I. Nutrient Management

The criteria in the Nutrient Management chapter focus on the management of plant nutrition, nutrient application decision-making, and application of nutrients. The goal of this chapter is to promote practices that optimize nutrient management, particularly nitrogen, on the farm. It includes criteria related to nutrient application decision-making, nutrient sources, and application equipment calibration.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
1.1	Nutrient Management - Nutrient Management Plan	A nutrient management plan has been prepared. This plan includes the following factors: soil type, sources of nutrients (including organic / biological), recommended rates, application methods, application timing, and a process for updating the plan. (5 points) Note: may be one plan w/ specifics for each grove.	5	Nutrient management plan with required elements
1.2	Nutrient Management - Soil Analysis - Micronutrients	A soil sample has been analyzed by a lab for micro-nutrients in the last 36 months. (3 points)	3	Soil test analysis results
1.3	Nutrient Management - Soil Analysis - Macronutrients	A soil sample has been analyzed by a lab for macro-nutrients in the last 36 months. (3 points)	3	Soil test analysis results
1.4	Nutrient Management - Tissue Analysis	At least one tissue nutrient analysis has been done in the last 24 months. (5 points)	5	Tissue nutrient analysis results
1.5	Nutrient Management – Certified Crop Advisor	The amount and timing of fertilizer applications is determined by a certified crop advisor (CCA), or a CCA is advising on fertilizer applications. (3 points)	3	Written records of CCA recommendations and/or record of CCA employment
1.6	Nutrient Management - Sources of Nitrogen - Biological	Some or all of the nitrogen applied is from a plant or animal source, and it was analyzed for its nutrient value in advance. If manure is used, it has been composted according to the National Organic Program compost standard OR Code of Federal Regulations Title 40, Part 503, Appendix B OR is incorporated into the soil at least 120 days prior to harvest. (4 points)	4	Records of purchase of biological N-sources; records of testing
1.7	Nutrient Management - Sources of Nitrogen - Synthetic/Mined	If a synthetic source of N is used, it is either slow release, or N is applied in small injections through the drip irrigation system with no more than 20 units of N applied at a time. Foliar feeding may be used in addition to fertigation. (3 points)	3	Records of nutrient applications

1.8	Nutrient Management - Nutrient Application Equipment Calibration	Fertigation equipment has been calibrated at least twice in the last 12 months, or at the start of the current season and after all equipment adjustments or repairs. (3 points)	3	Equipment maintenance records
1.9	Nutrient Application - Fertigation System Design	If fertigation is used, a written record is maintained of measurement of length of time for materials to move from injection site to the beginning of furthest lateral and from beginning to end of last lateral line. (4 points) <i>If fertigation is not used, this criterion is not applicable.</i>	4	Written record of measurement

## 2. Irrigation & Water Management

The Irrigation & Water Management chapter aims to promote practices that optimize water quality and water use efficiency in the operation's irrigation and water management practices. It includes criteria around irrigation decision-making, types of irrigation systems, and irrigation system efficiency.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
2.1	Irrigation & Water Management - Well Testing and N Calculation	If well water is used for irrigation, it has been tested in the last 36 months for nitrogen content and the amount of N applied annually in irrigation water has been calculated and subtracted from amount needed. (3 points)	3	Well water test; records of N applied in irrigation water
2.2	Irrigation & Water Management - Irrigation Scheduling - ET & Precipitation Data Used	Evapotranspiration (ET) and precipitation are measured and recorded during the cropping season for use in irrigation scheduling. (3 points)	3	Records of measurements taken
2.3	Irrigation & Water Management - Irrigation Scheduling - Soil Probe/Sensor Data Used	Irrigation scheduling utilizes soil probes or moisture sensing technologies such as gypsum blocks, tensiometers, or pressure bombs. (3 points)	3	Visual inspection of equipment
2.4	Irrigation & Water Management - Water Conservation - Irrigation Type - Drip or Microsprinklers	Drip or microsprinklers are used. (3 points)	3	Visual inspection of equipment
2.5	Irrigation & Water Management - Water Conservation - Irrigation Type - Regular Sprinklers	a. Regular sprinklers are used. (1 point)	1	Visual inspection of equipment
2.5	Irrigation & Water Management - Water Conservation - Irrigation Type - Flood/Furrow No Tailwater	b. Flood/furrow with no tailwater generated is used. (1 point)	1	Visual inspection of equipment
2.5	Irrigation & Water Management - Water Conservation - Irrigation Type - Flood/Furrow W/ Tailwater	c. Flood/furrow is used and tailwater is released. (0 points)	0	Visual inspection of equipment

2.6	Irrigation & Water Management - Water Conservation - Flow Meter Usage	A flow meter is used on each irrigation pump, or no pump is used. (2 points)	2	Visual inspection of equipment
2.7	Irrigation & Water Management - Irrigation Pump Type	a. The irrigation pump is electric with time-of-use meter or variable frequency controller. (3 points)	3	Visual inspection of equipment
2.7	Irrigation & Water Management - Irrigation Pump Type	b. The irrigation pump is low-emission internal-combustion powered (as defined by NRCS EQIP program). (2 points)	2	Visual inspection of equipment
2.7	Irrigation & Water Management - Irrigation Pump Type	c. Another type of pump besides those listed above was used. (0 points)	0	Visual inspection of equipment
2.8	Irrigation & Water Management - Irrigation Pump Type - Bonus	Bonus: No pump (gravity-fed system) is used or the pump is solar powered electric. (3 bonus points)	3	Visual inspection of equipment
2.9	Irrigation & Water Management - Water Usage Tracking	The total amount of water applied annually for irrigation is recorded and tracked for this production block in order to improve water stewardship and measure effects of water management BMPs on water use. (3 points)	3	Records of water applied
2.10	Irrigation & Water Management - Distribution Uniformity	A documented schedule and process are in place and employees have been trained to check for and make necessary adjustments to ensure distribution uniformity at least once every season. (3 points)	3	Copy of schedule and process; records of DU tests
2.11	Irrigation & Water Management - Irrigation System Maintenance	A documented schedule and process is in place and employees are trained to check lines for leaks, breaks, and clogs and make necessary repairs at least every other irrigation. (3 points)	3	Irrigation system inspection schedule
2.12	Irrigation & Water Management - Water Coalition Membership	The farming operation is a member of a local water coalition that provides services for compliance with conditional agriculture discharge waiver requirements. (1 point)	1	Proof of membership

### 3. Soil Management

The Soil Management Chapter aims to promote practices that increase soil fertility and prevent erosion. It contains criteria around monitoring, maintaining, and enhancing soil organic matter and preventing soil erosion.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
3.1	Soil Management - pH Testing	Soil pH has been tested in the last 36 months. (3 points)	3	pH test results
3.2	Leaching Prevention - Soil Amendments	Soils have been augmented with compost, organic mulch, or similar organic matter source in the last 12 months (grinding prunings and leaving them in the field qualifies). (3 points)	3	Field activity records; visual inspection
3.3	Leaching Prevention - Soil Organic Matter Analysis	A soil organic matter analysis has been done in the last 36 months. (3 points)	4	Soil analysis results
3.4	Leaching Prevention - Grove Floor Mgmt	Grove floor is managed so that vegetation is maintained between tree rows year-round (dry season dieback excepted). (3 points)	5	Visual inspection or photos
3.5	Soil Management - Erosion Control	Ditches have been planted with grass, hardened, or lined with material such as plastic or weed matting to prevent downcutting and other types of erosion. (3 points)	3	Visual inspection or photos



## 4. Pest Management

Integrated Pest Management (IPM) is a sustainable approach to managing pests by combining biological, cultural and chemical tools in a way that minimizes economic, environmental and health risks. The goal of IPM, and intent of the criteria in this chapter, is to manage not only economic risks from pest outbreaks, but also reduce the potential risks posed by pesticides to the environment, workers, and surrounding communities. Many of the practices contained in this chapter are focused on preventative techniques to avoid overreliance on pesticide use. When pesticide use occurs, criteria are included to ensure they are handled safely and applied in ways that target usage to reduce amounts applied and to maximize efficacy.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
4.1.	Pest Management - General - Pest Management Plan	There is a documented pest management plan including prevention measures, monitoring and action thresholds, and remedial actions. (3 points)	3	Copy of pest management plan
4.2	Pest Management - General - Training of Employees	Employees that handle and use pesticides have received appropriate training, which included use of proper notification and/or signage in treated area. (3 points)	3	Records of training, including dates, participants, and topics covered; observation or photos of signage
4.3	Pest Management - General - Sprayer Calibration	Sprayer calibration and spray coverage tests are done at least once a season and are based on manufacturers' recommendations and spray target characteristics. (3 points)	3	Equipment maintenance records; records of coverage tests
4.4	Pest Management - General - PPE	Workers who handle or apply pesticides are provided with necessary personal protective equipment (PPE) and an area to shower after applications, clean PPE clothing is stored separately from personal clothing and provided to workers each day, and employees are not allowed to take PPE home. (3 points)	3	Visual observation of PPE provided, shower area, PPE storage area
4.5	Pest Management - General - Notification of Pesticide Application	The following information about each pesticide application was posted at a central farm location: treated area, time and date; product name, active ingredient(s), and associated adjuvants; and restricted entry interval. (3 points)	3	Observation or photos of pesticide application posting
4.6	Pest Management - General - Resistance Management	Pesticide resistance management was practiced by rotating pesticides with different 'modes of action' at least every two sprays. (3 points)	3	Pesticide use reports; Pesticide resistance management

				protocols or pest management plan with protocols included
4.7	Pest Management - Crop Scouting - Who Scouts the Crop?	a. Independent or in-house Farm Employed PCA, with written report to grower. (4 points)	4	Scouting records; record of scout employment
4.7	Pest Management - Crop Scouting - Who Scouts the Crop?	b. Dealer/Co-op Employed PCA, with written report to grower. (2 points)	2	Scouting records; record of scout employment
4.7	Pest Management - Crop Scouting - Who Scouts the Crop?	c. Non-PCA scout, with written report to grower, or grower is scout and keeps records. (1 point)	1	Scouting records; record of scout employment
4.7	Pest Management - Crop Scouting - Who Scouts the Crop?	d. Crop not scouted or incomplete scouting report regardless of scout qualifications. (Non-qualifier. Fail Chapter)	0	Scouting records; record of scout employment
4.8	Pest Management - Crop Scouting - Scouting Frequency	a. Scout inspects grove at least weekly March 15 through November 1. (3 points)	3	Scouting records
4.8	Pest Management - Crop Scouting - Scouting Frequency	b. Grove is scouted at least once every two weeks from March 15 through November 1. (2 points)	2	Scouting records
4.8	Pest Management - Crop Scouting - Scouting Frequency	c. Grove is scouted less than once every two weeks but at least monthly March 15 through November 1. (1 point)	1	Scouting records
4.8	Pest Management - Crop Scouting - Scouting Frequency	d. Documented scouting is performed monthly or less March 15 through November 1. (Non-qualifier. Fail Chapter)	0	Scouting records
4.9	Pest Management - Crop Scouting - Scouting Records	a. Scouting records are analyzed at year end with a written evaluation of trends both within a season and from season to season. (4 points)	4	Written scouting record analysis
4.9	Pest Management - Crop Scouting - Scouting Records	b. Scouting records are analyzed at year end with a written evaluation of trends within the season. (3 points)	3	Written scouting record analysis

4.9	Pest Management - Crop Scouting - Scouting Records	c. Scouting records for the complete season are kept from year to year, but a written evaluation of trends is not done at year's end. (1 point)	1	Written scouting record analysis
4.9	Pest Management - Crop Scouting - Scouting Records	d. Scouting records for the complete season are not kept from year to year. (0 points)	0	Written scouting record analysis
4.10	Pest Management - Beneficials Monitoring	Beneficial organism populations in the grove are monitored during scouting and factored into treatment decisions. (3 points)	3	Scouting records; pest management plan
4.11	Pest Management - Red Scale Monitoring	In groves where <i>Aphytis</i> is not released and insect growth regulators are not used, red scale is monitored using pheromone traps (or <i>Aphytis</i> releases are used) during the first (May), second (June-July), and fourth (Sept.-Oct.) flights of male scale, and degree-days are used to estimate when these flights occur. When an average of more than 1,000 scale are trapped during the fourth flight and fruit is infested with scale at harvest, a pesticide application is done for the next season. (3 points)	3	Monitoring records
4.12	Pest Management - Weed Mapping	Grove has been mapped for emerging weed problems at least twice in the past 12 months. (3 points)	3	Copy of weed survey/map
4.13	Pest Management - Honeydew Ants Monitoring	Honeydew feeding ants are monitored. (1 point)	1	Scouting records
4.14	Pest Management - Nematodes Monitoring	Soil and root samples have been analyzed for nematode populations in the past 36 months. (3 points)	3	Lab analysis records
4.15	Pest Management - Phytophthora Monitoring	Soil and root samples have been analyzed for <i>Phytophthora</i> propagules in the past 36 months. (3 points)	3	Lab analysis records
4.16	Pest Management - Disease Symptoms Monitoring	Scouting program includes monitoring for disease symptoms. (1 point)	1	Scouting records
4.17	Pest Management - Lepidoptera Pest Treatment	No pesticides have been applied for Lepidoptera pests (e.g., Citrus cutworm, Citrus leafminer, Orange tortrix, Fruittree leafroller, Omnivorous leafroller, loopers), or Lepidoptera pests are treated with a spray, but economic thresholds have been met or exceeded prior to treatment and a non-carbamate or non-OP material was used. (3 points)	3	Scouting records; pesticide use reports or records
4.18	Pest Management - Scale Management - <i>Aphytis</i> Usage	<i>Aphytis</i> sp. are released for red or yellow scale. (3 points)	3	Receipts for <i>Aphytis</i> ; farm activity records
4.19	Pest Management - Scale Management - Pyriproxyfen or Buprofezin Usage	If pyriproxyfen or buprofezin are applied to red scale, it is monitored for the second period of crawler production prior to application. (5 points) <i>If pyriproxyfen or buprofezin are not applied, this criteria is not applicable.</i>	5	Pesticide use reports or records; scouting records

4.20	Pest Management - Scale Management - Mating Disruption	Pheromones are used to disrupt the life cycle of red scale.	3	Records of farm activities
4.21	Pest Management - Tree Hedging/Topping	Trees are hedged or topped. (3 points)	3	Pruning records; physical observation
4.22	Pest Management - Packinghouse High-Pressure Spray	The packinghouse uses a high-pressure washer for scale removal. (4 points)	4	Physical inspection; packing house literature
4.23	Pest Management - Ant Treatment	Non-OP (organophosphate) and non-carbamate treatments are used for ant treatments, or no ant treatment is made. (3 points)	3	Pesticide use reports or records; farm activity records
4.24	Pest Management - Thrips Treatment	Economic thresholds are used prior to citrus thrips treatment, or no citrus thrips treatment was made. (3 points)	3	Scouting reports; pesticide use reports or records
4.25	Pest Management - Citricola Scale Treatment	Economic thresholds are used prior to citricola scale treatment, or no citricola scale treatment is made. (3 points)	3	Scouting reports; pesticide use reports or records
4.26	Pest Management - Red Mite Treatment	Economic thresholds are used prior to citrus red mite treatment, or no citrus red mite treatment is made. (3 points)	3	Scouting reports; pesticide use reports or records
4.27	Pest Management - Brown Garden Snail Management	Snails are not treated or are managed by one or more of the following methods (2 points): <ul style="list-style-type: none"> <li>· Decollate snail has been established in the grove, or there is documentation of attempt to establish decollate snail.</li> <li>· One of the following pesticide alternatives are used: copper banding, iron phosphate, copper sulfate or cuprous oxide paint.</li> </ul>	2	Scouting reports; pesticide use reports or records
4.28	Pest Management - Disease Mgmt - Branch Pruning	In the past 12 months, lower branches of the trees have been pruned to 24 inches off the ground. (2 points)	2	Visual inspection
4.29	Pest Management - Disease Mgmt - Wet Trunks	Irrigation method used does not wet the trunk. (2 points)	2	Visual inspection or photos

4.30	Pest Management - Disease Mgmt - Budwood or Planting Stock Selection	If replanting or topworking trees, only registered budwood or certified planting stock from the Citrus Clonal Protection Program is used. (2 points)	2	Budwood registration documentation or nursery equivalent
4.31	Pest Management - BONUS - Disease Mgmt - On-Farm Rootstock or Scion Trial	Bonus: Farm has an on-farm rootstock or scion trial planted. (3 bonus points)	3	Map of rootstocks/scion trial experimental plot
4.32	Pest Management - Weed Mgmt - Herbicide Selection	a. None of the following herbicides have been used in the previous 12 months (3 points): Atrazine (Aatrex), Simazine (Princep), Bromacil (Hyvar, Krovar), Diuron (Karmex, Krovar), Prometon (Pramitol), Bentazon (Basagran), Norflurazon (Solicam, Predict, Zorial).	3	Pesticide use reports or records; field activity records
4.32	Pest Management - Weed Mgmt - Herbicide Selection	b. One or more of the above materials has been used in the last 12 months, but was applied in a band within the dripline of the tree row. (1 point)	1	Pesticide use reports or records; field activity records
4.32	Pest Management - Weed Mgmt - Herbicide Selection	c. One or more of the above herbicides has been used beyond the dripline. (0 points)	0	Pesticide use reports or records; field activity records
4.33	Pest Management - Weed Mgmt - Herbicide Application - Ultra Low Volume	Ultra-Low Volume applicators are used for herbicide applications. (2 points) <i>If ultra-low volume applicators are not used, this criterion is not applicable.</i>	2	Equipment manual; physical observation of applicator
4.34	Pest Management - Weed Mgmt - Herbicide Application - Drift Reduction	Hooded/shielded sprayers or wiper applicators used to reduce drift. (2 points) <i>If hooded/shielded sprayers or wiper applicators are not used, this criterion is not applicable.</i>	2	Equipment manual; physical observation of applicator
4.35	Pest Management - Weed Mgmt - Other - Drip Usage	Drip irrigation is used (not fanjet). (3 points)	3	Physical observation of equipment
4.36	Pest Management - Weed Mgmt - Other - Microsprinkler Usage	Fanjet/microsprinkler irrigation is used. (2 points)	2	Physical observation of equipment
4.37	Pest Management - Weed Mgmt - Other - Spot Treatment	Spot treatment of weeds is used at least once in the past 12 months. (2 points)	2	Field activity records; pesticide use

				reports or records
4.38	Pest Management - Weed Mgmt - Other - Herbicide Tank Mixtures	No herbicide tank mixtures are used, or herbicide tank mixtures are of chemicals from different HRAC mode-of-action groups. (2 points)	2	Field activity records; pesticide use reports/records
4.39	Pest Management - Weed Mgmt - Other - Mechanical Controls	A mechanical weed control method (mowing, disking, flaming) is used at least once in the past 12 months. (3 points)	3	Field activity records
4.40	Pest Management - Asiatic Citrus Psyllid - Best Management Practices	The operation follows the recommended best management practices to prevent and respond to Asiatic citrus psyllid (ACP) recommended by the California Citrus Pest and Disease Prevention Program in 2019.	3	Field activity records; scouting records.
4.41	Pest Management - Asiatic Citrus Psyllid Monitoring	Monitoring of Asiatic citrus psyllid (ACP) is performed using yellow sticky cards, visual monitoring and/or sweep net or tap sampling every two weeks throughout the season. (3 points)	3	Field activity records
4.42	Pest Management - Asiatic Citrus Psyllid - Reporting of New Infestation	If an ACP infestation is found in the grove for the first time, and it is the first time it is detected in the region, the County Ag Commissioner is contacted immediately, and eradication strategies are followed. (3 points) <i>If ACP infestation was not found, this criterion is not applicable.</i>	3	Record of contact; field activity records
4.43	Pest Management - Asiatic Citrus Psyllid - Management Strategy	If ACP is established in the region and present in the grove, the UC IPM recommended management strategy is followed. (3 points) <i>If ACP is not established in the region, this criterion is not applicable.</i>	3	Field activity records
4.44	Pest Management - IPM or Water Quality Organization Membership	The farming operation has current membership in at least two organizations that provide information or support for IPM or water quality protection practices. (3 points)	3	Proof of membership
4.45	Pest Management - Continuous Improvement in Best Management Practices	The farming operation has had someone in attendance at a minimum of two training sessions related to IPM or BMPs offered by university, government, or non-profit organizations within the last 12 months. (3 points)	3	Records of attendance at training sessions

## 5. Materials Handling

Materials handling is a technical term for the storage, use, recycling, and disposal, if necessary, of hazardous materials. Hazardous materials are those that, because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety, or to the environment if released into the workplace or the environment. This chapter contains criteria around pesticide handling, fuel handling, and materials disposal and recycling.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
5.1	Materials Handling - Pesticide Spill Containment	A pesticide spill containment plan has been developed and addresses all of the following issues (5 points): 1. Who to contact if there is a spill, with phone numbers 2. How to contain the spill 3. How to clean up the spill 4. How to prevent spills 5. Where critical or sensitive areas are on your farm 6. How often the plan will be updated	5	Copy of pesticide spill containment plan with required elements
5.2	Materials Handling - Pesticide Storage Conditions - Commercial Applicator	A commercial applicator is used for all pesticide applications and no pesticides are stored on the farm. (10 points) <i>If YES, select NA for next three criteria (5.3, 5.4, 5.5)</i>	10	Records of commercial applicator contracts; physical observation
5.3	Materials Handling - Pesticide Storage Conditions – Containment	Pesticides are stored on the farm in a ventilated and locked containment area with a secondary containment device or structure. (3 points) <i>If pesticides are not stored on the farm, this criterion is not applicable.</i>	3	Physical observation
5.4	Materials Handling - Pesticide Storage Conditions - Off Ground	Pesticide containers are stored off the ground. (3 points) <i>If pesticides are not stored on the farm, this criterion is not applicable.</i>	3	Physical observation
5.5	Materials Handling - Pesticide Storage Conditions - Spill Kit	A spill response/cleanup kit is in the pesticide storage facility. (4 points) <i>If pesticides are not stored on the farm, this criterion is not applicable.</i>	4	Physical observation
5.6	Materials Handling - Pesticide Inventory Management	No pesticides are stored on the farm OR pesticides are stored on the farm and inventories are limited to materials purchased less than 12 months previously. (5 points)	5	Physical observation; records of pesticide purchase

5.7	Materials Handling - Pesticide Storage Location	No pesticides are stored on the farm OR storage area is located at least 400 feet from any public or private drinking water source AND two hundred feet from surface water. (4 points)	4	Physical observation
5.8	Materials Handling - Pesticide Mixing and Loading Area	The outdoor pesticide mixing and loading area was more than 100 feet from the wellhead unless a berm or other physical characteristics protected the well from contamination by surface water. (3 points)	3	Physical observation
5.9	Materials Handling - Pesticide Mixing and Loading - Eye Wash Station	An eye wash station maintained in good working order was provided at the mixing and loading site. (3 points)	3	Physical observation
5.10	Materials Handling - Pesticide Mixing and Loading - Emergency Response Plan	A bilingual emergency response plan, including emergency phone numbers, for pesticide spills and exposure is posted in an appropriate location(s), and employees are made familiar with and trained to follow the plan. (3 points)	3	Copy of bilingual emergency response plan
5.11	Materials Handling - Nutrient Storage Conditions	If synthetic nitrogen or phosphorus fertilizers are present on the farm for more than 30 days, they are stored in an enclosed structure with a secondary containment device or structure. Liquid fertilizers of any type are stored in an enclosed structure with a secondary containment device or structure. (3 points) <i>If synthetic nitrogen or phosphorus fertilizers are not present on the farm for more than 30 days, this criterion is not applicable.</i>	3	Physical observation
5.12	Materials Handling - Fuel Storage	The fueling area has a concrete floor or other mechanism(s) to contain leaks and spills (e.g., berms and/or sump). (3 points)	3	Physical observation
5.13	Materials Handling - Hazardous Material Disposal and Recycling	All disposal of hazardous materials is done in compliance with applicable laws, and dumpsters and recycling containers are sited to minimize environmental and visual impacts, positioned on cement pads to contain spills and leaks, and had lids or other covering (e.g., awning) to keep water out. (3 points)	3	Physical observation; disposal records/receipts
5.14	Materials Handling - Recycling of Equipment, Metals, Glass, Cardboards and Plastics	The business has an established, documented recycling program for metal, cardboard, plastics, paper and glass. (3 points)	3	Documentation of recycling program or procedures
5.15	Materials Handling - Materials Handling Management Planning	A materials handling and waste management plan with goals has been developed and documented for the farm, and includes elements such as packaging, hazardous waste, recycling and wastewater. (3 points)	3	Copy of materials handling and waste management plan



## 6. Air Quality

The goal of the Air Quality chapter is to promote practices that reduce air pollution resulting from agricultural production practices. The chapter contains criteria related to dust management, alternatives to burning of prunings, preventing pesticide drift, and sprayer calibration.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
6.1	Air Quality - Road Dust Management	a. Roads are permanently paved. (5 points)	5	Visual observation
6.1	Air Quality - Road Dust Management	b. Unpaved roads are oiled or roadmix/base is applied. (4 points)	4	Visual observation; records of farm activities
6.1	Air Quality - Road Dust Management	c. A chemical dust suppressant or polymer, washed gravel, organic material, or chip/mulch approved by the NRCS EQIP program or San Joaquin Valley Air Pollution Control District (see companion guide) is applied. (3 points)	3	Visual observation; records of farm activities
6.1	Air Quality - Road Dust Management	d. Roads are watered when dust is visible, or driving speed is posted for 10 mph or less. (2 points)	2	Visual observation; records of farm activities
6.1	Air Quality - Road Dust Management	e. The dust control practices described above are not consistently used. (0 points)	0	Visual observation; records of farm activities
6.1	Air Quality - Road Dust Management	f. No road in or around this grove has greater than 10 vehicle trips per day. (3 points) <i>If no unpaved roads, this criterion is not applicable.</i>	3	Records of farm activities
6.2	Air Quality - Chipping/Burning	a. Annual prunings are chipped and incorporated into or remain on soil in grove. (3 points)	3	Records of farm activities
6.2	Air Quality - Chipping/Burning	b. Annual prunings are not returned to the soil, but are not burned. (1 point)	1	Records of farm activities
6.2	Air Quality - Chipping/Burning	c. Annual prunings are burned. (Non-qualifier. Fail chapter)	0	Records of farm activities
6.3	Air Quality - Drift Management Plan	A drift management plan has been developed (see citrus companion document) and training has been conducted with those responsible for application. (4 points)	4	Copy of drift management plan; record of training

6.4	Air Quality - BONUS - Drift Management Technologies	Bonus: If pesticides are applied, sensor-controlled sprayer or tower spray equipment is used. (5 bonus points)	5	Visual inspection of equipment
6.5	Air Quality - Sprayer Calibration	a. If pesticides are applied, sprayer has been calibrated at least once in the last 1 month and after every adjustment or repair. (4 points)	4	Equipment maintenance records
6.5	Air Quality - Sprayer Calibration	b. If pesticides are applied, sprayer has been calibrated at least once in the last 2 months and after every adjustment or repair. (2 points)	2	Equipment maintenance records
6.5	Air Quality - Sprayer Calibration	c. No pesticides have been applied during the season. (4 points)	4	Equipment maintenance records
6.5	Air Quality - Sprayer Calibration	d. Pesticides have been applied but sprayer has not been calibrated at least once in the last 2 months and after every adjustment or repair. (0 points)	0	Equipment maintenance records

## 7. Energy Management

The Energy Management chapter focuses on energy use and energy use efficiency practices that are used throughout the operation. The goal of the chapter is to promote best practices on the farm related to increased energy efficiency and fuel efficiency, and mitigation of greenhouse gases (GHGs).

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
7.1	Energy Management - Energy Use Tracking	The total amount of energy used annually is documented and tracked by source (e.g., electricity, diesel) to measure production performance and is used to assess effects of energy BMPs on energy use. (3 points)	3	Fuel use records, electrical use records
7.2	Energy Management - Vehicle Efficiency	A documented schedule and process is in place and employees are trained to inspect and maintain vehicle engines for optimal operating efficiency. (3 points)	3	Copy of engine maintenance schedule and training records
7.3	Energy Management - Stationary Motors	Variable-speed drives are installed on motors that experience variable loads. (3 points)	3	Photo record or visual inspection of variable speed pumps
7.4	Energy Management - Stationary Motors - Electrical Pump Efficiency	Electrical pump efficiencies are measured and necessary adjustments to improve efficiencies have been completed within the last two years. (3 points)	3	Pump efficiency test results; pump maintenance records
7.5	Energy Management - Energy Audit	An energy audit of the operation has been completed during the last five years. (3 points)	3	Copy of energy audit
7.6	Energy Management - Alternative Energy - BONUS	Bonus: The operation generates and uses renewable energy sources (including solar, wind, hydroelectric, or biofuel) to supply its energy needs (3 bonus points)	3	Photo record or visual inspection of power generation equipment

## 8. Habitat Management

The Habitat Management chapter aims to promote best practices for maintaining habitat for plants and animals on or near the farm, as well as enhancing existing habitat. Watershed and wetland stewardship are also addressed.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
8.1	Habitat Management - Biodiversity Habitat Enhancement	Unfarmed areas are maintained or enhanced to increase biodiversity, such as wildlife, pollinators, pest natural enemies, and/or other beneficial organisms (e.g., via maintaining or enhancing the health of existing vegetation). (3 points)	3	Field observation
8.2	Habitat Management - Nesting Boxes	Nesting boxes have been provided for birds or bats, or mature native trees have been preserved within or adjacent to the grove. (2 points)	2	Field observation of trees and/or boxes
8.3	Habitat Management - Invasive Species and Animals	Invasive animals and/or species have been mapped and treated in the past 12 months. (2 points)	2	Copy of map; treatment records
8.4	Habitat Management - Riparian Areas	If riparian areas or water bodies are on or adjacent to the grove, a vegetative buffer area of at least 35 feet is established and maintained. (3 points) <i>If no riparian areas or water bodies are adjacent to the grove, this criterion is not applicable.</i>	3	Visual inspection; farm map or satellite image
8.5	Habitat Management - Endangered Species	The worksheet contained in my county's US EPA Endangered Species Protection Bulletin to determine which pesticides require special use modifications for protection of endangered species has been completed, even when not required to do so on the current pesticide label. (3 points)	3	Copy of completed worksheet from the bulletin
8.6	Habitat Maintenance - Erosion Control - Gully Maintenance	If gullies are present, they have been graded, filled, planted to permanent vegetation, or grade control structures have been constructed in gullies. (3 points) <i>If no gullies are present, this criterion is not applicable.</i>	3	Visual inspection
8.7	Habitat Management - Runoff Filtration - Wetland Maintenance	If a wetland area is in or adjacent to grove, buffers and setbacks are planted to grass or other permanent vegetation that filters the water as it moves off of the field. (3 points) <i>If no wetland area is in or adjacent to a grove, this criterion is not applicable.</i>	3	Visual inspection; farm map or satellite image
8.8	Habitat Management - Tailwater Management	If flood or furrow irrigation is used, no tailwater leaves the farm. (4 points) <i>If no flood or furrow irrigation is used, this criterion is not applicable.</i>	4	Visual inspection

## 9. Social Responsibility

The Social Responsibility chapter aims to promote best practices around human resources management, and the farm's relationships with neighbors and the community in which it operates. It includes detailed criteria related to hiring and recruitment, worker health and safety, wages, compensation, and benefits, workplace conditions, grievance and nonretaliation practices, the use of farm labor contractors (FLC's), and community involvement.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
9.1	Social Responsibility - Workplace Policies Documentation - Employee Handbook	The company has an Employee Handbook and associated workplace policies and procedures governing staffing and recruiting; orientation and training; employee relations and safety; performance review; and compensation and benefits. The Employee Handbook is reviewed annually and updated if necessary. Employees have access to the handbook upon hire, and the manual is available in their native languages. (3 points)	3	Employee Handbook
9.2	Social Responsibility - Workplace Policies Documentation - Written Terms of Employment	The company provides to employees upon hire a written employment contract or offer letter outlining the terms of employment in a language understood by the employee. (3 points)	3	Copy of example of an employment contract or offer letter
9.3	Social Responsibility - Recruitment and Hiring - Nondiscrimination	The company does not discriminate in its recruiting and hiring on the basis of age, race, gender, political persuasion or opinion, sexual orientation, religion, and national or social origin. (3 points)	3	Company statement of non-discrimination
9.4	Social Responsibility - Recruitment and Hiring - Farm Labor Contractors	If farm labor contractors (FLCs) are used, the company verifies FLCs are in compliance with all applicable state and federal laws, including, but not limited to, those related to recruitment, terms of employment, employment practices, compensation, and working hours. (3 points) <i>If FLCs are not used, this criterion is not applicable.</i>	3	Copies of records from sample of FLCs utilized related to recruitment, terms of employment, employment practices, compensation, and working hours tracking.
9.5	Social Responsibility - Employee Compensation,	The company complies with all state and federal laws and regulations related to minimum wage, working hours, and overtime pay. (3 points)	3	Copy of wage and overtime payment policy

	Benefits and Incentives - Wages and Overtime Pay			
9.6	Social Responsibility - Employee Compensation, Benefits and Incentives - Minimum Compensation for Piecework	When piecework compensation is used, the company ensures that piecework rates meet or exceed the legal minimum wage. Piece-rate workers are compensated at least minimum wage for rest periods and breaks. (3 points)	3	Copy of piecework compensation policy
9.7	Social Responsibility - Employee Compensation, Benefits and Incentives - Unemployment Compensation and Social Security	The company complies with state and federal laws for unemployment compensation and social security. (3 points)	3	State and federal law
9.8	Social Responsibility - Employee Compensation, Benefits and Incentives - Paid Time Off	Employees are provided paid time off for vacation and sick leave. (3 points)	3	Copy of paid time off policy
9.9	Social Responsibility - Employee Compensation, Benefits and Incentives - Unpaid Time Off	Employees are allowed unpaid time off without reprisal for important events such as childbirth, adoption or serious illness (up to 12 weeks is required by federal law). (3 points)	3	Copy of time off policy
9.10	Social Responsibility - Employee Compensation, Benefits and Incentives - Worker Compensation	The company provides worker compensation coverage to all workers, even if state law excludes agricultural employers or workers. (3 points)	3	Copy of worker compensation policy
9.11	Social Responsibility - Employee Compensation, Benefits and Incentives - Wages Paid During Training	The company pays all employee wages during training. (3 points)	3	Company policy statement on paying wages during training
9.12	Social Responsibility - Employee Compensation, Benefits and Incentives - Work-related Continuing Education	The company pays or reimburses employees for tuition for work-related continuing education. (3 points)	3	Sample evidence of reimbursement of tuition
9.13	Social Responsibility - Employee Compensation, Benefits and Incentives - Breaks	The company adheres to applicable laws for the provision of daily breaks for lunch and rest. (3 points)	3	Evidence or written policy of provision of daily breaks

9.14	Social Responsibility - Employee Compensation, Benefits and Incentives - Clean Facilities for Lunch and Food	Clean facilities are provided for food storage and lunch breaks. (3 points)	3	Visual inspection of facilities
9.15	Social Responsibility - Employee Compensation, Benefits and Incentives - Child Labor	The company adheres to applicable laws relating to child labor and forced labor. (3 points)	3	State and federal law
9.16	Social Responsibility - Working Hours and Overtime Hours	The company complies with applicable laws regarding regular working hours and overtime hours. (3 points)	3	Company policy statement on regular working hours and overtime hours
9.17	Social Responsibility - Training - Safety Training	Safety training is done according to applicable regulations for when employees start work, begin new assignments, processes, procedures or uses of a substance or equipment that involve a hazard (training topics include hazardous materials, office and shop safety, tractor safety, first aid, and personal hygiene including daily changes to clean clothing). (3 points)	3	Records of training, including dates, participants, and topics covered; record of participation in state-mandated safety trainings.
9.18	Social Responsibility - Training - Personal Protective Equipment	Workers are trained in the use of all personal protective equipment (PPE) required for their job tasks. (3 points)	3	Records of training, including dates, participants, and topics covered
9.19	Social Responsibility - Training - Hazardous Events	Employees have been trained to respond to hazardous events. (3 points)	3	Records of training, including dates, participants, and topics covered
9.20	Social Responsibility - Training - Sexual Harassment Prevention	All employees have participated in sexual harassment prevention training. (3 points)	3	Records of training, including dates, participants,

				and topics covered
9.21	Social Responsibility - Worker Health and Safety - Accident Prevention Program and Emergency Response Plan	The company has an established accident prevention program (APP) and emergency response plan, and the program has been communicated to employees. (4 points)	4	Copy of APP; verbal confirmation from employee of receipt of APP
9.22	Social Responsibility - Worker Health and Safety - Safety Statistics	Safety statistics (e.g., employee time lost to accidents) are tracked and retained for at least two years to communicate and manage performance. (3 points)	3	Records of safety statistics for the last two years
9.23	Social Responsibility - Worker Health and Safety - Employee Trained in First Aid Onsite	An employee trained in first aid is always onsite during farming activities. (3 points)	3	Documentation of training of key personnel and observation of presence of trained employee
9.24	Social Responsibility - Worker Health and Safety - Accessible First Aid Kits	Adequately stocked first aid kits are provided and accessible at key locations throughout the operation. (3 points)	3	Visual observation of first aid kits and their contents throughout the operation
9.25	Social Responsibility - Worker Health and Safety - Personal Protective Equipment	Workers are made aware of, have immediate access to, and utilize all required personal protective equipment (PPE) for their respective work tasks. (3 points)	3	Visual observation and verbal confirmation with employees
9.26	Social Responsibility - Worker Health and Safety - Investigation of Work Accidents	Work accidents are investigated with the goal of reducing or eliminating them in the future. (3 points)	3	Records of accident investigations
9.27	Social Responsibility - Worker Health and Safety - Treatment of Injured or Sick Workers	A documented process is in place and employees are trained to ensure the adequate and timely on-site treatment of injured or sick workers.	3	Copy of policy, and evidence of training of workers



9.28	Social Responsibility - Workplace Conditions - Hygiene Infrastructure	Employees are trained in basic hygiene practices and are provided with conveniently located clean toilet and hand washing facilities in the field. (3 points)	3	Records of training, including dates, participants, and topics covered
9.29	Social Responsibility - Workplace Conditions - Provision of Shade	Employees are provided shade when temperatures exceed 85 degrees F. (3 points)	3	Observation or worker verbal verification
9.30	Social Responsibility - Workplace Conditions - Provision of Drinking Water	Employees working in hot environments are provided with at least one quart of drinking water per hour at accessible locations (2 gals per 8-hour day). (3 points)	3	Observation or worker verbal verification
9.31	Social Responsibility - Workplace Conditions - Workplace Free from Discrimination and Harassment	The company has a policy guaranteeing a workplace free from discrimination and harassment, including coercive, threatening, abusive, or exploitive conduct or behavior or harassment because of race, color, religion, gender, national origin, age, disability or sexual orientation. The policy is included in the employee handbook. (3 points)	3	Copy of policy
9.32	Social Responsibility - Workplace Conditions - Freedom of Association and Right to Collective Bargaining	The company has a policy on freedom of association and collective bargaining and implements it. The policy states that workers have the right to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in other concerted activities for the purpose of collective bargaining or other mutual aid or protection, and shall also have the right to refrain from such activities. (3 points)	3	Copy of policy
9.33	Social Responsibility - Workplace Conditions - Nonretaliation	The company does not retaliate in hiring, tenure of employment, or any term or condition of employment for engaging in the above-mentioned activities under the freedom of association policy. (3 points)	3	Verbal worker verification
9.34	Social Responsibility - Employee Job Performance & Grievance - Job Performance Evaluation	A documented process and timeline for evaluating job performance and determining pay increases and promotions for permanent employees is in place and communicated to employees. (3 points)	3	Copy of job performance evaluation process
9.35	Social Responsibility - Employee Job Performance & Grievance - Grievance Process	A grievance process has been documented in the employee manual, and grievances are recorded and processed in a timely manner. (3 points)	3	Copy of employee handbook & grievance records
9.36	Social Responsibility – Employee Recognition and Feedback	A documented employee recognition process was in place to provide peer-to-peer and management-to-employee feedback.	3	Copy of recognition process

9.37	Social Responsibility – Neighbors and Community	The farm took proactive measures to ensure good community relations, which may include but are not limited to: holding open houses; making literature available to the public; presenting community members with gifts (e.g., flower arrangements); maintaining visual aesthetics of the farm; involvement or volunteering in local initiatives; or contributing to fundraising for local initiatives.	3	Copies of literature; calendar of events; visual inspection of grounds; record of donations; or record of participation in community activities
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## 10. Product Handling & Chain of Custody

The Product Handling & Chain of Custody chapter aims to ensure best practices to ensure the transparent chain of custody of products, the differentiation and the segregation of certified products. It includes criteria related to employee training, product identification and tracking, and labelling of certified product.

Criterion Number	Criterion Name	Criterion	Certification Points	Audit Requirements
10.1	Product Handling - Written Handling Procedures	Specific written standard operating procedures (SOP) for product handling are in place and are distributed to employees and/or posted. (3 points)	3	Copy of SOPs; visual observation of posting or verbal confirmation of receipt by employees
10.2	Product Handling - Product Handling Employee Training	Employees are trained in standard operating procedures for product handling and trainings are documented, including date, time, topics covered, and participants (3 points)	3	Documentation of training, including required information
10.3	Product Handling - Harvest Record IDs	Harvest records include a unique field and harvest identification (e.g., field tags, harvest log, etc.). (3 points)	3	Harvest records with required information
10.4	Product Handling - Storage Record IDs	Storage records show the unique product lot identifications and quantities in inventory (e.g., warehouse log, bin log, etc.), or the operation does not store any product. (3 points)	3	Storage records with required information
10.5	Product Handling - Distribution Record IDs	Distribution records identify the unique product identifications and quantities distributed (e.g., bill of lading, pull sheet, warehouse log, etc.). (3 points)	3	Distribution records with required information
10.6	Product Handling - Shipping Paperwork Includes Certified Status	Shipping paperwork clearly shows the certified status of product represented under this program (e.g., Protected Harvest identification on invoice, bill of lading, copy of Protected Harvest Certificate with each load, etc.). (3 points)	3	Shipping paperwork with required information
10.7	Product Handling - Segregation of Certified vs. Non-Certified Product	a. No separation measures are needed because our facilities only store certified product. (5 points)	5	Storage records; visual

				observation of storage units
10.7	Product Handling - Segregation of Certified vs. Non-Certified Product	b. Designated storage units are used that solely house certified or non-certified product at any given time. (4 points)	4	Storage records; visual observation of storage units
10.7	Product Handling - Segregation of Certified vs. Non-Certified Product	c. Certified and non-certified product is mixed within the same bins, and visual identification techniques are employed (e.g., chalk mark on wall). (2 points)	2	Storage records; visual observation of storage units
10.7	Product Handling - Segregation of Certified vs. Non-Certified Product	d. Certified and non-certified product is mixed within the same bins, and physical barriers are used (e.g., chicken wire, paper, etc.). (3 points)	3	Storage records; visual observation of storage units
10.7	Product Handling - Segregation of Certified vs. Non-Certified Product	e. Certified product intended to be sold as certified is mixed in the same bins as non-certified product, and no separation measures are used. (0 points)	0	Storage records; visual observation of storage units
10.8	Product Handling - Product Traceability	A system is in place that can trace a certified product from its field of origin to its final point of distribution. (4 points)	4	Site visit; handling records

## Glossary of Terms

**Citrus** in this Standard only refers to oranges and mandarins.

**Chapters** are the categories of practices in the Standard.

**Criteria** are the individual requirements of the Standard, organized by Chapter.

**Certification Points** are the scoring points earned by fulfilling each practice. Point values for each practice are listed next to the practice.

**Audit Requirements** are the required observations, inspections, or documentation required to evidence compliance with a given practice. Audit Requirements are listed for each practice.