



Field Safety Manual

2024

TABLE OF CONTENTS

1	OBJECTIVE/PURPOSE	4
2	SCOPE	4
3	TERMS/DEFINITIONS	4
4	RECOMMENDED PRACTICES	5
5	ROLES & RESPONSIBILITIES	6
5.1	SITE MANAGER	6
5.2	SUPERVISOR / LEAD	6
5.3	EMPLOYEES / SUPERVISED CONTRACTORS	6
6	PROCEDURE	7
6.1	FIELD HAZARD ASSESSEMENT	7
6.2	FIELD SAFETY PRE-SEASON	8
	Irrigation safety -- Pre-season	8
	Emergency Action Plan	8
	Lone Worker	8
	Pesticide Exposure Planning and Response	9
	Field Awareness Letter	9
6.3	FIELD SAFETY IN-SEASON	10
	Irrigation safety -- In-season	10
	Wind Turbine Safety	11
	PPE Policies	11
	Field Sanitation	12
	Field Entry	13
	Hand Tool Safety	13
	Vehicle Safety	14
	Cell Phone Use	14
	Pesticide Storage, Transport, and Spraying	14
	Waste Management General Guidance	16

6.4	FIELD MEDICAL AND HEALTH	17
	Incident Report and Management.....	17
	Animal Insect Hazard Awareness	17
	Health Hazard Awareness	18
	Physical Hazard Awareness	21
6.5	FIELD EQUIPMENT SAFETY	23
	General Information -- Field Safety.....	23
	Field Equipment Inspection and Design.....	23
	ATV/UTV Operation	24
	Field Equipment Operation	24
	Field Equipment Maintenance and Fueling	26
	Field Equipment Transportation	26
7	TRAINING	27
8	DOCUMENTATION	29
9	PERFORMANCE INDICATIONS / PROCESS CONTROLS	29
10	VERSION / REFERENCES / APPENDICES	29

1 OBJECTIVE / PURPOSE

The purpose of this manual is to provide guidance to farm operators on working safely during field activities.

2 SCOPE

This manual is designed to share industry best practices and allow organizations to develop a field safety program focusing on the relevant risks that may arise in the production, management, and harvest of agricultural commodities.

3 TERMS / DEFINITIONS

All-Terrain/Utility Terrain Vehicles (ATV/UTV): Used for various on- and off-site operation activities and may be equipped with a bed for loading and transporting materials.

American National Standard Institute (ANSI): A recognized voluntary consensus standard organization that link to International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), and many other international standards.

Electrical Power Source: A component that supplies power to an electrical device.

Hand Labor Activities: Agricultural activities or agricultural operations performed by hand or with hand tools in field operations. Some examples of hand-labor operations are hand-cultivation, hand-weeding, stalk cutting, rogueing, hand-detasseling, hand-planting, hand-pollination, silk cutting, thinning, and hand-harvesting. Field-trial data gathering is not a hand labor activity for purposes of this policy.

Irrigation: the controlled application of water to plants via engineered water supply systems. There are many types of irrigation methods worldwide, all of which have risks, considerations, and/or impacts.

Job Safety Analysis (JSA): A systematic analysis to identify tasks of a job and their associated hazards, with recommended mitigation measures.

Lone worker or “to work alone”: to work at a field/worksites as the only worker in circumstances where there is no one to physically assess their wellbeing or where assistance is not readily available to the worker in the event of injury, illness, or emergency.

Machine Field Operations: Any task that involves the use of a mechanical piece of equipment designed for riding or traveling on while conducting field operations, including but not limited to, tractors, field planters, or harvesters.

Personal Protective Equipment (PPE): Protective equipment meeting appropriate standards to protect personnel from hazards to the eyes, face, head, hearing, respiratory system, hands, body, and feet. Personal fall protection may also be included.

Qualified Electrician: An individual who is engaged in the electrical construction and maintenance profession and possesses training and certification in all local applicable electrical codes.

System Owner: The individual or entity responsible for operation and maintenance of the irrigation system.

4 RECOMMENDED PRACTICES

- It is recommended that agriculture facilities maintain Health, Safety, and Environment (HSE) information at a central notification area for relevant notifications, compliance documents, and instruction for entering a location.
- Sites should develop a method of communicating significant hazards to affected personnel prior to (re-)entry to a worksite.
- Prior to entry into a field for inspection activities, review the Field Activities Hazard Assessment (Appendix 1) and update if needed.
- All workers should be aware of safety and health information, know where the information is located and readily have access to relevant information. Safety and Health information should be translated into local languages.



5 ROLES & RESPONSIBILITIES

5.1 SITE MANAGER

The Site Manager is responsible for:

- Following the defined safety procedure.
- Performing any necessary and appropriate planning and development.
- Delegation of any portion of this program as needed.
- Providing Health, Safety, and Environment (HSE) leadership if a dedicated specialist is not available.

5.2 SUPERVISOR / LEAD

The Supervisor / Lead is responsible for:

- Implementing the requirements of this procedure.
- Reviewing and approving exception requests.

5.3 EMPLOYEES / SUPERVISED CONTRACTORS

Employees and contractors are responsible for:

- Attending and understanding the provided training.
- Adhering to the requirements of this procedure, as well as other safety-related procedures that may be used in conjunction with this procedure.

6 PROCEDURES

Agriculture field operations have the potential for workers to be exposed to many safety hazards. It is the responsibility of the business owner, Health, Safety, and Environment (HSE) specialist, and/or site manager to critically evaluate all standard practices for the site and establish safe procedures to mitigate hazards that may pose significant injury to people or the environment. Prior to completing any task, a thorough hazard assessment must be completed by a team of operators and technical specialists for a review of the operation.

6.1 FIELD HAZARD ASSESSMENT

- Complete the Field Activities Hazard Assessment (Appendix 1) or a Job Safety Analysis (JSA) for each field prior to any operation activities.
- Use the assessment to identify potential hazards and to communicate these hazards to workers.
 - Electrical
 - Fire/Explosion Sources
 - Irrigation
 - Weather Related
 - Biological/Animal/Insect
 - Chemical/Flammable
 - Physical/Health
 - Mechanical/Wind Turbine
 - Noise
 - Pressure
- Additional hazards to assess:
 - Lone worker
 - Pesticide Exposure
 - Heat Stress
 - Vehicle Operation
 - Field Equipment

6.2 FIELD SAFETY PRE-SEASON

Irrigation Safety – Pre-Season

- Site Irrigation Inventory
 - Maintain an inventory of irrigation systems, when an electrical power source is used, to determine the scope and to identify the irrigation system types and risk associated with each.
- Annual Pre-season Electrical Safeguard Inspection
 - Use the inventory criteria to determine which systems require the annual pre-season electrical safeguard inspection (Appendix 2).
 - The System Owner is responsible for arranging the inspection and maintaining a copy of the completed inspection onsite.
 - See the Irrigation Requirements Flowchart (Appendix 3).

Emergency Action Plan

- Develop an Emergency Action Plan to address field specific risks. Field topics include, but are not limited to:
 - Severe Weather
 - Heat Exposure
 - Pesticide Exposure
 - Lost Worker
- Severe weather includes thunderstorms, hail, flash floods, hurricanes, tornadoes, cyclones, etc. Precautions should be taken at each location to reduce risks and stay safe during severe weather. See Appendix 4 for a Severe Weather Preparation Checklist.

Lone Worker

The health and safety challenges facing agricultural lone workers include medical emergencies related to a workplace incident or a personal medical condition, sudden and severe changes in weather, and fatigue from working long hours in the field including solitary driving to and from the field.

- Identify and document lone workers.
 - Tasks that require working alone for more than 2 hours should be identified, risk assessed, and have appropriate control measures applied.
 - Special emphasis should be provided for those solitary tasks that involve working with machines, mobile equipment, and manual tasks in high heat environments.
- Establish a communication protocol to monitor lone workers' wellbeing.
 - An example electronic solution to monitor lone workers is Safety Line. See Appendix 5 for additional details.
 - If an alternative method is used, test and verify the effectiveness.

Pesticide Exposure Planning and Response

Pesticide is an all-inclusive term for legally registered herbicides, fungicides, insecticides, plant growth regulators and biologicals. Each country and often local jurisdictions regulate the use of pesticides.

- Create a specific pesticide exposure plan, and ensure it is readily accessible.
- It is recommended to maintain a logbook of all pesticide applications on site. This may also help with inventory control of the pesticides stored on site.
- Consult organization support to outline the level of planning needed to measure the pesticide risk profile and determine the appropriate type of pesticide drill.
 - Pesticide Exposure Incident Reporting Flowchart (Appendix 6)
 - As part of the risk profile the globally harmonized Safety Data Sheet (SDS) for all pesticides should be reviewed and made available should an incident arise
- To raise field worker protection awareness, communicate with neighboring fields, growers, and third-party pesticide applicators.
- Ensure all required pesticide application information is available for communicating information to workers, including verbal notification and warning signs. Warning signs must:
 - Comply with local laws
 - Be made of materials resistant to weather conditions (rain, wind, etc.)
 - Be posted before application, remain during the restricted-entry interval, and removed after
 - Be posted to be seen at all normal entrances to treated areas, including entrances from worker camps and public access routes

Field Awareness Letter

- Provide a field safety awareness letter to all supervised seasonal field employees, including the parents or legal guardians of seasonal field employees under the age of 18, to raise awareness of potential safety risks associated with field operations and recommendations for mitigating risks.
- Ensure the letter is signed, returned, and filed with the emergency contact parental consent form, which should be completed and returned prior to working, along with completed payroll documentation.

6.3 FIELD SAFETY IN-SEASON

Irrigation Safety – In-Season

- Irrigator Safe Distance
 - For all hand labor activities, the minimum safe distance should be maintained. If the minimum safe distance cannot be maintained for any reason, perform the in-season safeguard inspection; or de-energize and lock out the irrigation system prior to entry into the field.
 - Maintain a minimum safe distance of 6 meters (20 feet) from any potentially electrically conductive component of an irrigation system. This includes above ground metal piping, wiring, etc.
 - Minimum safe distance does not apply to machine field operations if the operator remains on the machine. If the operator leaves the machine for any reason, the minimum safe distance criteria for Hand Labor Activities apply.
- Irrigator Inspection
 - Perform an in-season inspection (Appendix 7) the day of and prior to any worker entering the field that will be working within 6 meters (20 feet) of an electrically conductive component of an irrigation system.
 - The in-season inspection may also be utilized to assess storm damage. This visual inspection is to verify that there is no observable physical damage to the equipment.
 - If at any point it is determined that the irrigation system may not be safe, field workers must exit the field and may not re-enter the field until the system owner and qualified electrician has de-energized and locked out the system out. The field crew supervisor or applicable team lead shall verify that the system has been locked and tagged out by following the below steps:
 1. Visually inspect, but do not touch, the control panel and power disconnect, looking for evidence equipment is powered off, and secured with lock and tag.
 2. Visually inspect that the control panel to ensure control switch is off and follow site or equipment specific Lockout/Tagout (LOTO) verification steps.
 3. Follow site or organization specific procedure to ensure a ‘supervisory lock’ or individual locks are added based on those accessing the field or working on the equipment
 - For non-organization owned/operated irrigation systems: if the system owner has de-energized and locked out the irrigation system, apply a organization lockout lock to the disconnect and verify that the system is de-energized per the organization Lockout/Tagout (LOTO) procedure prior to a worker entering the field. The Lockout/Tagout (LOTO) disconnect should accommodate both locks.

Wind Turbine Safety

- At no time should employees be within 50 meters/165 feet from the wind turbine electricity generator while the generator blades are in operation.
- Wind Turbine Setback Entry Inspection Form:
- Complete (Appendix 8) prior to field equipment or workers entering the minimum setback distance of wind turbines.

Personal Protective Equipment (PPE) Policies

Personal Protective Equipment (PPE) is often a last line of protection to control employee exposures to hazards. Personal Protective Equipment (PPE) needs should be assessed using a Personal Protective Equipment (PPE) Hazard Assessment process. Organizations should develop plans to provide required Personal Protective Equipment (PPE) to employees, train employees on its use and care, and provide oversight to confirm Personal Protective Equipment (PPE) is being utilized according to hazard assessment. After use, it should be cleaned, inspected, and properly stored to minimize damage. Management should be notified if Personal Protective Equipment (PPE) is not available or cannot be used as intended (damaged, ill-fitting, or introducing additional hazards). It is highly recommended that management establishes a PPE matrix that clearly identifies minimal Personal Protective Equipment (PPE) for regular tasks

- Eye Protection
 - American National Standard Institute (ANSI) approved safety glasses or rigid side shields (prescription glasses only) are required throughout the field season for everyone entering fields.
 - Head nets or approved hats with sewn in nets (in addition to the site approved safety glasses) are required for all field workers when a crop is over waist height. Padded safety glasses or goggles may be used as an alternative to head netting if they are tight-fitting.
 - Head netting is not required while operating powered field equipment, but safety glasses remain a requirement.
 - Other examples and considerations include face shield and welding visor.
- Hand Protection
 - Gloves are required for hand detasseling, rogueing operations.
 - Cut-resistant gloves are required on the holding hand for cutting into fruit or vegetables and pruning shear use.
 - Maintain a supply of various sizes.
 - Hand protection should be assessed for tasks that create physical or chemical hazards
- Head Protection
 - American National Standard Institute (ANSI) approved hard hat is required:
 - While performing maintenance and other adjustments around the field equipment.
 - When manually installing sign and field posts.
 - Head protection should be readily accessible.
 - Other examples and considerations include safety helmet, bump cap, sun hat, welding helmet, and hair nets or means to control hair from being caught in routing parts.

- Hearing
 - Examples and considerations include ear plugs, ear defenders, earmuffs.
- Foot Protection
 - American National Standard Institute (ANSI) approved safety footwear is required while operating or riding powered equipment.
- Respiration
 - Examples and considerations include filtering face piece respirators including “dust masks”, powered air purifying respirators, or supplied air respirators.
- High-visibility Clothing
 - Provide, and ensure all field personnel wear at least one piece of high visibility clothing (e.g., hats, vests, shirts) as determined by hazard risk assessments.
- Standard Work Clothing
 - Workers are responsible for wearing appropriate work clothes, including overalls or long pants, long sleeves with no loose ends to be caught in machinery, a brimmed hat, suitable work boots or closed toe shoes, and socks.
 - Electrical safety is a separate high hazard risk and a full assessment of incident energy, arc flash, and necessary Personal Protective Equipment (PPE) must be conducted.
- Other
 - Harness, lanyard, and manufacturer approved tie off points, if accessing the top or areas of field equipment without standard work surfaces. To be considered a standard work surface, the area must be fully enclosed and have access ladders or steps, handrails, and mid-rails.

Field Sanitation

Field sanitation addresses safe and healthy working conditions in the field pertaining to the provision of toilets, potable drinking water, and hand-washing facilities. In addition to this general guidance some countries have field sanitation regulations.

- Inform field workers of the location of sanitation facilities and water and allow each field worker reasonable opportunities during the workday to use them.
- Field workers should also be informed of the importance of good hygiene practices. Good personal hygiene will help to reduce the risk of illness due to infection or exposure to chemicals.
- Complete the Field Sanitation Inspection Log (Appendix 9) daily, or more often as needed.

Potable Drinking Water

- Should be provided and placed in locations readily accessible to all field workers.
- Should be suitably cool and be provided in sufficient amounts, considering the air temperature, humidity, and nature of the work performed to meet the need of all workers.
- Should be dispensed in single use drinking cups or by water fountain(s). The use of common drinking cups or dippers is prohibited. An adequate supply of single-use cups should be maintained during the entire workday.
- Should be obtained through a tested municipal water source or bottled. Technology also allows tested/approved well water, but analytical data should be maintained and provided upon request.

- Drinking water containers should be constructed of materials that maintain water quality.
- Containers should be refilled daily or more often as necessary, kept covered, and regularly cleaned.

Toilet Facilities

- One toilet facility should be provided for every 20 field workers, or fraction thereof.
- Should have self-closing doors that can be closed and latched from the inside and should be constructed to ensure privacy.
- Are required to be appropriately screened and adequately ventilated to reduce heat, noxious odors, and flies and other vermin inside the facility.
- Should be operational and maintained in clean and sanitary condition.
- Disposal of wastes from facility should not cause unsanitary conditions.

Handwashing Facility

- One handwashing facility should be provided for every 20 field workers, or fraction thereof.
- Hand washing facilities should be provided at the beginning of each workday and be refilled with potable water as necessary to ensure an adequate supply.
- The handwashing facility should contain liquid soap and single use towels; waterless hand cleaner is not an option.
- Should be operational and maintained in clean and sanitary condition.
- Handwashing water should be separate from drinking water and posted with the appropriate language and workforce relevant translation. Example: “Wash water only, Agua solo para lavar” or other native language/translation combinations, as applicable.
- Toilet and handwashing facilities should be located within one-quarter mile walk of each hand laborer's location in the field. Consider access to the back of field to meet this requirement.
- Toilet and handwashing facilities are not required for field workers who perform field work for a period of 3 hours or less per day in any field, including transportation time to and from the field.

Field Entry

- Enter fields only through the designated entrances; never jump ditches or climb any fences to get into the field or use secondary entry.
- Check the Worker Protection Standard (WPS) sign and any posted hazards prior to field entry (where applicable).

Hand Tool Safety

- Use the appropriate tool for the task.
- Shovels or rousing hooks with guarding should be used when performing volunteering, rousing, thinning, and weed removal operations to prevent injury.
- See Appendix 10 for pruning shear and knife use requirements.

Vehicle Safety

- All field vehicles should follow all applicable requirements.
- Operators should utilize seat belts and only travel in Original Equipment Manufacturer (OEM) provided seating.
- Obey speed limits and limit off-road speed limits to under 25 miles per hour.
- Understand the types of roads used, be aware of the specific hazards and how to safely operate the vehicle.

Cell Phone Use

- Nonwork-related personal cell phone use is discouraged in the field. This includes talking, texting, and/or using the internet. If you bring your cell phone into the field and you lose it, the organization is not responsible.

Pesticide Storage, Transport, and Spraying

Storage

Pesticides and other hazardous materials must be stored appropriately and incorporate the following features:

- Located a suitable distance from watercourses, storm water drains, boreholes, and wells
- Secured to prevent unauthorized access
- Have external signage that complies with local legislation and locally recognized general hazard sign
- Have secondary containment to prevent spillages/uncontrolled releases to the environment
- An inventory and Safety Data Sheets for all materials held
- Well ventilated to prevent a build-up of vapor or fume
- Well organized
- Protected from extremes of temperature
- Have a spill kit and fire extinguishing equipment
- Incompatible chemicals not stored together
- Emergency shower and eyewash
- Pesticides held in storage must be reviewed for flammability risk, if the chemical presents a clear hazard for ignitability, flammable storage or storage away from electrical outlets may be required

Transport

Chemical transport is normally subject to local regulation and must be followed.

- Chemicals should not be present in the driver/ passenger compartment of a vehicle.
- Store out of direct sunlight and avoid excessive heat
- If transporting compressed gas cylinders: gas cylinders must not be situated in the same compartment as personnel, transport in suitable containers that are secured in an upright (vertical) position
- Cylinders equipped with threading must have safety caps in place during transport

Spraying

Prior to Spraying:

- If working alone tell a colleague or supervisor where you are going, and when you expect to return
- Have field emergency instructions with explicit directions on how emergency services are to locate the field/injured person in the event of a spraying accident/exposure
- In warm conditions, consume enough fluids (drinking water)
- Review the field conditions to identify water courses, the terrain and stability of the ground, overhead power lines, public footpaths, proximity of neighbors, etc.
- Ensure weather conditions are suitable for spraying
- Always read the product label and comply with the instructions for application rates, Personal Protective Equipment (PPE) requirements, etc.
- If making up the spray mix in the field, have a drip tray for the pesticide container
- If a chemical container is completely used, triple rinse the container and add the washings to the spray mix
- Retain the container and return it to the appropriate waste collection area for authorized recycling or disposal collection
- Empty containers should be rendered unusable by puncturing them once returned to the home station/site
- If a chemical container is not completely used, securely close the container and store securely before returning it to the chemical store
- Always clean any spillage immediately, placing waste and contaminated clothing or equipment in a sealed container. All spillages (however small) must be reported to supervisor/Health, Safety and Environment (HSE) support.
- Always select the appropriate spray nozzles and calibrate the spray equipment to ensure correct application rates. Collected spray must not be emptied onto the ground and should be returned to the spray tank.

During Spraying:

- Do not carry food or tobacco in work clothes and do not eat, drink, or smoke
- Strictly avoid touching face (mouth, skin, eyes, nose) or other exposed skin with gloves or sleeves.
- Keep soap, towels, and sufficient water close to the work site for washing hands, face, body
- If spray nozzles become blocked, clean with a blow pipe or bellows; never by blowing by mouth or scratching with a fingernail

After Spraying:

- Before eating, drinking, or smoking, wash hands (including under the fingernails) and face thoroughly with soap and water
- Before leaving the work site (example: to use the lavatory) always wash hands with soap and water
- When changing from work clothes, wash the most exposed parts of the body with soap and

water before putting on other clothes

- All work clothes must be regularly changed for professional laundering, they must not be taken home for domestic washing
- Any additional Personal Protective Equipment (PPE) must be either washed or disposed as hazardous waste
- Observe the strength and direction of the wind, do not spray if it is too windy
- Never leave products or equipment unattended
- Place warning signs if working near public routes
- Ensure members of the public or livestock are not able to enter the field during application
- Collect all waste articles such as chemical containers and remove them from the field before recycling or disposing via an authorized disposal route
- Ensure Re-Entry Intervals (REIs) are recorded, communicated, and strictly adhered to
- Follow field entry guidelines, (i.e., must always be entered at the designated point of entry to enable entrants to know the re-entry status of the field)

Waste Management General Guidance

In most countries the management of wastes is a regulated activity and is subject to specific laws and regulations.

- **Empty pesticide containers:** a pesticide container is considered empty when it has been “triple rinsed”; all pesticide residue has been removed from the container and it has been punctured to prevent re-use.
 - Recycle empty plastic pesticide containers as fuel or non-food/non-cosmetic plastic feedstock when possible.
 - If recycling is not an option, legally dispose in accordance with rules and regulations.
- **Rinsate (wash water):** pesticide-containing rinsates may cause environmental pollution and long-term liability if handled inappropriately.
 - Whenever possible rinsate should be used as part of the make-up water for the next batch.
 - Rinsate that cannot be reused or sprayed in accordance with the label must be handled according to local waste rules.
- **Treated seed (and seed dust):** treated seed contains pesticide active ingredients, many of which are toxic to aquatic organisms and may be harmful to other life forms and may be classified as hazardous waste in some countries. Consider these hazards with disposal.
 - The following disposal routes may be permitted:
 - Burning as a fuel for indirect heating or an industrial process
 - Incineration in a licensed hazardous waste incinerator with appropriate air emissions control equipment
 - The following disposal methods must not be used:
 - Burning as a fuel for private or public heating systems
 - Use as food for people or animals
 - Burial in the ground or intensive sowing at concentrations above product label listing
- **Seed packets and other packaging material:** used seed packets may contain treated seed dust or treated seed. Unused seed bags must not be allowed to enter the secondary market, under no circumstance may they be sold or disposed of where they could be reused for packaging.

- The following disposal routes may be permitted for used seed packets:
 - Burnt as a fuel for power or industrial heat generation
 - Incinerated in a permitted hazardous waste incinerator with appropriate air emissions control equipment
- The following disposal routes may be permitted for unused seed packets:
 - As fuel for industrial heating or power generation
 - If unlined, sent for re-pulping, provided the handler can provide assurance that there will be no diversion
- **Regulated plant material**
 - Large quantities (a bag or more) of regulated seed should be incinerated or burnt as fuel
 - Small quantities of material should be devitalized by autoclaving or steaming and then disposed of as vegetable waste or trash as appropriate, when possible
 - Open burning is not allowed
- **Used oil (hydraulic, motor, fuel oil):** may be classified as hazardous waste in some countries.

Used oil:

 - Must never be disposed of by burning, especially for residential heating
 - Must never be applied to the ground to control dust
 - Must not be mixed with other wastes before disposal
 - Must only be recycled by a suitable and certified waste contractor
 - Containers must be closed when not in use, stored in secondary containment, and labelled appropriately e.g., “Used Oil”

6.4 FIELD MEDICAL AND HEALTH

Incident Reporting and Management

Communicate incident reporting procedures, including contact information.

- **First Aid**
 - First aid awareness training is required for contractors and crew leaders prior to the start of work, first aid overview is required for bus drivers.
 - Area personnel, crew leaders, contractors, and field vehicles should be equipped with an appropriate first aid kit.
 - Display the awareness posters on each bus and/or field sanitation trailer and referenced during toolbox sessions. See Appendix 11a, 11b, and 11c.

Animal Insect Hazard Awareness

Insect Sting

- Evaluate the regional, seasonal, and personal risks associated with field activities and insect encounters.
- Discuss these risks with the local medical provider to develop a site-specific medical emergency response plan.
- See the sample protocol in Appendix 12.

Rattlesnake

- See Appendix 13 for awareness, training, and toolbox discussion information.

Health Hazard Awareness

Heat Stress

- Working in hot and humid or hot and dry conditions may present a risk of heat stress. Tasks that require PPE in these conditions may present an additional health risk.
- The four most common forms of heat illnesses include: heat rash, heat cramps, heat exhaustion, and heat stroke. Exposure to Ultraviolet (UV) rays from the sun can also cause sunburn. When a worker is experiencing signs of heat illness, promptly provide first aid. Do not try to diagnose which illness is occurring. Diagnosis is often difficult because symptoms of multiple heat-related illnesses can occur together. Time is of the essence. When in doubt, cool the worker with ice or cold water until help arrives and immediately call for emergency medical services. Never leave a worker with heat-related illness alone as the illness can rapidly become worse.
 1. **Heat rash:** also known as “prickly heat”, may occur in hot and humid environments where perspiration is not easily removed from the surface of the skin by evaporation. When extensive or complicated by infection, heat rash may be so uncomfortable that it inhibits sleep and impedes a worker’s performance and may even result in temporary total disability.
 - ◆ **Treatment:** prevent by resting in a cool place and allowing the skin to dry.
 2. **Heat cramps:** painful spasms of the muscles, are caused when workers drink large quantities of water but fail to replace their bodies’ salt loss. Tired muscles, those used for performing the work, are usually the ones most susceptible to cramps. Cramps may occur during or after working hours.
 - ◆ **Treatment:** may be relieved by resting in a cool place and drinking an electrolyte solution. Doctors may decide to administer saline solutions intravenously for quicker relief.
 3. **Heat exhaustion:** results from loss of fluid through perspiration when a worker has failed to drink enough fluid or take in enough salt or both. The worker with heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. Their skin will feel clammy and moist, their complexion pale or flushed, and their body temperature normal or slightly higher.
 - ◆ **Treatment:** rest in a cool place and drink an electrolyte solution. Severe cases involving individuals who vomit or lose consciousness may require longer treatment under medical supervision.
 4. **Heat stroke:** the most serious health problem for workers in hot environments, caused by the failure of the body’s internal mechanism to regulate its core temperature. It is a severe medical emergency requiring prompt medical treatment. Natural perspiration stops and the body can no longer dissipate excess heat. Signs include:
 - ◆ Mental confusion, delirium, loss of consciousness, convulsions, or coma
 - ◆ A body temperature of 106°F (41°C) degrees or higher

- ◆ Hot dry skin which may be red, mottled, or bluish. People with heat stroke will die unless treated promptly
- ◆ **Treatment:** while awaiting medical help, move worker to a cool place and soak clothing with cool water (remove outer layers, especially heavy protective clothing). Place ice or cold wet towels on the head, neck, trunk, armpits, and groin. Fan vigorously to increase cooling. Prompt first aid can prevent permanent injury to the brain and other vital organs.
- To acclimatize workers to hot humid climates, gradually increase exposure time to hot environmental conditions over a 7–14-day period. Fainting (heat syncope) may be a problem for a worker not acclimatized to being in a hot environment and can be exacerbated if the worker remains stationary in the heat.
- The best way to avoid injury and illness due to heat or sun is prevention. Develop a plan to assess the risk of working in heat and identify effective control measures to mitigate the risk(s). Consider the following elements:
 - Training and timely communication about heat stress, symptoms, sensible precautions, and emergency procedures.
 - Daily weather condition monitoring (temperature and humidity)
 - Schedule working hours, if possible, during the coolest part of the day, usually the morning.
 - Refrain, if possible, from extended periods of heavy physical labor during high heat and high humidity days.
 - Providing ample cool drinking water and clean drinking utensils to all workers, close to the work area. Encourage workers to drink plenty of fluids (avoid caffeine) throughout the day, typically 1 pint or 0.5 liters/ hour.
 - Providing designated shade stations to accommodate all workers so that they can sit in a normal posture, fully in the shade without having to be in physical contact with each other. The shaded area should be located close to the work area.
 - Use fans and water vapor misters where practical.
 - Providing sufficient rest breaks to allow workers to cool off.
 - Providing proper acclimatization time for new workers. Monitoring of new workers by supervisors and adjusting work schedules and intensity until they have acclimated to the working conditions.
 - Providing appropriate clothing and Personal Protective Equipment (PPE) (broad brimmed hats) that shade the face, neck, and ears. Encourage workers to wear light-colored clothing of natural fibers to permit natural evaporation of perspiration while working. Wear ventilated or air-conditioned suits if full body protection is required.
 - Developing emergency response procedures for heat stress medical emergencies.

Pollen Exposure/Seasonal Allergy Protocol

- Allergic rhinitis, also known as hay fever or seasonal allergies, is a common allergic disorder with symptoms that include runny nose, sneezing, nasal congestion, and nasal and sometimes facial itching.
- It is strongly recommended that individuals with seasonal allergies take over-the-counter

(OTC) medication daily when exposed to allergic triggers such as plant pollen.

- Due to the possibility of drowsiness with any antihistamine, it is recommended to be taken every evening. If you have questions about the use of over-the-counter (OTC) medications, consult your physician.

Poison Ivy/Poison Oak

- Display the awareness poster at each bus and/or field sanitation trailer and reference during toolbox sessions. See Appendix 14.

Noise Exposure

Repeated exposure to high levels of noise can cause permanent or temporary hearing loss. Certain field activities involve the use of loud machinery and/or take place in noisy work environments, examples include open cab tractors and rolling stock as well as threshing machines, shelling equipment, and seed counters.

- Most countries have legal limits for noise exposure in the workplace. These limits are often based on a worker's exposure to noise over an 8-hour day.
- A noise survey may be necessary and should include workplace noise sampling to identify which employees are at risk from hazardous levels of noise. Noise surveys can only be performed by qualified individuals using calibrated noise monitoring equipment. Contact HSE support for noise limits and how to conduct a noise survey.
- If the noise survey results show unacceptable exposure to noise, a Hearing Conservation Plan will need to be implemented to prevent initial occupational hearing loss, preserve and protect remaining hearing, and equip workers with the knowledge and hearing protection devices necessary to protect them. Key elements include (in hierarchical order):
 - Noise reduction: engineering controls that reduce sound exposure levels and involve modifying or replacing equipment or making related physical changes at the noise source or along the transmission path to reduce the noise level at the worker's ear. Examples of inexpensive effective engineering controls include:
 - ◆ Procurement of low-noise tools and machinery
 - ◆ Regular maintenance and lubrication of machinery and equipment (e.g., oil bearings)
 - ◆ Placing a barrier between the noise source and employee (e.g. enclosed cab with soundproofing materials)
 - ◆ Enclosing or isolating the noise source
 - Noise isolation: can involve engineered features such as sound-reducing cabs on agricultural machinery, e.g., planters, sprayers, harvesters, and tractors. In addition, it is important to inspect the tightness of cab doors and windows to reduce the amount of outside noise reaching the operator.
 - Administrative controls: involve controlling worker exposure to noise sources. Examples include:
 - ◆ Operating noisy machines during shifts when fewer people are exposed
 - ◆ Limiting the amount of time a person spends at a noise source
 - ◆ Providing quiet areas where workers can gain relief from hazardous noise

sources (e.g., construct a soundproof room where workers' hearing can recover, depending upon their individual noise level and duration of exposure, and time spent in the quiet area)

- ◆ Restricting worker presence to a suitable distance away from noisy equipment
 - ◆ Training all workers about hazards associated with excessive noise exposure, the site's Hearing Conservation Program and the correct use of Personal Protective Equipment (PPE)
 - ◆ Placing signs that restrict access to noisy work areas
- Hearing Protection Devices (HPDs)/Personal Protective Equipment (PPE): such as ear defenders and ear plugs, are acceptable but less desirable to control exposures to noise and are generally used during the time necessary to implement engineering or administrative controls, when such controls are not feasible, or when worker's hearing tests indicate significant hearing damage.

Physical Hazard Awareness

Fall Protection

- Elevated work includes:
 - An unprotected edge or opening in an excess of 4 feet (1.2 m) to a lower level, elevation, or the ground.
 - Working over dangerous equipment and other hazards where the danger of falling into or onto the hazard exists, regardless of height. For example, work done over exposed reinforcing bars or rotating equipment.
 - Work that creates a fall hazard by removing grating or permanently installed fall prevention or protection (e.g., guardrails), or creating an opening through which a person may fall.
- Prevention guidelines include:
 - Walking and working surfaces should be guarded against falls, support the intended load, maintained free of hazards, and inspected every 3 years (at minimum)
 - Perform inspections by a competent person and communication hazards to workers. Risks include holes in the walking or work surfaces 2 inches or greater, slipping and tripping hazards, as well as sharp or protruding objects, loose boards, corrosion, leaks, snow, ice, etc.
 - Fall prevention devices (guardrails, restraint systems, warning lines, etc.) should be used when an unprotected edge exists on a work platform, runway, catwalk, or other structures or equipment (including trucks, trailers, field equipment, and wagons) where employees or contractors work within 6 feet (1.8 meters) of an unprotected edge and a fall exceeds 4 feet (1.2 meters), or 6 feet (1.86 meters) during construction activities.
 - Personal fall arrest systems should be used when fall prevention devices are not feasible including working on top of truck, trailer, or wagon (tarping, leveling loads, etc.) that do not have guardrails.
 - ◆ When the use of a personal fall arrest system is not feasible (or cause a hazard), develop a written policy regarding working from the tops of vehicles, trailers, etc. Address what tasks are allowed to be performed, where those tasks take

place, and how that policy will be communicated to persons involved.

- ◆ Climbing a ladder fixed to the side of a truck, grain trailer, or wagon to check the status of the load or secure a tarp does not require the use of a personal fall arrest system.
- ◆ Ladders should meet minimum construction requirements and used and maintained according to manufacturer instructions and intended use.
- ◆ Portable ladder: ensure the ladder is secure and stable, no object overhead fall risks, use both hands when ascending or descending, and use fall protection when 3 points of contact and/or center of gravity between rails cannot be maintained.
- ◆ Fixed ladder: maintain center of gravity between the rails, retrofit with a ladder safety system when taller than 24 feet (7.3 meters) or use fall protection otherwise, have a self-closing gate to prevent falling

Confined Space Entry (CSE)

- A confined space is a space that:
 1. Is large enough and so configured that a worker can bodily enter and perform assigned work.
 2. Has limited or restricted means for entry or exit (e.g., tanks, vessels, silos, storage bins, hoppers, vaults, and pits)
 3. Is not designed for continuous human occupancy.
- General guidelines include:
 - Implement a Confined Space Entry (CSE) standard and ensure compliance with local regulations for each site where workers enter confined spaces.
 - Entry permitted only by personnel trained in the specific hazards and applicable controls.
 - Ensure the hazards and mitigation/controls are communicated to, and understood, by the entrant, attendant, and entry supervisor.
 - Evaluate all work in a Confined Space (CS) to determine if it can be completed without a worker entering the space (e.g., remote camera, drone, or tool extension).
 - Ensure that an effective communication process is in place so that contractors and company personnel are aware of the entire scope of work and its impact on others working in or near a Confined Space (CS).
 - Evaluate all potential confined spaces against Confined Space (CS) criteria and identify in a site/facility confined space list, update annually.
 - ◆ Include the potential for trenches, sewers, excavations, underground vaults, cooling towers, etc. to meet the confined space (CS) criteria.
 - Attach clearly visible signs near all confined space points of entry.
 - Enter spaces meeting the definition of a Permit Required Confined Space (PRCS) only with all required documentation. Do not allow and/or suspend a Permit Required Confined Space (PRCS) entry when rescue services are not available.
 - Conduct annual drills with each member of the on-site rescue team to maintain proficiency.

- Prepare the space prior to entry by isolating all energy hazards, cleaning, and decontaminating in accordance with site procedure, and utilizing forced air during unacceptable atmospheric conditions.

6.5 FIELD EQUIPMENT SAFETY

General Information – Field Safety

- Develop Job Safety Analysis (JSA)'s based on risks associated with field equipment used.
- Required Personal Protective Equipment (PPE) for field equipment operation includes:
 - Safety glasses
 - Approved Footwear
- Required Personal Protective Equipment (PPE) for field equipment maintenance and inspections includes:
 - Safety glasses
 - Approved Footwear
 - Work gloves which meet the established standards for the specified task
 - Hard hat
- Additional PPE may be required, based on Personal Protective Equipment (PPE) hazard assessment and Job Safety Analysis (JSA).

Field Equipment Inspection and Design

- Field equipment should be equipped with:
 - Suitable first aid kit
 - Appropriate fire extinguisher
 - General field equipment: minimum 5 lbs./2.5 kg ABC fire extinguisher.
 - Combine: minimum 10 lbs./5 kg ABC fire extinguisher outside and readily accessible while standing on the ground.
 - Cotton Picker: at least one 2.5-gallon/10 liters water extinguisher.
 - Additional fire extinguishers may be needed depending on field activity.
- Inspect and document field equipment daily before use.
 - Inspection forms for farm equipment should be developed in accordance with reference to the operator manuals.
- All tractors with horse-power greater than 20hp should have Rollover Protection Structure (ROPS) and a seat belt; this will be identified via a certification sticker on the Rollover Protection Structure (ROPS).
 - **Exempted uses:**
 - **Low profile** tractors while they are used in orchards, vineyards or hop yards where the vertical clearance requirements would substantially interfere with normal operations, and while their use is incidental to the work performed therein.
 - **Low profile** tractors while used inside a farm building or greenhouse in which the

vertical clearance is insufficient to allow a ROPS equipped tractor to operate, and while their use is incidental to the work performed therein.

- Tractors while used with mounted equipment which is incompatible with Rollover Protection Structure (ROPS) (e.g., corn pickers, cotton strippers, vegetable pickers and fruit harvesters). Rollover protection is only possible when the Rollover Protection Structure (ROPS) is engaged and secure; Rollover Protection Structure (ROPS) that are folded down ARE NOT ACCEPTABLE protection.
- If any structural member is damaged, the entire Rollover Protection (ROP) should be replaced. DO NOT ATTEMPT TO REPAIR A ROLLOVER PROTECTION STRUCTURE (ROPS).

All-Terrain/Utility Terrain Vehicles (ATV/UTV) Operation

- Only trained and authorized personnel should operate All-Terrain/Utility Terrain Vehicles (ATV/UTV).
- All-Terrain/Utility Terrain Vehicles (ATV/UTV) operator minimum age requirement is 18.
- No three-wheeled vehicles are allowed to be owned or operated.
- Minimum HSE requirements for All-Terrain/Utility Terrain Vehicles (ATV/UTV) are provided in Appendix 15.
- Required All-Terrain/Utility Terrain Vehicles (ATV/UTV) specifications are provided in Appendix 16.

Field Equipment Operation

- Only trained and authorized personnel should operate field equipment.
- Field equipment operator minimum age requirement is 18.
- Ensure everyone is clear of the area before starting the machine. Many types of equipment may produce front, rear, or side discharges of dirty air or debris during start up.
- Start the engine only while seated and properly restrained with a seat belt. Remain seated and continue wearing the seat belt while the machine is moving.
- Maintain a minimum distance of 10 ft (3 m) and always maintain eye contact with operator while in the immediate vicinity of equipment.
- Equipment operators and riders: do not wear jewelry, long unrestricted hair, or loose fitted clothing around equipment as it can cause serious injury if caught or entangled within the equipment.
- It is strongly recommended that two people be present in the area when field equipment is in operation.
 - Review the field conditions to identify any water courses, the terrain and stability of the ground, overhead power lines, public footpaths, proximity of neighbors, etc. Modify the risk assessment and work methodology to take account of local conditions.
 - Field equipment operators should have immediate and workable access to a communication source such as a phone or radio.
- Smoking is not permitted in, on, or near field equipment.
- Authorized riders are allowed on equipment designed for riders (seats, seatbelt, walk platform, etc.), such as planters and some harvesters.
- Stop the machine, shut off all moving parts, allow free-wheeling parts to come to a complete

stop, lower all supported attachments to the ground, and remove the key:

- Before general dismounting
- When anyone approaches the machine on foot
- During refueling
- When working with an implement:
 - Match the implement to the tractor size.
 - Balance the front of the tractor with weights, as needed, when using a rear-mounted implement.
 - Remove front-end weights as required when using front mounted equipment.
 - Implements should be serviced in the down position whenever possible. If implement service is required in the raised position, use transport locks, block it up, chock power source and chock implement (if applicable) to prevent unintentional movement.
 - Do not stand between the power unit and the attached implement.
- Power Take-Off (PTO) Operation
 - Keep the tractor Power Take-Off (PTO) master shield in place.
 - A tubular shaft guard should be used to enclose the drive shaft when implement is connected.
- Mechanical Detasseling
 - Cutting and pulling should be avoided in any part of a field where crews are working.
 - If field crews need to be in the field during mechanical detasseling use Appendix 17 to document and gain approvals for exceptions.
 - Be alert for:
 - Vibration in the cutting heads, report out of balance blades to your supervisor immediately.
 - Washed-out tile openings, ditches, wheel ruts, and steel posts hidden by the crop. Mark these hazards when noted and report them to your supervisor.
- Overhead Powerlines (OPL)
 - Identify the location and minimum height of all Overhead Powerlines (OPL)s in fields where agricultural workers plant crops and/or traverse to plant crops. Mark Overhead Powerlines (OPL)s on field maps.
 - Measure the maximum height/reach of all machinery used in fields, including any extensions to field machines. Use the overall height measured from the ground, including the length of any mounted implements, radio aerials, and/or conveyed loads when assessing Overhead Powerlines (OPL) clearance.
 - Identify and utilize designated safe travel routes between fields and work sites, considering safe Overhead Powerlines (OPL) clearance distances. Generally, a safe Overhead Powerlines (OPL) clearance distance is 10 feet or 3 meters in all directions (i.e., 3-dimensional bubble) although some applicable regulations may have different safe Overhead Powerlines (OPL) distances.
 - Do not park or perform maintenance on equipment located under or near Overhead Powerlines (OPL)s.
 - If possible, designate safe Overhead Powerlines (OPL) distance boundaries in the field using signs, fencing, and/or other suitable barriers.

- If any part of a tractor, front-end loader, sprayer, planter, combine, hoisted load (pipes, augers etc.), radio aerial, or mounted implement contacts an Overhead Powerlines (OPL), it can be lethal to the person(s) operating the equipment. If one of these objects touches the Overhead Powerlines (OPL), do not get out of the equipment. Phone for help and warn people to stay away and wait until the electric power company declares it safe.
- If the field machinery operator encounters a fallen Overhead Powerlines (OPL) in the field, stop immediately and call the electric power company. Assume it is still energized and do not touch.

Field Equipment Maintenance and Fueling

- Follow applicable lockout/tagout procedures before attempting to clear out tassels, leaves, stalks, husks, or other debris, and when repairing, adjusting, or servicing the machine in any way.
- All guards should be in place while machinery is operating.
- Before refueling, turn off vehicle, allow a hot engine to cool at least five minutes after dismounting.
- Follow site and fueling facility safe fueling guidelines
- If equipment is to be stored for a long period of time, ensure all biological material and debris is cleaned to prevent potential fires in storage

Field Equipment Transportation

These guidelines cover the transportation of field equipment to, from, and between field locations when not using a trailer or other haul vehicle.

- Make machine as narrow as possible by folding in all moveable components before transporting.
- Equipment should be loaded and secured using appropriate cables, straps, chains as well as the wheels chocked as to prevent movement of the equipment during transport; selection of the appropriate materials for securing the equipment should account for the weight and dimensions of the equipment and be designed for this intended use
- A Slow Moving Vehicle (SMV) emblem should be visible on the rear of the machine during operation. The maximum speed is limited to 25 mph/40 km/h if the Slow Moving Vehicle (SMV) emblem is left in place and visible from the rear of the equipment during transport.
- Lights and flashers should be in operation while equipment is moving.
- Observe all traffic rules and regulations, including posted road weight limits.
- Yield the right of way, pull over and stop when meeting cars or being overtaken by cars on narrow roads.
- Drive at a safe speed.
- Select the least traveled route. Pre-check the route for adequate height and width clearance. The field supervisor/technician and driver should understand and agree on the chosen route.
- Move equipment during daylight hours, followed by a second vehicle with its flashers on. If field equipment should be moved at night it should be moved by trailer, or if permitted in your local, should be equipped with lights and warning devices, be followed by a second vehicle

with its flashers on, and meet all other local legal requirements governing movement of farm equipment on public roadways.

- Be alert for blind corners on country roads, stop and check traffic from both directions before continuing.
- Watch for low hanging branches, power lines, low clearance underpasses, and other obstructions.
- Passengers/riders are not permitted on the equipment during non-field movement/transportation. Enter field from the driveway whenever possible.

7 TRAINING

- Provide training by a qualified instructor knowledgeable in this procedure and regulatory requirements (where applicable).
- Train all employees inspecting/entering fields on:
 - The potential hazards of working in a field
 - Loading and unloading field equipment (when applicable)
 - General Awareness Training
 - Required for non-supervised seasonal contract workers that perform manual field labor task to raise awareness with employees that may not have direct interface with irrigation systems.
 - Irrigation Safety Training
 - Required for ALL organization employees that interface with irrigation systems.
 - In-Season Irrigation Inspection Training
 - Required for any employee that will be conducting in-season irrigation systems inspections.
 - Focused first aid awareness training
 - Review and/or provide a field safety handbook to each field employee during the initial orientation process.
 - Field crew leaders: require additional training in their role and responsibility with special emphasis on field focused first aid procedures, field emergency response plans, and procedure requirements with emphasis on the Field Activities Hazard Assessment (Appendix 1).
 - Onboarding season field labor (only): follow the training elements contained in Appendix 18 as applicable to the work practices.
- Training should be conducted prior to the work assignment and refresher training provided annually using the approved organization training program, employee handbook, and this procedure.
- Verify training with an examination and/or sign off sheet

Example Field Safety Training Curriculum

	Curriculum ID	Curriculum Title	Frequency	Item Type	Item ID	Item Title	
1	Field Safety Crew Leads	Field Safety for Field Crew Leaders	Initial: 5 days, Retraining: 24 months	Instructor Lead Training (ILT)	MU_M_972684	Cardiopulmonary Resuscitation (CPR) First Aid and Automated External Defibrillator (AED) Training	
	Assign this curriculum to individuals who have responsibility for managing or overseeing summer field temps.						
2	Field Safety for Temps	Field Safety for Summer Field Temps	Initial: 5 days	Instructor Lead Training (ILT)	MU_M_1223625	North America Field Safety Program	
	Assign this curriculum only at your site's discretion; and only if you have or create usernames for your summer temps. It is not necessary to assign this curriculum, but the curriculum is provided for sites that choose to use it. If used, this curriculum should be assigned to summer temps.						
3	Irrigation Systems Safety Full time (FT)/ Part time(PT)	Irrigation System Safety	Initial: 5 days, Retraining: 12 months	Instructor Lead Training (ILT)	MU_M_972756	Irrigation Systems Safety for Direct Full time (FT) and Part time(PT)	
	Assign this curriculum to workers in areas where irrigation systems are in use.						
4	Irrigation Systems Safety Leader	Irrigation System Safety for Leadership and Authorized Workers	Initial: 5 days, Retraining: 12 months	Instructor Lead Training (ILT)	MU_M_972758	Irrigation Systems Safety for Site Leadership	
	Assign this curriculum to site leadership at sites where workers may be around irrigation systems, and to authorized workers who manage irrigation rigs.						
5	Field Sanitation	Field Sanitation for All Field Workers	Initial: 30 days, Retraining: 12 months	Instructor Lead Training (ILT)	MU_M_972745	Field Sanitation Training	
	Assign this annual training to all seed employees and contract employees that perform field work.						
6	Farm/Ag Ops Affected	Farm / Agricultural Operations Safety for Affected Workers	Initial: 3 months	Instructor Lead Training (ILT)	MU_M_972688	Farm and Ag Operations Safety for All Workers	
	Use this curriculum for workers who work around farm equipment but are not authorized to operate it.						
7	Farm/Ag Ops Affected	Farm / Agricultural Operations Safety for Affected Workers	Initial: 3 months, Retraining 12 months	Instructor Lead Training (ILT)	MU_M_972692	Farm and Ag Operations Safety for Authorized Workers	
	Use this curriculum for workers who operate farm / agricultural equipment						

8 DOCUMENTATION

Records are to be maintained in accordance with applicable records retention requirements.

9 PERFORMANCE INDICATORS / PROCESS CONTROLS

N/A

10 VERSION / REFERENCES / APPENDICES

Version

Version	Change Description
1.0	Field Safety Manual creation

References

<i>Title</i>	<i>File / Written Reference</i>

Appendices

No.	Title
1	Field Activities Hazard Assessment
2	Annual Pre-Season Electrical Safeguard Inspection
3	Irrigation Requirements Flowchart
4	Severe Weather Preparation Checklist
5	Lone Worker – SafetyLine
6	Pesticide Exposure (Incident Reporting) Flow Chart
7	In-Season Electrical Safeguard (Visual) Inspection
8	Wind Turbine Setback Entry Inspection Form
9	Field Sanitation Inspection Log
10	Pruning Shears (Snippers)/Knife Use
11a	First Aid Poster
11b	First Aid Poster – Spanish
11c	Seasonal Allergy Poster
12	Sting Prevention, First Response, and Medical Management
13	Rattlesnake Training Template
14	Poison Ivy
15	All-Terrain/Utility Terrain Vehicles (ATV/UTV) Use Requirements
16	All-Terrain/Utility Terrain Vehicles (ATV/UTV) Required Specifications
17	Exception Permit For Operating Detasseling Equipment in Fields with Workers
18	Employee Safety Orientation Review Sheet

APPENDIX 1

Field Activities Hazard Assessment

- The checklist should be completed entirely.
- Identify a strategy to mitigate each hazard identified. Mark all hazards (electrical lines, bins, tanks, etc.) from this review on a current copy of a field map for location purposes. Abatement strategies may include, but should not be limited to, recognition, flagging/marking, alternate field entrance, avoidance, shielding, or Personal Protective Equipment (PPE).
- Significant hazards that pose immediate threat to life and or limb result in all work being suspended until abatement procedures can be established and implemented.
- Immediately communication significant hazards to all personnel.
- File each completed checklist in an appropriate location for future reference.

Location Description: _____

Person Completing Evaluation: _____ Date of Initial Evaluation: _____

Do these risks exist at this location?		If yes, how will risk be mitigated?
Electrical Hazards: such as low electrical lines, power poles or guide wires, electric wells, or power plants	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Irrigation Hazards*: such as operating pivots, pivot tracks, gated pipe, drip tape, irrigation canals	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Wind Turbine Electricity Generators**	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Weather Related Hazards: such as wash outs, deep ditches, possible slippery / uneven footing, sinkholes tile holes	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Animal Hazards: any wild or domestic animals, unusual insect/ mosquito activity, burrows / holes dug into ground	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Chemical / Flammable Hazards: chemical tanks, fuel tanks, storage tanks	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Physical Hazards: culverts, abandoned building site sand irrigation wells, steep embankments, bridges, high traffic roadways, vegetation in field walk-ways	<input type="checkbox"/> YES <input type="checkbox"/> NO	

**Irrigation Hazards – If irrigation equipment exists in this location comply with potential electrical irrigation hazards, Reference and adhere to the Irrigation Systems Safety procedure.*

***At no time should employees be within 10 rods/165 feet from the wind turbine electricity generator while the generator blades are in operation.*

Communication log to record:

- Persons the hazards were communicated to
- If hazards identified in season, who made an update and the date the change was made.

Printed Name: _____

Review or Hazard Update Date: _____

APPENDIX 2

Annual Pre-Season Electrical Safeguard Inspection

Location: _____

1. All connections are visible with electrical equipment covers opened. YES NO
2. The condition of the system owner electrical system is good, no uncovered holes in the equipment enclosures or signs of deterioration that could lead to an unsafe condition of the electrical system. YES NO
3. Electrical service entrance is properly grounded per National Electrical Code (NEC) or local codes. YES NO
4. Connection of the grounding conductor to the grounding electrode (ground rod or ground mat) is by an approved method: exothermic weld or a listed for purpose grounding clamp. YES NO
5. Grounding electrode system resistance to ground is no greater than 25 ohms. YES NO
6. Grounding electrode conductors are sized correctly per National Electrical Code (NEC) or applicable local codes. YES NO
7. All metallic systems (both electrical and mechanical components) are electrically or structurally bonded together with properly sized external or internal jumpers. YES NO
8. The available fault current information provided by the power utility is up to date and correct.^{1,3} (Inspector may need to contact the power utility for available fault current at the electrical service) YES NO
9. The available fault current from the power utility and the service entrance disconnecting device ratings are properly coordinated.¹ YES NO
10. The inspector's opinion is that the condition of the utility company's equipment for the electrical system is good, no uncovered holes in the equipment enclosures or signs of deterioration that could lead to an unsafe condition of the electrical system.^{1,2} YES NO

As of this inspection date, I certify that this irrigation system meets all of the electrical criteria listed above.

Company Name: _____

Qualified Electrician Name (print): _____

Signature: _____ Date Inspected: _____

Grower Signature: _____ Date Inspected: _____

Reason for no inspection: _____

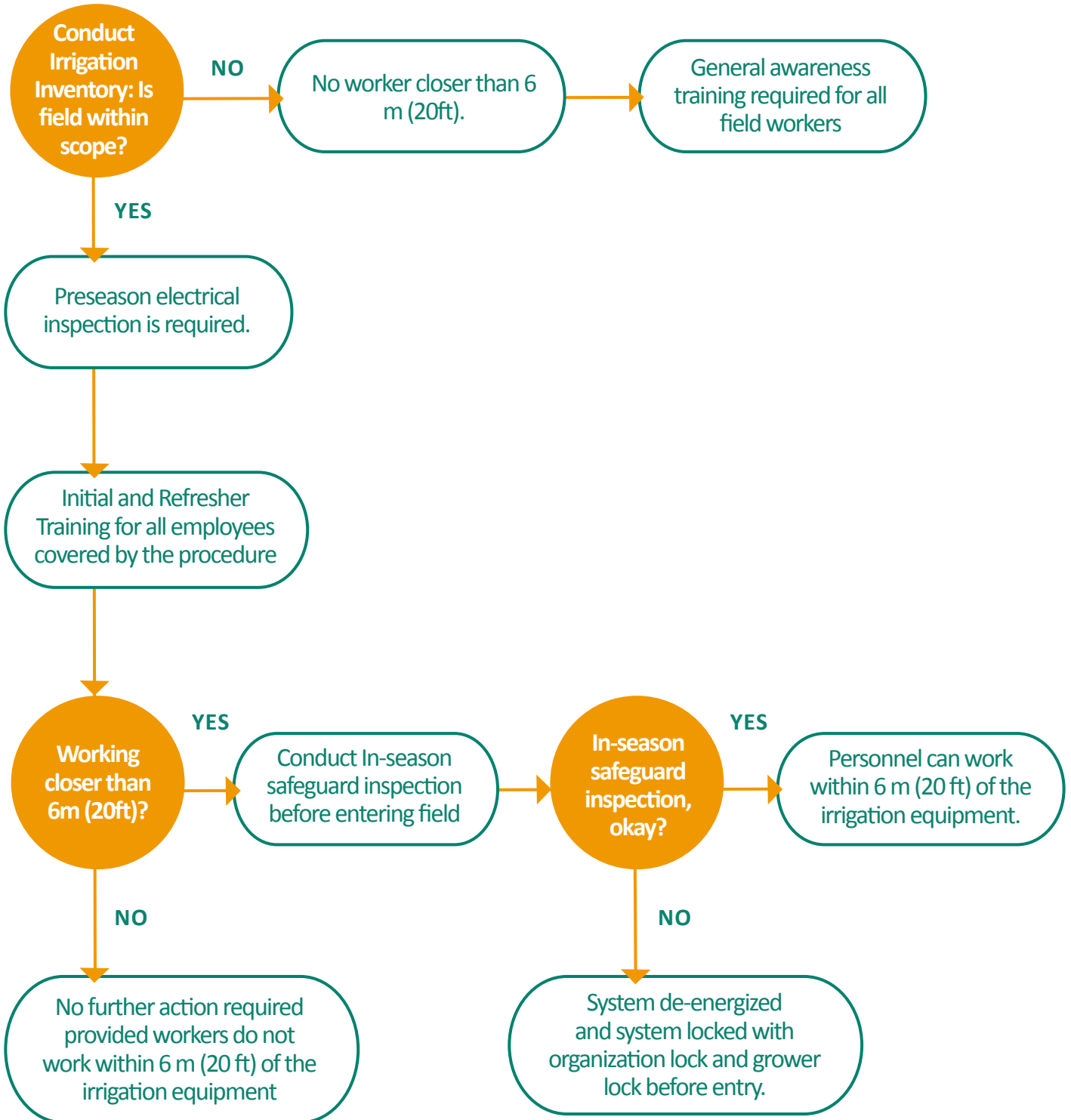
1- Items 8 through 10 are not required to be validated if the system has self-generated electrical power, such as a diesel-powered generator.

2 - If this question is answered NO then the utility company needs to be called and they need to evaluate and repair their equipment.

3 - Only required at initial inspection and then on subsequent inspections if the inspector determines there has been a change in the utility side distribution lines, transformers, or other equipment.

APPENDIX 3

Irrigation Requirements Flowchart



Severe Weather Preparation Checklist

Organization Location: _____

Identify All Potential Weather Hazards for your location:

Prepare or review Emergency Action Plan (EAP) calling tree and ID the primary individual responsible for maintaining:

Identify Individuals (including a backup) responsible for Monitoring and Decision making in the field:

Heightened Monitoring Systems utilized:

Describe Field Responsibility and Protocol if a severe weather event occurs (define for each Weather Hazard identified):

Communication method utilized for evacuation of workers:

Has a drill been performed? YES NO Date: _____

Corrective Actions Identified and Shared:

Comments

APPENDIX 5

Lone Worker – SafetyLine

Smart Phone GPS Enabled Monitoring Program

Monitors are organization individuals within the site or organization who have been deemed responsible for responding. Monitors are required to follow proper procedures outlined below and in the SafetyLine training.

- Organization has authorized a Smart Phone Global Positioning System (GPS) enabled cell phone application called SafetyLine.
 - This system automatically monitors remote workers by having them check-in regularly and in the event of an emergency, automatically notifies designated personnel (Monitors) of the incident for prompt attention.
 - This is currently the only approved app.
- The app “SafetyLine” is free to download and is available for iPhone, Android, and Windows. This app also works with satellite (in/out cell phone coverage) and tablets.
 - There is a monthly access fee per user and decreases as more users are activated.
- Once downloaded, the user opens the app and will be asked to enter log-in credentials. This is only required once.
 - This tool will adapt to the user’s safety needs only if activated and procedures followed.
- Workers who are working alone check-in on a regular basis.
 - When starting a shift working alone, a worker will turn on their monitoring by checking-in to report OK.
 - Throughout the day they will be required to check-in again within regular time intervals.
 - At the end of a shift the worker will once again log-in to end monitoring and turn off the system monitoring remotely.
 - On each check-in workers can leave text & voice messages, and Global Positioning System (GPS) position (if device supported). The SafetyLine system logs all of this data and ensures that check-ins occur within allotted times.
 - If a worker misses a check-in (and reminders), or declares an emergency, then the SafetyLine system will change their status to either “Unconfirmed Emergency” or “Emergency”, and the system will start a notification process to pre-defined Monitor.
- Once the employee has activated a designated roster their associated assigned Monitors will be provided via email from SafetyLine.
- Contact SafetyLine to update the roster as needed.

PROCEDURES AFFECTED STAFF SHOULD FOLLOW

1. Contact SafetyLine and begin monitoring prior to “Working Alone” regardless of duration.
Preferred:
 - SafetyLine Loneworker app on smartphone or tablet
 - Alternative:
 - Web (www.slmonitor.com)
 - Telephone (1-866-913-3337)
 - SPOT device
2. Indicate itinerary using voice recording, text message etc. (excludes SPOT)
3. Continue to Check-in at least every 2 hours
4. End Monitoring when no longer working alone

PROCEDURES MONITORS SHOULD FOLLOW WHEN EMPLOYEE FAILS TO CHECK-IN

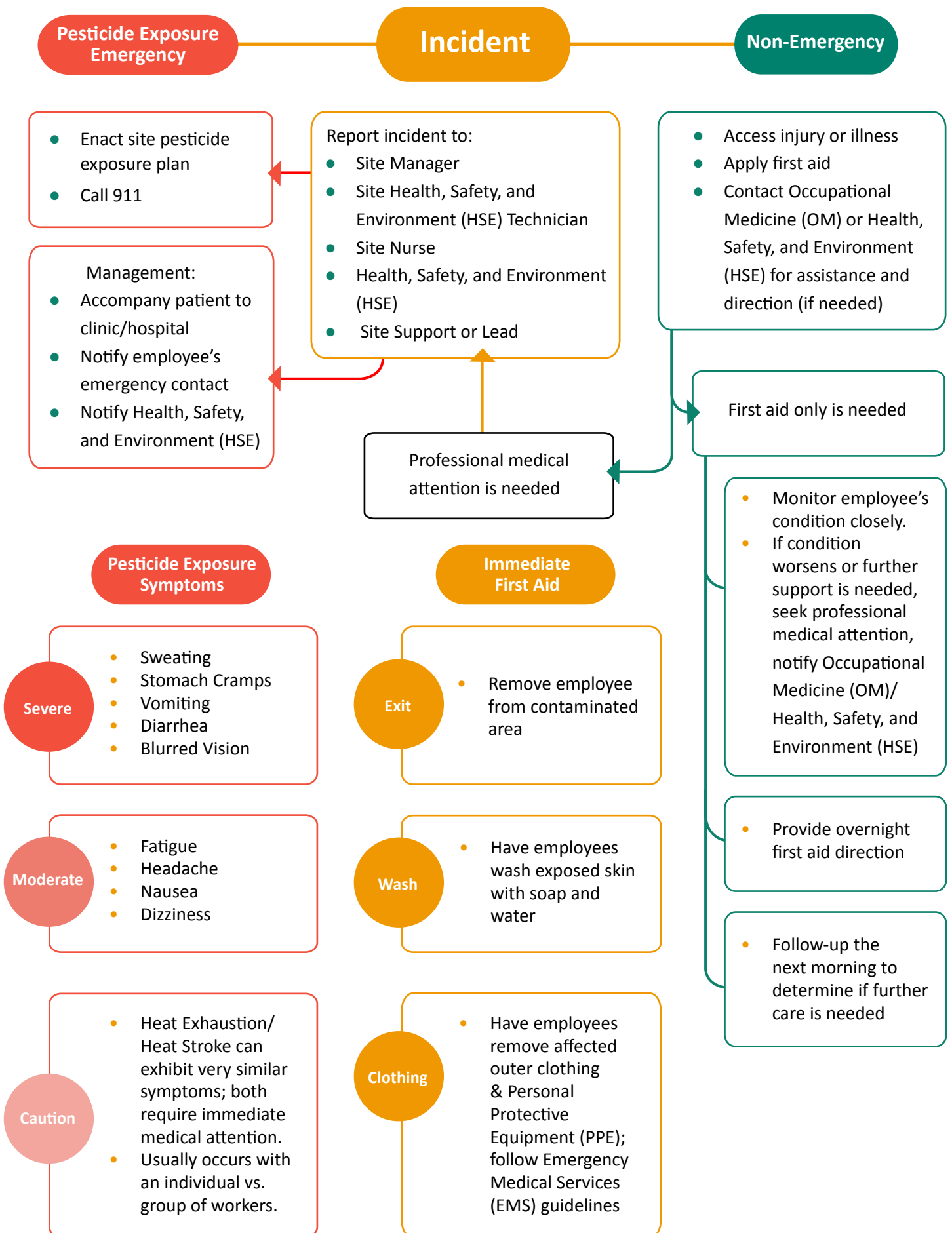
1. Call person’s cell phone
2. Call other organization employees working in the same area to check on the employee
(Provide last known Global Positioning System (GPS) location if available)
3. Contact another employee to drive to the last known location to check on the employee
4. Contact 911 and drive to last known area. Ensure the predefined emergency responder is given the following information:
 - Your Name and Company name
 - Your phone number
 - Missing person’s name
 - Missing person’s cell number
 - Last known location and Global Positioning System (GPS) coordinates (if available)

Monitor: log action taken in SafetyLine (www.slmonitor.com)

Monitors (in order of notification)			Workers		
Location	Last Name	First Name	Location	Last Name	First Name

APPENDIX 6

Pesticide Exposure (Incident Reporting) Flow Chart



APPENDIX 7

In-Season Electrical Safeguard (Visual) Inspection

Location: _____

Instructions:

- This is a VISUAL inspection.
- Never touch any part of the irrigation system
- Wear standard Field Personal Protective Equipment (PPE)
- Inspection is to be performed by an organization employee trained on the inspection procedure.

Inspection Questions:

1. Did an organization representative contact the irrigation system owner within 24-hours prior to workers entering the field to verify that there are no known issues with the irrigation system’s power supply or other related equipment?
2. Is the electrical system in good condition with no uncovered holes in the equipment or signs of deterioration (rust, burn marks, or discolored paint) that could indicate an unsafe condition?
3. The grounding electrode conductor (cable) connection to the grounding electrode is free of visible damage?
4. Has the irrigation system been verified to meet all electrical criteria?
5. Is the system required to be locked out by the owner? If yes, enter owner representative name. If no, enter “N/A”.

Question #1 System Owner Contacted? Enter: Yes/No	Question #2 Electrical System Good Condition? Enter: Yes/No	Question #3 Grounding Connection Good Condition? Enter: Yes/No	Question #4 Irrigation Electrical System Verified? Enter: Yes/No	Question #5 Owner Representative Name or “N/A”:	Employee Performing Inspection:	Inspection Date:

If ANY of the questions above are NO, owner/representative must de-energize and LOCKED OUT the system before organization employees or contractors may enter the area. Place an organization LOCK OUT lock on de-energized equipment while organization employees or contractors are present.

APPENDIX 8

Wind Turbine Setback Entry Inspection Form

Complete this form prior to entry when field equipment or worker(s) on foot need to enter the minimum setback distance. Perform this inspection by an employee who is knowledgeable with this procedure.

A new form needs to be completed each day that the setback area is entered.

Question	Answer Required	
1. The wind turbine(s) appear to be in good condition with no visual damage, signs of wobble or deterioration that would indicate an issue with the wind turbine(s)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
2. Is the weather forecast free of severe or adverse weather?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
3. Have all workers that will be performing activity within the minimum setback distance to the wind turbine been trained to identify the hazards that could exist while they are in the setback area?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
4. Do all workers know what to do if the setback area or field becomes unsafe?	<input type="checkbox"/> YES	<input type="checkbox"/> NO

If any of the above questions are answered **NO**, entry into the setback area is not allowed.

I have verified that all answers provided above are true and accurate.

Worker performing inspection: _____

Date of Inspection: _____

Pruning Shears

Several things should be considered when deciding on the style and brand of pruning shears to use for field work:

- Shears that have less tension when squeezing will reduce the chances of repetitive motion injuries and illnesses.
- Replace or sharpen dull blades. Sharper blades reduce tension when using.
- Shears that ergonomically fit the hand will reduce the chances of repetitive motion injuries and illnesses. Switching hands can also cut down on repetitive motion.
- Consider rotating employees performing this task and include breaks in shifts to allow employee/contractors to rest tendons and joints. Occasionally all employees are setting up pollinations at one time during seasonal peaks. Rotation may not be possible at key times.
- Select and approve several styles to fit different sized hands.
- Select styles that have easily maneuverable locking devices when not in use.
- Some styles have holes in the handles to attach a chain or rope to for easier handling.
- Bright colors show up in the fields better if dropped or lost.
- The minimum requirement is to ensure the tip is blunt or curved and rounded to reduce injury when shears are in the closed position.
- Use a glove for the holding hand, the hand not operating the shear.

Training should be completed and documented on the proper use of shears. The training should be performed by the crew supervisor. Training should include but is not limited to:

Shears/Snippers:

- Use one hand at a time to operate shears.
- Opposite hand can be used to steady the plant but keep opposite hand clear from shears and do not hold the plant ear with the opposite hand while cutting. Fingers and hands could get in the way of the shears.
- If an accident occurs report it immediately.
- Always close and lock shears shut when not in use.
- Keep shears sharp to reduce tension of squeeze.
- Replace shears that are broke or malfunctioning.
- Do not modify shears against manufacture's recommendations.
- When not using shears, carry them with the point towards the ground.

Knife Use

The safest way to ensure that no employee is cut by a knife is to continue to seek out alternatives to knives. Individual site managers have the responsibility to ensure the safety of employees.

- If a utility knife is required, a site-specific Job Safety Analysis (JSA) needs to be written and approved by site management. Affected employees need to be trained on the Job Safety Analysis (JSA). The utility knife will need to be self retracting to prevent cuts.

(Use the attached PDF document for printable poster)

Field Injuries: Prevention, Recognition & First Aid

Heat Stress Prevention

- Fluid Intake
 - Minimum of 8-10 glasses of water / day
- Avoid alcohol and caffeinated drinks (cause further dehydration)
- Include sports drinks as part of fluid to replace electrolytes
DO NOT USE SALT TABLETS
- Wear light-colored, loose fitting clothing, and a hat with a brim to reflect sun.
- Frequent breaks in shade or cool building
Use extra caution if on diuretic or blood pressure medications.



Heat Exhaustion Symptoms



- Profuse sweating
- Feeling faint
- Fatigue, weakness
- Headache
- Dizziness
- Nausea
- Skin is cool, moist, and pale or flushed

Heat Exhaustion First Aid

- Get out of sun and move to cool area
- Lay person down and elevate legs and feet
- Remove unnecessary clothing
- Apply cool (not cold) water to entire body
- Fan to speed evaporation and cooling, but avoid causing them to chill.
- If alert, give cool water and sports drinks
- Apply ice packs to neck, arms, groin
- Watch for progression to heat stroke

Heat Stroke Symptoms

- This happens when your body fails to regulate its own temperature.
- Body temperature rises to >102 degrees
- Rapid heartbeat and breathing
- Confusion

Heat Stroke First Aid

- Call 911 for Emergency Care
- Continue cooling measures as for Heat Exhaustion
- Do not give fluids by mouth if not fully conscious.
- Monitor breathing and pulse and administer CPR if required.

Eye Injury Prevention

- Wear Safety Glasses w/ Sideshields required at all times
- Head nets may be used



Eye Injury First Aid

- Foreign body
 - Irrigate with head turned toward affected eye
 - Hold eyelid open
 - Irrigate at least 10 minutes
 - If irritation persists or unable to remove easily, seek medical attention

Hand Injury Prevention

- Wear cut resistant gloves to prevent leaf cuts
- Check Tetanus status

Hand Injuries

- Splinters
- Smashed tips/ blood under nail
- Lacerations
- Blisters
- Dislocations and Fractures



Corn Leaf Cuts

- Like paper cuts
- Try to keep as clean as possible
- Bacitracin or antibiotic ointment
- If itchy, can use Hydrocortisone Cream 1%
- Be careful not to confuse leaf-cuts with allergic reactions to pollen



Allergies/Reaction to Pollen

- Allergic symptoms
 - Hives
 - runy nose, itchy eyes, wheezing
 - rash or other skin problems that occur in area without contact with plant leaves
- Signs of infection
 - redness
 - fever
 - drainage
- Problem worsening rather than improving with time
- Be careful not to confuse leafcuts with allergic reactions to pollen



Sprains/Strains First Aid



- R Rest the injured area. Limit movement until fracture is ruled out
- I Ice the area for 15 to 20 minutes (Don't apply ice directly to skin)
- C Compress the area by wrapping it with an elastic bandage
- E Elevate the area to reduce swelling.

Wrapping Extremities

- Decreases swelling
- Wrap from farthest toward heart
- Snug, but not tight
- Best wrapped in morning
- Watch toes, fingers for color, circulation



Sunburn Symptoms



- Red, painful skin
- May be 1st degree - just redness
- May be 2nd degree - blistering
- Mild fever and headache may accompany
- Repeated sun exposure and sunburns increase risk for skin cancer (fair-skinned are more at risk)

Sunburn First Aid

- Cool baths or compresses
- Acetaminophen or Ibuprofen for pain
- Get medical attention for:
 - Severe blistering
 - Severe pain with fever
 - Fever >102 degrees

Photosensitivity

- Also called sun poisoning
- Red, itchy skin rash
- Sometimes fever
- Fatigue or dizziness
- Use sunscreen and protective clothes



Insect Bite Prevention

- Wear white or light-colored solid fabrics
- Avoid wearing perfumes and colognes
- Wear insect repellent containing DEET
- Wear gloves and tuck pants into shoes
- Inspect surroundings - nests, hives, swarms
- Wear protective clothing (white or light solids)
- Use insect repellents w/ DEET (Alpha-Keri or Skin-So-Soft oils)
- Inspect skin/scalp after outdoors
- Tetanus vaccination up-to-date

Insect Bite Symptoms



- Localized reaction:
 - Pain
 - Swelling
 - Redness
 - Itching
- Generalized (More Serious) Reaction
 - Hives over entire body
 - Shortness of breath
 - Tightness in throat and chest
 - Dizziness
 - Wheezing or hoarseness
 - Swelling of the tongue and face

Plant Rashes



Poison Ivy Spring



Poison Ivy Summer

Poison Ivy Rash

- Lasts about 14 days
- Fluid in blisters does not cause spread
- Benadryl
- Hydrocortisone 1%
- Caladryl
- See Dr. if extensive or on face



Poison Oak Plants



Poison Oak Spring



Poison Oak Summer

Poison Oak Rash



- Rash is linear
- Treatment is same as for poison ivy
- Watch for secondary infection

Ticks

- Dog tick or wood tick
- Remove as soon as possible
- Wash bite w/ soap and water
- Apply bacitracin ointment
- Watch for infection



Deer Ticks



- Much smaller - size of pin head
- Carries Lyme disease
- Remove quickly
- Wash bite w/ soap, water
- Apply bacitracin ointment

Lyme Disease

- Carried by ticks that bite infected mice
- Reduce chance of infection by removing tick before 36 hrs of attachment
- 1-2 wks after bite: fever, rash, joint pain, inflammation of heart, brain, and nerves
- Can be treated w/ antibiotics if treated in early stages



Bee Sting



- Remove stinger by scraping w/ credit card (don't squeeze w/ tweezers)
- Be aware of possible severe allergic reaction - call 911
- Wear Medic Alert tag and carry Epi-Pen if known allergy

Wasp Sting

- Generally doesn't leave stinger
- Wash area
- Apply ice, antibiotic ointment, Benadryl, Advil or Tylenol
- Be aware of possible allergic reaction
- Also, watch for secondary infection



Spider Bites



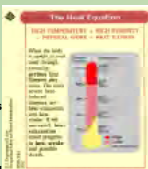
- Try to capture spider if possible for identification
- See doctor immediately if possibility of black widow or brown recluse spider
- Wash bite, apply ice, antibiotic ointment, Benadryl, Advil or Tylenol
- See Dr. for signs of infection

(Use the attached PDF document for printable poster)

LESIONES DE CAMPO: Prevención, Tratamiento y Primeros Auxilios

Prevención de Stress por Calor

- Tome Líquidos
 - Mínimo de 8-10 vasos de agua por día
- Evite el alcohol y bebidas cafeinizas [dausa deshidratación posterior]
- Incluya bebidas deportivas como parte de los fluidos para reponer los electrolitos
- **NO UTILICE TABLETAS DE SAL** Utilice ropa de color claros, ropa floja, y un sombrero de ala para reflejar el sol
- Frecuentemente tome descansos a la sombra o en edificios frescos. Tome precauciones extras si esta tomando diuréticos o medicamentos para la presión sanguínea



Síntomas de Agotamiento por Calor



- Sudor abundante
- Debilidad
- Fatiga, flojera
- Dolor de cabeza
- Mareo
- Piel fresca, húmeda, pálida o fiebre

Primeros Auxilios para el Agotamiento por Calor

- Quite del sol y muevase a un área fresca
- Acuesta a la persona y levantele las piernas y pies
- Quitele la ropa innecesaria
- Aplique agua fresca (on fría) a todo el cuerpo
- Abaníquela para mejorar la transpiración y el refrescamiento pero evite causar frío.
- Esta alerta y de agua fresca y bebidas deportivas
- Aplique bolsas de hielo en cuello, brazos e ingles

Síntomas por Ataque de Calor

- Esto sucede cuando el cuerpo falla en regular su propia temperatura
- La temperatura puede ser superior a 102 ° F
- Respiración y palpación acelerada
- Confusión

Primeros Auxilios al Ataque por Calor

- Llame al 911 para cuidados de emergencias
- Continúe tomando medidas similares a las de Agotamiento por Calor
- No de a beber líquidos si la persona no esta conciente.
- Verifique la respiración y el pulso y administre CPR en caso necesario.

Prevención de Lesiones en Los Ojos

- El uso lentes de seguridad con guardas laterales se requerido todo le tiempo
- Velo protector para la cabeza puede ser utilizado



Primeros Auxilios de Lesiones en los Ojos

- Foreign body
 - Leve con la cabeza volteada hacia el ojo afectado
 - Mantenga el párpado abierto
 - Lave por al menos 10 minutos
 - Si la irritación persiste es imposible de quitar facilmente, busque atención medica

Prevención de Lesiones en la Mano

- Utilice guantes resistentes a cortadas para prevenir cortadas con las hojas
- Verifique el estado de vacunación contra el tetano

Lesiones de Manos



- Astillas
- Machucaduras/Sangre Coagulada debajo de las unas
- Laceraciones y ampollas
- Dislocaciones y fracturas

Cortaduras con Hojas de Maiz

- Parecidas a las cortadas con hojas de papel
- Trate de mantenerlas limpias como sea posible
- Ponga Bacitracin o unguento antibiótico
- Si tiene comezon puede usar Crema de Hidrocortisona al 1%
- Tenga cuidado de no confundir cortaduras con hojas con reacciones alergicas al polen



Alergias / Reacciones al Polen

- Síntomas Alérgicos
 - Urticaria
 - Escurreniento nasal, comezon en ojitos dificultad para respirar
 - Sarpullido u otros problemas en la piel que ocurren area sin tener contac to con las hojas de las plantas
- Síntomas de Infección
 - Piel roja
 - Fiebre
 - Escurreniento
- El problema puede empeorar con el tiempo en lugar de mejorar
- Sea cuidadoso de no confundir cortes con hojas con reacciones alergicas al polen



Primeros Auxilios de Torceduras / Esguinces



- **R** Soporte el área danada. Limite el movimiento hasta que se descarte una fractura
- **I** Aplique hielo por 15 a 20 minutos (No aplique el hielo directamente en la piel)
- **C** Comprima el área vendandola con una banda elastica
- **E** Eleve el área para reducir la hinchazon

Vendado de Extremidades

- Disminucion de la hinchazon
- Vende desde lo mas lejos hacia el corazon
- Ajuste pero no muy apretado
- Lo mejor en vendar por la mañana
- Observe los dedos de los pies y manos para observar el color y la circulación



Síntomas de Quemaduras por el Sol



- Roja y con dolor
- Puede ser de primer grado, rojiza
- Puede ser Segundo Grado - Ampollamiento
- Puede presentarse fiebre ligera y dolor de cabeza
- Repetidas exposiciones al sol y quemaduras solares incrementan el riesgo de cancer de piel (Piel blanca es mas riesoa)

Primeros Auxilios de Quemaduras Por el Sol

- Baños de agua fresca y compresas
- Acetaminofen o Ibuprofen para el dolor
- Vaya al doctor si:
 - Ampollas severas
 - Dolor severo con fiebre
 - Temperaturas mayores a 102 ° F

Fotosensibilidad

- También llamado envenenamiento por sol
- Piel roja, comezon por sarpullido
- Algunas veces fiebre
- Fatiga o mareo
- Use bloqueador solar o ropa protectora



Protección Contra Picaduras de Insectos

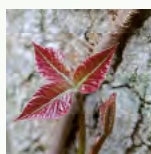
- Use telas lisas de colores claros o blancas
- Evite utilizar perfumes y colonias
- Use fepelentes de insectos que contengan DEET
- Use guantes y pantalones ajustados a los zapatos
- Inspeccione los alrededores - nidos, colmenas o enjambres
- Use ropa protectora (blanca o colores claros)
- Use repelente para insectos con / DEET (Alfa - Keri - o aceites Skin - So - Sofa)
- Inspeccione la piel y elucero cabelludo despues de cada actividad de campo
- Actualice su vacunación del tetano

Síntomas de Picaduras de Insectos



- Reaccion Localizada:
 - Dolor
 - Hinchazon
 - Enrojecimiento
 - Comezon
- Reaccion Generalizada (Mas seria)
 - Urticaria en todo el cuerpo
 - Falta de aliento
 - Garganta cerrada y dificultad para respirar
 - Mareo
 - Urticaria en lengua o cara

Plantas Urticantes



Hiedra Venenosa de Primavera



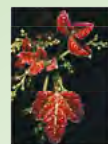
Hiedra Venenosa de Verano

Urticaria Por Hiedra Venenosa

- Dura cerca de 14 dias
- El fluido de las ampollas no se desparrama
- Benadryl
- Hidrocortisona al 1%
- Caladryl
- Ver al doctor en caso de que sea en la cara



Plantas Venenosas de Roble



Roble Venenoso de Primavera



Roble Venenoso de Verano

Urticaria Por Roble Venenoso



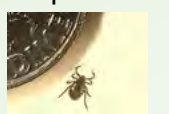
- La urticaria es en una linea
- El tratamiento es el mismo que para la hiedra venenosa
- Esta atento a posibles infecciones secundarias

Garrapatas

- Garrapata de perros o del bosque
- Quitela tan pronto como sea posible .
- Lave la mordedura con agua y jabon
- Aplique pomada de Bacitricin
- Esta pendiente de posibles infecciones



Garrapatas de Venados



- Mas pequena - Del tamaño de la cabeza de un alfiler
- Tramite enfermedad de Lyme
- Quitela inmediatamente
- Lave la mordeduta con agua y jabon
- Aplique pomada de Bacitricin

Enfermedad de Lyme

- Trasmiteda por Garrapatas que han mordido ratones infectados
- Disminuya la posibilidad de infección removiendola antes de 36 horas despues de la mordedura
- Despues de 1 a 2 semanas de la mordedura puede desarrollar fiebre, urticaria dolor de de articulaciones, inflamación de corazon, cerebro y nervios
- Puede ser curable con antibioticos en etapas tempranas



Picaduras de Abejas



- Quite la ponzona rascando con una tarjeta (no la aplaste con pinzas)
- Este pendiente de posible reacciones alergicas (llame al 911 en caso necesario)
- Utilice una etiqueta de alert medica y carque consigo Epi Pan si sabe que es alergico

Picadura de Avispa

- Generalmente no deja ponzona
- Lave el area
- Aplique hielo, pomada antibiologica, Benadryl, Tylenol o Advil
- Esta pendiente de posibles reacciones alergicas
- Tambien este pendiente de posible infeccion secundaria



Picaduras de Aranas



- Trate de capturar la araña si es posible para su identificación
- Vea al doctor inmediatamente se hay complicaciones que haya sido una viuda negra o araña reclusa cafe
- Lave la mordedura, aplique hielo, pomada antiagiotica, Benadryl, Tylenol o Advil
- Vea al doctor en casos de signos de infección

Seasonal Allergy

- Up to 50% of US population may have some allergy symptoms when exposed to pollen
- Over the counter allergy treatment is adequate for most sufferers
- Should be started before the allergen exposure
- Should be taken regularly (daily or as directed by manufacturer) during exposure period
- Poorly or untreated allergies can lead to infections and the need for prescription medication

Allergist Recommended Over-the-counter (OTC) Treatment

- Avoidance of allergens when possible
- Long acting oral antihistamines
- Cetirizine (Zyrtec)
- Loratidine (Claritin)
- Fexofenadine (Allegra)
- Intranasal Corticosteroids
- Nasonex
- Nasocort
- Ocular anti-histamines (Allergy eye drops)
- Consult your doctor about which is best for you, but understand it needs to be taken daily the entire season.



Pollen

APPENDIX 12

Sting Prevention, First Response, and Medical Management

(Sample Protocol)

Recognizing Different Stinging Insects

- **Honeybees:** have hairy bodies with bright yellow and black markings. They are typically found around flowers or clover. Honeybees are not aggressive unless provoked, and they die once they sting you, often leaving their stinger in your skin.
- **Yellow Jackets:** are the most aggressive stinging insect. They too have bright yellow and black bodies but are slimmer than honeybees. Yellow jackets hover around garbage or uncovered foods (especially foods containing sugar). They nest on the ground and can sting repeatedly.
- **Hornets:** have short black bodies with yellow or white markings. They nest in trees or bushes and may sting repeatedly.
- **Wasps:** have no hair and have long narrow bodies. They can be black, red, or brown, and build their nests under the eaves of buildings or under rafters. They can sting repeatedly.



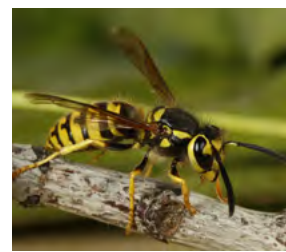
Honeybee



Yellow Jacket



Hornet



Wasp

- All the above insects have also been known to nest in pollinating and shoot bags.

Prevention

- **Avoid:**
 - Bright clothes
 - Loose-fitting clothes that insects may get trapped in
 - Perfumes
 - Aftershave lotions/colognes
 - Scented lotions
- **Consider/Use:**
 - Head/face nets
 - Insect repellent
 - Gloves, long sleeve shirts, pants
 - Boots or protective leggings (special chaps to protect against snake bites)
 - Beekeeper suit if handling beehives
- Don't go barefoot.
- Don't swat or provoke flying insects with your bare hands.
- Make sure there are no insects in beach towels before you use them.
- Keep food/beverages covered and be very careful drinking from open containers.
- Check your car for insects if you leave the windows open.
- Check field equipment for insect nests, if stored outdoors.
- Check seldom used storage areas for insect nests.
- Stay away from areas where insects congregate.
- If you have had a severe allergic reaction to stings before, get allergy shots to reduce your chances of having another anaphylactic reaction in the future.
- If you know that you are severely allergic to insect stings, let others know.
 - People who are severely allergic should wear some form of medical identification and carry a sting kit that contains a syringe of epinephrine (adrenaline) to inject if they develop signs of an anaphylactic reaction.

Recommended Gloves for Field Tasks:

- Pollinating: (optional, due to need for touch sensitivity).
- Harvesting: leather (i.e. goat skin), wasps have been known to sting through cotton/knit gloves.
- De-tasseling: knit or mechanix gloves.
- Rougeing: leather gloves.
- Leather gloves are recommended for all other field tasks, unless Job Safety Analysis (JSA) indicates otherwise.



Harvesting (Leather)



De-tasseling (Knit)



De-tasseling (Mechanix)

Treatment:

1. If stung by a bee, gently scrape away the stinger using your fingernail.
 - Do not attempt to pull the stinger out, you might squeeze the venom sac and accidentally release more venom into your skin.
 2. Apply a Nox-A-Sting swab.
 3. Apply ice to the affected area intermittently to minimize swelling and pain.
 4. Use an over-the-counter remedy as needed for pain.
 - Employee should sign a waiver if given an over-the-counter medicine from their employer.
 5. Hydrocortisone cream or Benadryl can reduce swelling or itching.
 6. Keep the skin clean with soap and water.
 7. Watch the employee for 30 minutes and recognize any allergic reactions that may occur.
 8. Some symptoms may include:
 - Rash of puffy pink “hives” or “weltchjs”
 - Sneezing
 - Runny nose
 - Metallic taste in your mouth
 - Teary or itchy eyes
 - Similar symptoms of hay fever
 9. Swelling may be worse the following day, as the allergic reaction progresses; however, it most likely does not represent an infection. Fever, pus or painful swelling may be signs of an infection and should be brought to the attention of a health care physician.
 10. Symptoms of anaphylaxis (severe allergic reaction) include:
 - Any of the mild symptoms
 - Nausea
 - Rapid swelling of the throat or lips
 - Vomiting
 - Swelling around the eyes
 - Diarrhea
 - Throat tightness
 - Abdominal pain
 - Wheezing
 - Lightheadedness
 - Difficulty breathing
 - Passing out due to low blood pressure
 - Hoarseness
- **If any anaphylactic symptoms occur, seek medical attention IMMEDIATELY.**

- **Maui's First-aid Protocol for Treatment of Bee/Wasp Stings:**

1. Employee needs to report to a supervisor immediately.
2. Bring employee inside for observation.
3. Apply first-aid as described above.
4. Observe closely for first 20-30 minutes for any signs of unusual allergic reaction.
5. Employee should be checked on periodically until sting site has healed completely

APPENDIX 13

Rattlesnakes

General Information:

- There are 30 different species of Rattlesnakes located around the world.
- Fully grown they can range from 3' to 6' and have an average lifespan of 20-30 years in captivity, but a shorter lifespan in their natural environment.
- They are not typically aggressive; however, they will defend their territory if approached.
- They send a warning by rattling its tail which can be heard up to 60' away.
- Their striking distance is 1/2 to 2/3 of its body length and have very sharp fangs that transfer poison to the victim. They are very poisonous, however approximately 24% of bites do not contain venom.

Active Periods:

- Rattlesnakes are most active from March through the beginning of the fall season.
- They become more active as the days and nights become warmer.
- Rattlesnakes begin to slow down as the temperature cools and eventually seek shelter in dens for the winter months.

Watch Outs:

- An encounter with a snake is possible during any field activity, and any encounter needs to be taken seriously.
- If possible, retreat from the area.
- Do not aggravate the snake or chase into an area that you cannot visibly see it.

If Not Possible to Retreat, Defend Yourself:

- Most snake bites occur on the lower leg or ankle area.
- If you should kill a snake, use a long handle shovel; it will be in a coiled position to strike, aim for a point right behind the head. The head contains venom, so dig a hole and bury it.

Medical Considerations:

- Several thousand individuals are bitten annually, and these encounters can be fatal if not treated properly and timely.
- The right anti-venom can save a person's life. It is imperative to seek care at an emergency room immediately. If treated properly, many will not have serious effects.

Field Treatment:

- Keep the victim calm and remember your ABC's (airway, breathing, circulation).
- If you are bitten by a snake and not sure if it is poisonous, seek professional medical treatment immediately.
- Activate medical emergency response and facilitate transport to the nearest emergency room – call ahead.

First Aid:


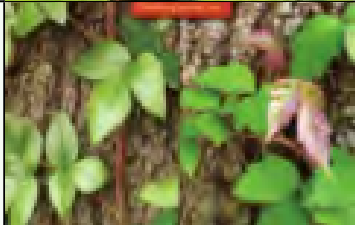
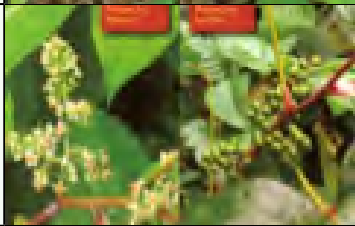


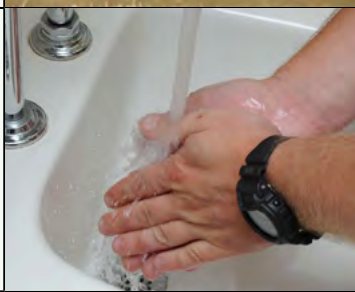

- Restrict movement and keep the affected area below heart level to reduce the flow of venom.
- Remove rings/constricting items in vicinity of bite in case of swelling.
- Monitor the worker/patient – if there are symptoms of shock lay the person flat and elevate the feet above about 12".
- Bring the dead snake only if this can be done safely.

Do NOT:

- Allow the person to become over exerted - if necessary, carry the person to safety.
- Apply a tourniquet.
- Apply a cold compress to a snake bite.
- Cut into a snake bite with a knife or razor.
- Try to suck the venom by mouth.
- Give the person anything by mouth.
- Raise the site of the bite above the level of the person's heart.



Rattlesnake

Poison Ivy Identification		La Hiedra Venenosa Identificasion
<p>Three leaflets "Leaves of three let it be"</p>		<p>Tres folletos "hojas de tres lo dejan ser"</p>
<p>Woody ropelike vine</p>		<p>La cuerda poblada de árboles como vid</p>
<p>Yellow/Green Flowers Green Berries in summer</p>		<p>Las flores de Amarillo/ verde verdean bayas en el verano</p>
<p>The poison ivy plant contains urushiol, the irritating chemical responsible for the itchy skin reaction. The urushiol is actually inside the stems, leaves, and roots of the plant; these weeds are very fragile, and the wind or animals or people brushing against them often break leaves or stems. The rash is caused by direct contact with the oil released from broken plant parts.</p>		<p>La planta venenosa de la hiedra contiene a urushiol, el producto químico irritante responsable para la reacción que pica de piel. El urushiol está realmente dentro de los tallos, sale, y se arraiga de la planta; Esta hierba es muy frágil, y el viento o los animales o las personas rozando contra ellos frecuentemente quiebran la hoja o tallo. El salpullido se debe al contacto directo con el aceite soltado de partes quebradas de la planta.</p>
<p>The rash is usually in streaks or lines where the person brushed against the plant</p>		<p>El salpullido está usualmente en vetas o líneas donde la persona rozó contra la planta.</p>
<p>The oil can be spread from one part of the body to another until it is removed or washed off.</p> <p>The oil begins to penetrate the skin in minutes. A reaction or rash appears in 12 to 48 hours.</p>		<p>El aceite puede ser esparcido de una parte del cuerpo para otro hasta que esté distante o</p> <p>El aceite comienza a penetrar en la piel en los minutos. Una reacción o salpullido aparece en 12 para 48 horas.</p>
<p>Most sources indicate that the urushiol is absorbed in as little as 30 minutes. It is absorbed faster in hot weather, and faster if your skin is wet and sweaty.</p>		<p>La mayoría de fuentes señalan que el urushiol está absorto adentro como en poco de absorto si su piel está mojada y sudorosa.</p>

APPENDIX 15

All-Terrain/Utility Terrain Vehicles (ATV/UTV) Use Requirements

The chart below lists the minimum Health, Safety, and Environment (HSE) requirements for All-Terrain/Utility Terrain Vehicles (ATV/UTV)s that will be used by organization employees at our sites and field locations. No three-wheeled vehicles are allowed to be owned or operated.

All-Terrain/Utility Terrain Vehicles (ATV/UTV) Type			
	Straddle ride, handle bar steer, Hand speed and brake control	Chair type seating, Steering wheel and foot braking and speed control less than 20 HP	Chair type seating, Steering wheel, foot brake and speed control, over 20 HP
Number of riders including driver	1	2-3	2-3
Helmet required Department of Transportation (DOT) approved type	Yes	No – these are basically golf carts w/low center of gravity and low operating speeds	No: For non-aggressive operation (speeds less than 18 MPH on smooth terrain) Yes: For aggressive operation (speeds greater than 18 MPH on rough terrain)
Safety glasses required (safety goggles required while operating in excessively dusty conditions)	Yes	Yes	Yes
Safety-toe boots required	Yes	Yes	Yes
Long sleeve shirts and long pants required	Yes	No	No
Registration required by State for operation on public property, verify local / State requirements	Yes	Yes	Yes
All-Terrain (ATV) safety institute specific training required	Yes	No	No
Equipment specific safety training required	Yes	Yes	Yes
Pre-ride check required	Yes	Yes	Yes

APPENDIX 16

ATV and UTV Required Specifications

The chart below lists the minimum HSE requirements for ATV and UTVs that will be used by organization employees at our sites and field locations. No three-wheeled vehicles are allowed to be owned or operated.

	All-Terrain/Utility Terrain Vehicles (ATV/UTV) Type		
	Straddle ride, handle bar steer, hand-operated speed and brake control	Chair type seating, steering wheel, foot-operated speed and brake control, under 20 hp	Chair type seating, steering wheel, foot-operated speed and brake control, over 20 hp
Required Specifications			
Roll over protective structure	No	Yes	Yes
Seat belt for all riders	No	Yes	Yes
Top speed limited	No	No	No
Rear differential lock	No	Yes	Yes (If Available)
Lockable device to isolate the battery	Yes	Yes	Yes (If Available)
Reverse	Yes	Yes	Yes
Mounted rear trailer hitch for light duty towing	Yes	Yes	Yes (If Available)
Full Light Package (brake, low and high beam, backup, instrument panel, and flashing hazard lights, turn signals,)	Yes	Yes	Yes (High Beam and Back-Up lights may not be available on all makes and models)
Brakes on all wheels	Yes	Yes	Yes
Emergency park brake	Yes	Yes	Yes
Spark arrestor muffler	Yes	Yes	Yes
Noise level at rider's ears less than 90 decibels	Yes	Yes	Yes
Back-up beeper	Yes	Yes	Yes
Front accessory box	No	Yes	Yes (If Available)
Front grill guard	Yes	Yes	Yes
Front and rear cargo racks	Yes	No	No
Rear view mirrors	No	Yes	Yes
Horn	Yes	Yes	Yes
Must be in neutral or park to start	Yes	Yes	Yes
Hour meter	Yes	Yes	Yes
Operator Training Video	Yes	Yes	Yes
Operator Manual	Yes	Yes	Yes
Tool Kit	Yes	Yes	Yes (If Available)

APPENDIX 17

Exception Permit

For Operating Detasseling Equipment in Fields with Workers

Objective: Eliminate risk of injury to all workers in the seed corn field by creating a defined buffer zone between the area a detasseling machine is operating and the areas of the field being hand detasseled, rouging, or inspections.

Systems: This program is implemented only in situations in which it is deemed absolutely necessary to be hand detasseling or rouging while at the same time operating detasseling equipment in same field. This decision is to be made and approved by Site Management and only used when absolutely necessary to maintain field purity.

Operations:

1. Approval is obtained and documented on this form from a Site Management representative.
2. All Seed Techs, Contract Coordinators, Field Inspectors, Contract Detassellers, Detassellers, and Detasseling Machine Operators associated with the field are to be properly informed on the day the simultaneous detasseling operations are occurring.
3. Required signatures listed on this form are obtained prior to the start of the operation.
4. A designated seed panel in the field will be determined where workers and detasseling equipment will not cross.
5. Red or yellow barrier tape will be attached at both ends of the field and stretched from the designated seed panel through the headlands or barrier rows to the edge of the field. This will be at 3-4 foot height from the ground.
6. The detasseling machine operator will maintain a six (6) panel buffer zone between the tape and where the mechanical detasseling operations will start.
7. Whenever possible, the hand detasseling crews and the machine operators should start near the erected barrier tape and work in opposite directions.
8. Barrier tape is to be removed only when mechanical detasseling operations are completed.

I have read the above procedure and will adhere to all of the above guidelines.

Field No.:	_____	Date:	_____
Seed Tech:	_____	Date:	_____
Contract Coordinator:	_____	Date:	_____
Contract Detasseler:	_____	Date:	_____
Machine Operator:	_____	Date:	_____
Site Management Approval:	_____	Date:	_____

APPENDIX 18

Employee Safety Orientation Review Sheet

(Non-Safety Sensitive Field Labor Only)

(Check as appropriate)

Date of Meeting/Training:	
Start Time of Meeting/Training:	End Time of Meeting/Training:
<input type="checkbox"/> Field Safety Handbook (Field Employees) – “Your Job as a Temporary Employee”	
<ul style="list-style-type: none"> ● Provide copy and discuss purpose 	
<input type="checkbox"/> Field Safety Training PowerPoint	
<input type="checkbox"/> On-the-Job Training	
<ul style="list-style-type: none"> ● Refer to Safety Manual/JSA/SOP’s for specific job functions – sites can document this elsewhere. ● Discuss safe working procedures/Job Safety Analysis (JSA)/ Standard Operating Procedure (SOP)’s and Appendix 5, pruning shears use (if applicable), how to carry and inspect hand tools. 	
<input type="checkbox"/> Personal Protective Equipment	
<ul style="list-style-type: none"> ● Discuss when and what Personal Protective Equipment (PPE) is required ● Provide appropriate Personal Protective Equipment (PPE) and ensure employee understanding 	
<input type="checkbox"/> COVID Guidelines	
<input type="checkbox"/> Completed Field Activities Hazard Assessment (Appendix 3)	
<input type="checkbox"/> Worker Protection Standard	

www.croplife.org

