



Fruit and Vegetable Processing Level-II Based on May 2019, Version 2 Occupational standards

Module Title: - Implementing food safety

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LG #10	LO #1- Implement the food safety program
Instruction sheet	
<p>This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:</p> <ul style="list-style-type: none">• Identifying food handling requirements.• Identifying food safety program• Carrying out food handling• Controlling Food safety hazards• Reporting food safety control and taking corrective action• Recording Food safety procedure.• Maintaining workplace standard• Conducting work <p>This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:</p> <ul style="list-style-type: none">• Identify food handling requirements.• identify food safety program• Carry out food handling• control Food safety hazards• report food safety control and taking corrective action• Record Food safety procedure.• maintain workplace standard• conduct work	
Learning Instructions:	
<ol style="list-style-type: none">1. Read the specific objectives of this Learning Guide.2. Follow the instructions described below.3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.4. Accomplish the “Self-checks” which are placed following all information sheets.5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).	



Information Sheet 1- Identifying food handling requirements

1.1. Introduction

The food processing industry is governed by a number of laws and regulations that must be followed in order to ensure that the food provided is safe for consumers to eat. These cover all steps in food-related activities, including delivery, storage, preparation, cooking and serving. All outlets within the production and catering industry are required to produce a policy stating how they will ensure standards are set, monitored and maintained, as well as how and when training will be delivered to all staff. In addition to this, businesses must keep thorough daily food safety records, which Environmental Health Officers can request to see. Businesses can be inspected by food safety officers every six months, or more often if required. These inspections include all aspects of health and safety and food safety to ensure all required standards are being met.

Food safety practices refer to specific food handling controls related to food handling and preparation in your business. These include things such as the receipt, storage, processing, display, packaging and transportation of food.

As well as paying attention to the practices specific to food handling and preparation in your business there are some practices that support food safety. These are called Support programs and include things such as cleaning and sanitizing, time and temperature controls, pest control, food recalls and waste disposal. Support programs are an essential part of your food safety program and must be followed by all food businesses

1.2. General requirements for the products:

All food products are to be supplied

- in good condition
- fresh condition
- Free from any odour
- Free from discoloration or signs of spoilage or contamination and;
- Under temperature control (i.e. below 5°C or above 60°C).

1.2.1. Package and labeling requirements:



All food products are to be delivered in food grade containers that are free from chemical or physical contaminants. Labeling shall comply with the requirements of the Food Standards Code.

1.2.2. Transport requirements:

All food products are to be transported in clean food transport vehicles. The foods are not to be transported in direct contact with meat, animals, plants, pests or chemicals or exposed to sunlight. All potentially hazardous foods (dairy foods, meat, fish, & smallgoods) must be transported under refrigeration at or below 5°C for cold food and at or above 60°C for hot food. Frozen food is to be delivered frozen hard (not partially thawed). If food is transported between 5°C and 60°C, it must be demonstrated that the temperature of the food, having regard to the time taken to transport the food, will not adversely affect the microbiological safety of the food.

1.3. Waste Disposal

A food business must maintain the food premises to a standard of cleanliness where there is no accumulation of garbage, except in garbage containers; recycled matter, except in containers; food waste; dirt; grease; or other visible matter.

Waste food must be separated from other foods so that it cannot be used for human consumption. Waste food can include:

- Food which has been left over by a customer.
- Food which may have been contaminated and unsafe to consume.
- Food that may be contaminated by pests, dirt and dust.
- Food that may be contaminated by chemicals.
- Food that has been outside temperature control and recalled food.

An adequate number of garbage bins should be provided for the food preparation area, emptied and cleaned daily. External garbage bins should be positioned outside of the food preparation area and be located in a designated area that is away from entry and exit points to the food preparation area. They should be pest proof with close fitting lids and should be cleansed regularly (for example, once a week) as part of the cleaning schedule.



There is no single individual sewage disposal technique that can be universally applied under all conditions. However, the selection of a particular method will depend upon the following major factors:

- The nature of soil formation and stability of the locality
- The availability of adequate land for sewage disposal
- The quantity of sewage to be disposed
- The degree of sewage treatment to be achieved
- The presence of well water, and whether it is used as the source of the water supply
- The level of the water table of the ground water
- The proximity of the disposal site to surface water sources
- The relative cost of the disposal technology

In food handling industry, identifying food requirements are the most important thing to be considered food handling activities.

This can be summarized in the flow chart below.

Food Handling Receipt:

- Potentially hazardous food to be received under temperature control, hot (at or above 60°C), cold (at or below 5°C), cook chill (at or below 3°C) or frozen hard, not partially thawed.
- Packaged food with a shelf life of less than two years must have a use-by or best before date, and the food be within its date marking. Food should show no physical sign of damage, deterioration or spoilage.
- Transport vehicles are to be in a clean condition and transport personnel are to take all practicable measures to protect food from contamination.
- Packaging must be intact, food covered and not stored next to chemicals

Food Handling Storage:

- Food packaging must be intact or food stored in a cool dry area in food-grade containers with tight-fitting lids, and date marked.



- Foods are to be stored off the floor, e.g. at a minimum height of 15cm, that allows for easy cleaning of the floor area.
- Chemicals are to be stored in a separate area so as not to contaminate food.
- Ensure the temperature of refrigerated units remain at or below 50C for cold potentially hazardous foods and at or below 30C for cook chill foods

Preparation:

- Food handlers to minimize the cumulative time that potentially hazardous food is kept within the temperature danger zone (maximum of 2 hrs.).
- Food contact surfaces, utensils, chopping boards and equipment to be cleaned, sanitized and dried as per the Support Program - Cleaning and Sanitizing, after the preparation of different food types, e.g. meat, poultry, salads and sandwiches. Color coding of utensils/equipment for specific tasks will assist in keeping items separate.
- Wash all fruits and vegetables to remove visible contamination
- Food handlers to follow good hygiene practices as per the Support Program – Health and Hygiene Requirements.

Cooking:

- Ensure food is cooked thoroughly by
 - ✓ following standard recipes and ensuring the internal cooking temperature is 750C or greater; and
 - ✓ By cutting a portion of the food to ensure it is cooked until the juices run clear, the meat is not pink in color or by bringing food to boiling point.
- Ensure food is not left at a temperature of below 600C for more than 2 hrs. during cooking to prevent the possible production of toxin.
- Re-clean and re-sanitize contaminated equipment or utensils as per the Support Program Cleaning and Sanitizing and contaminated food is to be discarded.
- Food handlers to follow good hygiene practices in accordance with the Support Program –Health and Hygiene Requirements.

Cooling:

- After cooking, potentially hazardous food can be cooled at room temperature to 600C (as a guide, for no longer than 1 hr.) before further cooling under refrigeration. Potentially hazardous food must be cooled from 600C to 210C in 2 hrs. and to 50C after a further maximum of 4 hrs.



- Effective cooling can be achieved by:
 - ✓ Cooling food in shallow trays or small containers and ensuring food is not overstocked in the refrigeration unit.
 - ✓ To cool food quickly, using chilled trays or the water bath method (fill up the sink with water (and ice) and place tray of food into the sink for 30 mins, drain water and repeat procedure; then place food in the refrigeration unit. Ensure food does not come into direct contact with the water or sink).
- Food to be covered labeled and stored in clean containers during the cooling process.

Reheating:

- Potentially hazardous food is rapidly reheated to at least 60°C within 2 hrs, turned and stirred periodically for thorough and even distribution of heat. Reheated potentially hazardous food should always be consumed on the day of reheating, and should not be reheated twice. (Note: Bains-marie are not suitable for reheating purposes).
- Equipment and utensils are cleaned and sanitized before use in accordance with the Support Program Cleaning and Sanitizing

Packaging:

- Staffs are to minimize the cumulative time that potentially hazardous food is kept within the temperature danger zone, i.e. a maximum of 2 hrs.
- Containers and lids should be stored in a clean dry area, and meals are to be packaged into clean containers.



Self-Check #1	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Test I: Short Answer Questions (15 points)

1. Mention the condition in which all food products are to be supplied.
2. Mention waste food that must be separated from other foods so that it cannot be used for human consumption.
3. Explain food handling?

Note: Satisfactory rating –7.5points Unsatisfactory - below -7.5 points

You can ask you teacher for the copy of the correct answers.



Information Sheet 2- food safety program

2.1. The Food Safety Programs

A written document that specifies how a business will control all food safety hazards that may be reasonably expected to occur in all food handling operations of the food business.

The purpose of food safety programs is to ensure that a food business has made decisions on what actions it will take to prevent food safety problems arising in the food handling operations that are specific to its particular business. This food safety program tool for the commercial food service sector identifies and recommends controls for the hazards expected to be relevant to the food handling operations involved in the commercial food service sector in accordance with the components of a food safety program.

2.2. Food safety of fresh fruits and vegetable

Market-oriented, successful food production must focus on the final consumer. The aim of fruit and vegetable production is to deliver a safe and wholesome final product to the consumer. Nevertheless, fresh fruits and vegetables have recently been identified and confirmed as a significant source of pathogens and chemical contaminants that pose a potential threat to human health worldwide. In order to develop proper practices and methods of production, hazards and the risks that they may impose to consumer health have to be fully understood. An understanding of the agents that affect fresh fruit and vegetable safety and quality makes it possible to develop practices to minimize potential negative impacts.

The food safety program must:

1. Systematically identify the potential hazards that may be reasonably expected to occur in all the food handling operations of your business;
2. Identify where, in your food handling operations, you control the hazards;
3. Explain your monitoring system to ensure the controls are in place;
4. Specify the corrective action you will take if monitoring indicates that a hazard is not being controlled;
5. State how your food safety program will be reviewed to ensure that it is adequate;
and
6. Describe the records that you will keep so that you can demonstrate that you are complying with your food safety program



Standard requires that your food safety program and the records you keep demonstrating compliance must be in writing and available to food safety auditors.

It is essential that the food safety program you prepare based on this food safety program tool accurately reflects the food handling operations that you use in your business.

There may be more than one way to control a hazard and the legal requirements for a food safety program allow you the flexibility to include the control that works best for your business. For example, the growth of food borne pathogens in potentially hazardous food could be controlled by maintaining this food at 5°C or below or limiting the time the food is at temperatures that support the growth of these pathogens.



Self-Check #2	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention the importance of food safety program tool for the commercial food service sector that identifies and recommends controls for the hazards expected as components of a food safety program.
2. Explain food safety program

Note: Satisfactory rating – 3 points Unsatisfactory - below 3points

You can ask you teacher for the copy of the correct answers.



Information Sheet 3- Carry out food handling

3.1. Food handling fundamentals statement

The industry has included the food handling fundamentals by: *(examples only)*

- incorporating these fundamentals in food handling procedures and practices,
- providing food handlers with a copy of their obligations as a food handler,
- including the food handler hygiene policy in organisational policy, providing it to all current food handlers and new food handlers,
- using the food handling fundamentals during food handler training sessions,
- Displaying food handling and food safety information in the kitchen area or relevant notice board, and other.

3.2. Food Handlers skills and knowledge in food safety.

Food handlers and supervisors of food handling operations are required to have skills and knowledge in food safety and food hygiene matters appropriate to their work activities. There are many approaches that a given industry can adopt to provide food handlers with appropriate skills and knowledge to produce safe food. Some examples are

- in-house training;
- distribution of food safety information;
- viewing of relevant food safety videos or DVDs;
- use of interactive CD ROM or internet based packages;
- establishment of internal policies and procedures that provide information about food handler and supervisor responsibilities; and
- Attendance at food safety courses.

A food handler skills and knowledge register should be kept to demonstrate to an auditor that food handlers have appropriate skills and knowledge. This function may be undertaken by another department, a training coordinator or central office as long as the records are available if required by an auditor. Record below is an example of a food handler skills and knowledge register.



To ensure food safety, food handlers need to implement measures to ensure that food prepared and served is safe and food handling is of a high standard at all times. They have to comply with the health and hygiene requirements prescribed under the Food Safety Standards and follow the steps outlined in the food safety program.

Food handlers Responsibility

- A food handler must take all reasonable measures not to handle food or surfaces likely to come into contact with food in a way that is likely to compromise the safety and suitability of food.

Steps to prevent the contamination of food and food contact surfaces:

- ✓ store uncooked and ready-to-eat food separately and always store cooked and ready-to-eat foods above uncooked or unwashed foods
 - ✓ store foods in waterproof and pest-proof food-grade containers with well-fitting lids
 - ✓ Limit direct handling of food - clean gloves can be used but these must be changed between each task or if they are damaged. Clean tongs or other implements used to handle foods can also be used
 - ✓ keep raw and cooked foods separate at all times; also ensure that separate utensils and cutting boards are to be used for the preparation of raw and ready-to-eat or cooked foods, and washed and unwashed foods
 - ✓ use individual serving implements for each dish to reduce direct handling of food
 - ✓ Keep all food preparation areas, work surfaces, equipment and utensils in a clean condition.
- A food handler must, when engaging in any food handling operation, take all practicable measures to ensure that his/her body, anything from his/her body, and anything he/she is wearing does not contaminate food or surfaces likely to come into contact with food

Steps to be taken to meet hygiene requirements:

- Take all practicable measures (examples below) to ensure his or her body, anything from his or her body, and anything he or she is wearing does not contaminate food or surfaces likely to come into contact with food



- ✓ long hair to be tied or clipped back, or otherwise effectively covered so as to prevent contact occurring between hair and food or between hair and food contact surfaces
- ✓ jewellery is limited to plain banded rings and simple sleeper earrings
- ✓ keep finger nails short and clean and do not wear nail polish or false nails
- food handlers must cover any cuts or sores with a waterproof, brightly coloured dressing and ensure that disposable gloves are worn;
- Clean protective clothing that effectively provides a barrier between food and ordinary clothing must be worn when handling food. This may be in the form of a uniform worn when handling food only instead of everyday clothing, or an apron or overall worn over everyday clothing
- protective clothing must be worn in the food preparation areas only and not outside the premises



Self-Check #3	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention the approaches that a given industry can adopt to provide food handlers with appropriate skills and knowledge to produce safe food.
2. Write food handler Responsibility
3. Explain Food Handlers skills and knowledge in food safety

Note: Satisfactory rating -3points

Unsatisfactory - below -3points

You can ask you teacher for the copy of the correct answers.



Information Sheet 4- Controlling Food safety hazards

4.1. Definition

Hazards is a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect

Foods can become unsafe and have the potential to cause harm through hazards. Hazards arise from:

- improper agricultural practices
- polluted environment (mercury, cadmium, nickel)
- poor hygiene at all and any stage of the food chain (E.coli, Listeria, Campylobacter)
- lack of preventive controls in food processing and preparation operations
- untrained personnel
- misuse of chemicals (pesticides, weed inhibitors, growth hormones)
- use of banned dyes and flavors (Sudan, tartrazine, azo dyes, butter yellow)
- contaminated raw materials, ingredients and water (bacteria and viruses, mycotoxins)
- Inadequate or improper storage or handling.
- Adulterated food and food fraud (intentional addition of cheaper varieties, substitution with alternate substances, synthetic varieties, salt, sawdust, sand etc.).

4.2. Types of hazards

Safety Hazards in Fresh Produce: Biological, Chemical and Physical

The production of fresh fruits and vegetables embraces different activities such as farming, harvesting, post-harvest treatment and processing. Within all these activities, specific hazards exist that affect product safety and quality and might therefore pose a health risk for the consumer.

In order to reduce this risk and to increase produce safety, it is necessary to first assess the potential hazards in the production environment. Once the potential sources of produce contamination or other hazards have been identified, practices can be implemented to control, reduce or eliminate them.

4.2.1. Biological hazards

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Biological hazards in fresh produce come from micro-organisms such as bacteria, fungi (yeasts and moulds), protozoans, viruses and helminths (worms), which can also be termed microbes. In some cases, microbial contamination is indirectly introduced by pests. The term pest generally refers to any animals of public health importance, such as rodents, birds, insects (e.g. cockroaches, flies and their larvae), that may carry pathogens that can contaminate food.

Micro-organisms capable of causing human disease may be found in raw produce. Sometimes they are part of the fruit or vegetable microflora as incidental contaminants from the soil and surroundings. In other instances, they are introduced into or on food by poor handling practices in agricultural production or post-harvest processes

4.2.2. Chemical hazards

These are fertilizers, pesticides, weed inhibitors, growth regulators added intentionally during production, waxes during post-harvest, the residues of which are beyond safe or acceptable limits. They may also be prohibited or unauthorized substances and colorants (like Sudan IV, tartrazine, azo dyes), adulterants or inappropriately used stabilizers and preservatives.

Chemicals from non-food grade packaging in contact with food can also leach into food. Substances like heavy metals (lead, cadmium, zinc, and cyanide), refrigerants etc may be present in food due to pollution.

Detergents and lubricants used by the food handler or processor may also contaminate food and present a hazard. Chemical hazards exist also in natural form such as allergens, mycotoxins, alkaloids (glycoalkaloids in potatoes), and enzyme inhibitors.



Mycotoxins are

- poisonous chemical compounds
- produced by certain fungi
- associated with diseased or mouldy crops.
- found on seeds, nuts, grains, and fruits such as wheat, maize, barley, peanuts, apples etc.

Fig. 4.1. Chemical industry



4.2.3. Physical hazards

These are pieces of metal, glass, plastic, wood, personal items, machinery and equipment. For example pins, nails, broken bulb or bottle, fragments, watch, jeweler, keys, stones, hair. These hazards can cause choking, cuts and bruises in the mouth and gastrointestinal system.

4.3. Hazard controls / monitoring

- Only buy from approved suppliers on Record 1 Approved Food Suppliers List.
- Suppliers should read and sign Record 2 Approved Food Supplier Agreement Form.
- An employee of the business needs to be present when the goods are delivered to carry out the following checks:
 - ✓ Check that the temperature of potentially hazardous foods received from all suppliers is 5°C or below for cold food and 60°C or above for hot food. Once it is established that a supplier is delivering potentially hazardous foods within agreed temperature ranges, deliveries can be checked randomly, for example: a representative sample of 1 in 5.
 - ✓ Check that frozen food is received frozen hard (not partially thawed).
 - ✓ Check that packaging isn't damaged and that food has no immediate signs of contamination.
 - ✓ Check that all products are within their 'best before' or 'use by' date.
 - ✓ Check that all products are properly labeled with the name and address of the manufacturer and a batch code or a date code. A label will help you identify the food in case it is recalled.
- Complete Record 3 - Incoming Goods.
- Ensure all deliveries are placed in designated storage areas immediately.
- Ensure that when purchasing and transporting food directly (from a supplier to your business) that all the above checks are conducted



Self-Check #4	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (10 points)

1. Mention the three types of Hazards
2. Mention how can we keep food safe in business?
3. Explain chemical food hazards?
4. What is Hazard controls / monitoring means?

Note: Satisfactory rating – 5 points

Unsatisfactory - below -5 points

You can ask you teacher for the copy of the correct answers.



Information Sheet 5- Reporting food safety control and taking corrective action

5.1. Definitions of important terminologies

Control: To take all necessary actions to ensure and maintain compliance with criteria established in the HACCP plan and /or the state wherein correct procedures are being followed and criteria are being met.

Control measure: Any action and activity that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Corrective action: Any action to be taken when the results of monitoring at the CCP indicate a loss of control.

Hazard analysis and critical control point (HACCP): A system which identifies, evaluates, and controls hazards which are significant for food safety.

Hazard: A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

Hazard analysis: The process of collecting and evaluating information on hazards and conditions leading to their presence to decide which are significant for food safety and therefore should be addressed in the HACCP plan.

5.2. Food safety control and taking corrective action

The bee product processing industry, like other industries, faces the problem of what to do with products of semi-finished products which cannot be safely consulted. Often, the product can be reprocessed; however, this may require a rapid HACCP study because, when no previous experience exists, the product to be 'reworked' should be regarded as a new raw material. The HACCP system for food safety management is designed to identify potential health hazards and to establish strategies to prevent their occurrence.

Under a properly implemented HACCP System, whenever a deviation from a critical limit (CL) for a critical control point (CCP) occurs, there shall be a corrective action. A deviation is a failure to meet a CL. It indicates that a possible food safety hazard may have occurred and that unsafe product may have been produced. Thus, corrective actions must be immediate and must trigger an automatic review of the HACCP plan.



The HACCP team should routinely pay close attention to operational trends. This should include tracking the frequency of the process adjustments that are required when operating limits are exceeded. A pattern of exceeding operating limits on a regular basis could serve as a warning that a deviation may be imminent.

I. Properties of Corrective Actions

- **Specific:** Corrective actions are required for each affected CCP, and for each and every deviation at each CCP.
- **Immediate and comprehensive:** The time for corrective action is dependent upon the monitoring frequency. All food products affected and produced within the monitoring time period must be brought under control. Holding and storage provisions for pending product must be included.
- **Documented:** Every corrective action for every deviation must be recorded on an appropriate form.

II. Corrective Action Plan

A written Corrective Action Plan is required, and each corrective action must be documented. Corrective actions are specific for each hazard and for each CCP. The plan must provide for immediate corrective actions. However, time factors will vary with monitoring procedures. It is important to note that, when a deviation occurs, a corrective action must be taken on all affected food products produced since the last monitoring observation or measurement. Thus, provisions in a corrective action plan should include procedures for holding suspected product as appropriate.

The goals of a Corrective Action Plan are to:

- Establish a system that allows and promotes rapid response to deviations from a critical limit;
- Correct and eliminate the cause of the deviation and restore process control;
- Maintain accurate documentation and records; and
- Identify affected product and determine appropriate disposition.

5.3. Taking Corrective actions

- Reject potentially hazardous foods which are delivered having internal temperatures between 5°C and 60°C (unless the supplier can demonstrate that the time period at which the food has been between 5°C and 60°C will not compromise the safety of the food). Refer to Support Program 5 Temperature Control (4 hour/2 hour guide).



- Reject products in damaged packaging.
- Reject goods that are incorrectly labelled. Goods that don't have the name and address of the supplier and a use by/best before date or batch code (un-packaged food is exempt).
- Reject deliveries if the inside of the delivery vehicle is unclean or is carrying chemicals or other matter that may contaminate food.
- Reject suppliers that do not provide food in the agreed manner. Refer to Record 2 - Approved Food Supplier Agreement Form.
- Record details of any problem/s and the corrective actions taken on Record 3 - Incoming Goods.

5.4. Documentation of Corrective Actions

Documentation and records of all corrective actions for all CCPs must be maintained on appropriate forms. In addition, corrective actions should be summarized in a narrative statement. These records should demonstrate both corrective actions and product disposition. In addition, they assist in assessing recurring problems and the need for modifications.

At a minimum, corrective action records must include:

- Product identification: description, code and/or lot number, hold number, amount of hold;
- Description of deviation;
- Date of occurrence;
- Corrective action taken and process adjustments;
- Name of responsible individual; and
- Results of product evaluation and disposition.

Improper corrective actions, or lack of corrective actions when deviations occur, are a major cause of regulatory violation of HACCP plans for those commodities under federal regulation. Therefore, where appropriate, the HACCP team should consult regulatory requirements. At the bare minimum, corrective actions must be summarized on the HACCP Plan Summary Form.

Generally, Corrective actions are key to preventing the sale of unsafe product. Corrective actions shall be taken for every deviation from a Critical Limit. The cause of the deviation shall be corrected and any modifications made to prevent recurrence. It is imperative that these actions be taken, that they be thorough, and that they be documented.



Self-Check #5	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (12points)

1. What is the importance of HACCP system designed for food safety management.
2. Write the properties of corrective action.
3. Mention some of the record of corrective action.
4. Explain documentation of Corrective Actions

Note: Satisfactory rating – 6points Unsatisfactory - below -6points

You can ask you teacher for the copy of the correct answers.



Information Sheet 6- Recording Food safety procedure

6.1. Recording

Select the Records that have been referred to in the Food Handling Activities and the Support Programs. It is a good idea to photocopy a stock of these records so they are available when needed. Some records are used daily, weekly or monthly whereas other records may only be used once a year. Your business needs to assign responsibility to people to carry out the actions in the food handling activities, and complete the records. The records in current use should be kept in a folder that is easily accessible. Those records that are not in current use (i.e. completed records) should be kept in such a way as to be available for review by an Environmental Health Officer or Food Safety Auditor.

The forms included in this template (and information within the forms) are examples. Standard requires that records demonstrate action taken and compliance with the food safety program. You may use any method, including other forms or variations of any of these or others, electronic logging, personal digital assistants etc, as long the record demonstrates action taken or compliance with the food safety program and is available to your food safety auditor.

It is important that the records are checked by someone who understands your food safety system and is able to take action should he find that control has been lost at any time. He should also highlight to the owner any breakdown in the system and any stage where correct practices are not been followed on a regular basis. You may consider asking this person to sign that the records have been checked.

Records you should consider keeping include the following :

RECORD	WHY NEEDED?
List of suppliers and ingredients	So that you know your suppliers and ingredients and buy ingredients of consistent quality
All in one' Food Safety Monitoring Record	This is an all in one record which covers the control of most hazards.
Monthly Chilled Food Storage Record	This form can be used to record checks on raw materials you purchase if the all in one form is not used.



Monthly Chilled Food Storage Record	Used to record fridge and freezer temperatures if the all in one record is not used.
Hot Holding Temperature Record Sheet	Used to prove that the temperature at which foods are held are sufficiently high to prevent bacterial growth. (above 65°C)
Hot Temperature Record	Again used to prove that the temperature to which the food is cooked or reheated is sufficiently hot to kill bacteria and that food is chilled quickly.
Probe /Thermometer Checking Record	Used to prove that thermometers are working correctly.
Cleaning Schedules	These specify frequency and method of cleaning and are to be signed by person carrying out the cleaning.
HACCP Review Records	This records the checks you have carried out to make sure your HACCP system is working effectively and does not need updating. .
Weekly/Monthly Food Safety Audit Check Lists	These lists are useful to carry out weekly or monthly checks that the food safety management system is operating as specified.
Training Records	These are essential in order to prove that you have trained your staff to understand your HACCP system
Food Safety Diary or Log	Can be used instead of some records to record that 'all in order' or that corrective actions were taken in the event of loss of control.

The key with record keeping is to:

- keep records to a minimum: only record information that is required or will be useful;
- be creative: develop recording methods as part of your current food operations or on existing documentation (for example, record receiving temperatures on purchase orders or invoices, or cooking temperatures on the weekly menu);
- make it clear and easy for the recorder (food handlers: talk to them about what works);



- develop processes to ensure completed records are collected, reviewed and filed ready for audit in a timely manner, and ensure replacement forms are readily and immediately available;
- avoid recording the obvious things
- use abbreviations where possible; and
- Discuss with your auditor: required information, methods and appropriateness of records.

Remember records must demonstrate compliance with your food safety program and be available to your food safety auditor.

6.2. Types and procedures of recording

Record 1: Supplier list

Procedure: for each food supplier, record business details (for example, business name, and contact person and phone number), the type of product supplied (for example, meat, dry good, fruit and vegetable, dairy, bee products etc) and any relevant notes

Record 2: Food receipt

Procedure: The business will check a sample of food deliveries:

- Potentially hazardous foods will be checked to see if the temperature is at 5°C or below.
- Frozen goods will be checked to confirm foods are received hard frozen.
- Non-potentially hazardous foods (dry goods, fruit and vegetables, bee products etc) will be checked for signs of contamination, damaged packaging or expired dates.

Record 3: storage temperatures

This is used to record the air temperatures of refrigerators, cool rooms and freezers. Any corrective actions should also be recorded on this form.

Storage procedure: check the fridge temperature each day and record if out of range and record. If below 60 °C check power and settings and check again in 30 minutes. If still below 60°C advise manager and take action to ensure food safety is not compromised.

Record 4: skill and knowledge

Procedure: record how food handlers have obtained appropriate skills and knowledge

Record 5: cleaning and sanitizing schedule

Food handlers will after every session:

- clean and sanitise the service area



- empty, clean and refill bain-maries
- wash and store dishes and utensils
- Mop the floor around the service area and dishwasher.

Procedure: food handlers are to initial tasks as completed or at the end of their shift

Record 6: Adequate cooking

Procedure:

- Temperature check or visually check potentially hazardous cooked foods that do not undergo sustained boiling, simmering or steaming; and
- Check that potentially hazardous cooked foods that are cooled for consumption later are cooled rapidly.

Record: 7 Maintenance and calibration

Procedure: list equipment, fittings and fixtures that impact on the safety and suitability of the food and record maintenance for each.

Record 8: pest control activities to prevent pests

Procedure: record routine activities undertaken to prevent pests

Record 9: Transport temperature

Procedure: record the temperature and time of a sample of potentially hazardous food before dispatch and at receipt. If foods are between 5°C and 60°C advise manager.

Record 10: review of food safety program

Procedure: review the food safety program at least annually by assessing and making any necessary adjustments to the food safety program.

Record 11: non conformance

Procedure: record any non-conformance and resolution that impact on food safety or the food safety program



Self-Check #6	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention the types and procedures of recording
2. Write Food Safety Diary or Log uses?
3. What are HACCP Review Records?

Note: Satisfactory rating –3 points

Unsatisfactory - below 3points

You can ask you teacher for the copy of the correct answers.



Information Sheet 7- Maintaining workplace standard

7.1. Workplace standard

Food safety practices refer to specific food handling controls related to food handling and preparation in business/industry. These include things such as the receipt, storage, processing, display, packaging and transportation of food.

As well as paying attention to the practices specific to food handling and preparation in product handling business/Industry there are some practices that support food safety. These are called *Support programs* and include things such as cleaning and sanitizing, time and temperature controls, pest control, and Food recalls and waste disposal.

In order to maintain the work place to its standards to keep food safety practices: there should be:

- Appropriate storage area
- Processing area and display facilities
- Packaging and transportation facilities and also
- Cleaning and sanitizing facilities
- pests control mechanism
- waste disposal
- Temperature controls are maintained to its standards.

Keep the workspace clean:

a) Keep your immediate work area clean and tidy

- by adopting a 'clean as you go policy' and immediately after carrying out a task cleaning your work surfaces and the surrounding work area
- everything must be visually clean and tidy
- return all unused raw materials to the correct storage area as soon as possible remove all used equipment and tools to the equipment wash sink for cleaning as soon as possible, and return unused items to their original storage area



- where food or other products such as packaging materials have fallen on the floor during production they must be cleaned up and placed in the correct waste disposal container as soon as possible
 - waste must not be allowed to accumulate
- b) Keep tools, utensils and equipment in good order, in a hygienic condition and stored correctly
- tools, utensils, and equipment require to be cleaned immediately after use, and dried thoroughly, to maintain their good condition
 - tools, utensils, and equipment require to be cleaned using the recommended cleaning materials
 - all tools, utensils, and moveable equipment need to be returned to their original storage area after cleaning

Work in a way that keeps food safe:

- A) Follow procedures to dispose of food waste and scraps promptly and hygienically
- by using the correct waste bin for specific waste following the company waste disposal policy
 - by not allowing waste to build up in food preparation areas
 - by following the hand-washing procedure after dealing with waste
- b) Avoid product contamination and cross-contamination at all stages of processing operations
- by maintaining good personal hygiene
 - by using correct color-coded equipment
 - by storing raw materials and finished products correctly at all stages of the process by keeping the floors in your work area clean
 - by keeping work surfaces and equipment clean by preventing pest infestation



Self-Check #7	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (5 points)

1. Mention some of the most important points that a work place maintain to keep a given food safety practices.

Test II: Chose the best answer (5 point)

1. Avoid product contamination and cross-contamination at all stages of processing operations
A/ by maintaining good personal hygiene
B / by using correct color-coded equipment
C/ by storing raw materials and finished products correctly at all stages of the process by keeping the floors in your work area clean
D/ by keeping work surfaces and equipment clean by preventing pest infestation
E/ All

Note: Satisfactory rating -5points Unsatisfactory - below -5points

You can ask you teacher for the copy of the correct answers.



Information Sheet 8- Conducting works with workplace environmental guidelines.

8.1. General environmental health and safety (EHS) Guidelines

The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors

Occupational Health and Safety

Occupational health and safety impacts during the construction and decommissioning of vegetable oil processing plants are common to those of most large industrial facilities and their prevention and control are discussed in the General EHS Guidelines. Occupational health and safety issues during the operational phase include:

- Chemical hazards
- Physical hazards
 - ✓ Confined space entry
 - ✓ Electrical hazards
 - ✓ Risk of fire and explosion
 - ✓ Noise

Environment

Essential tools for managing impacts while optimizing water, energy, and resource use and improving working practices involve the adoption of industry-specific good-manufacturing practice, quality management systems (including ISO 9000 series, ISO 22000), risk management systems (e.g., Hazard Analysis Critical Control Points, HACCP), and environmental management standards (e.g., ISO 14000).

Environmental issues in food and beverage processing facilities primarily include the following:

- Solid waste
- Wastewater
- Energy consumption
- Emissions to air

While conducting work in food safety program the following are very important points to be considered. Some of them are:



Material safety data sheets (MSDS)

The MSDS is a detailed informational document prepared by the manufacturer or importer of a hazardous chemical. It describes the physical and chemical properties of the product.

MSDS's contain useful information such as:

- Flash point,
- Toxicity,/contaminants
- Procedures for spills and leaks and
- Product handling, processing and Storage guidelines.

Information included in a Material Safety Data Sheet aids in the selection of safe products, helps you understand the potential health and physical hazards of a chemical and describes how to respond effectively to exposure situations

OHS standards and procedures

Specifications for tools, equipments and materials in controlling safety food requirements.

Standard Operating Procedures (SOP)

It is a set of step-by-step instructions compiled by an organization to help workers carry out complex routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance, while reducing miscommunication and failure to comply with industry regulations

Verbal directions from manager or supervisor

Work instructions and standards

Work notes.

Instructions and directions provided by supervisor must be followed and if we have any question we can ask when necessary. And also employee must observe and follow Enterprise policies and procedures in relation to workplace practices in the handling and disposal of materials.



Self-Check #8	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (10 points)

1. List down 5 instructions and directions provided by supervisor to be followed by an expert in camel raising activity.
2. Write the useful information contained in material safety data sheet.
3. What are Material safety data sheets (MSDS)?

Note: Satisfactory rating – 5 points

Unsatisfactory - below -5points



LG #11	LO # 2- Participate in maintaining and improving food safety
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Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Monitoring work area, materials, equipment and product
- Identifying and reporting processes, practices or conditions
- Taking corrective action
- Raising food safety issues

This guide will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Monitor work area, materials, equipment and product
- Identify and reporting processes, practices or conditions
- take corrective action
- raise food safety issues

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” which are placed following all information sheets.
5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets
7. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,
8. If your performance is satisfactory proceed to the next learning guide,
9. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.



Information Sheet 1- Monitoring work area, materials, equipment and product

1.1 .MONITORING

The processing facility should be evaluated on a daily basis to assure that conditions are hygienic before processing begins. Visual inspection should assure that no food particular or foreign matter is present on processing equipment. In particular, hard to clean spots should be inspected such as the underside of conveyors and peeling equipment. Unfortunately, visual inspection is not enough to assure that equipment has been sanitized properly. Monitoring of equipment's is very important to maintain the quality of must as to achieve the desired production of mead with good flavor. Similarly monitoring of equipment is used to identify the defected equipments which have a negative impact on must operation and suggest for maintenance. Monitoring involves the regular measurement of parameters such as functionality, vibration, temperature and sound in and around machines and equipment. The equipment component defects are recognized at an early stage for maintenance or purchasing new and the remaining runtimes of bearings, shafts, etc.

1.2. Five keys to safe food in a given working areas

Keep clean

- Wash your hands before handling product and often during food preparation. Wash your hands every time they are exposed to germs (after going to the toilet, blowing your nose, smoking, handling raw meat/poultry/eggs, touching unclean surfaces, handling trash etc.)
- Wash, and sanitize all surfaces and equipment used for food preparation.



Fig 1.1. Steps in washing hands

Utensils especially those from which you eat, drink or in which you cook should not come in touch with raw meat/poultry/eggs.

- Protect kitchen areas and food from insects, pests and other animals.
- Keep food covered, in closed containers and wherever needed, refrigerated.
- Keep food preparation area clean and in good condition (repair cracks, fill holes, do not allow small spaces between fixtures that do not allow cleaning and where dirt and food can accumulate).
- Do not neglect the rubbish area. Keep it clean and tidy and remove rubbish daily. Clean and dry all equipment (including the cleaning equipment) as germs can grow fast in damp places

Separate raw and cooked food

- Separate raw meat, poultry and seafood from other foods at all stages from cleaning, storing, preparation, and cooking.
- Use separate equipment, utensils (including washcloth) for handling raw foods meats, poultry and sea foods. Use them for other foods always only after washing with hot water and soap.
- Do not let juices or liquids from raw meats, poultry and sea foods to spill or seep onto other surfaces or come into contact with cooked or other raw foods.



- Store foods in covered containers to avoid cross-contamination between raw and prepared foods.

Cook thoroughly

Proper cooking can kill almost all dangerous microorganisms. Studies have shown that cooking food to a temperature of 70°C can help ensure it is safe for consumption.

- Ensure food is thoroughly cooked through, especially meat, poultry, eggs and honey and bees wax.
- Juices from meats, seafood and poultry should not be pink, and should be clear

Store food at safe temperatures

- Do not leave cooked food at room temperatures for more than 2 hours.
- Refrigerate all cooked and perishable foods promptly
- Keep cooked food very hot (above 60°C) prior to serving
- Do not store food too long (more than 3 days) in the refrigerator
- Do not reheat refrigerator food more than once.
- Do not refreeze frozen food after thawing or Cooking

Use safe water and raw materials.

- Use safe water or treat it (by boiling, chlorination, and filtration) to make it safe for cooking, washing hands or utensils, and making drinks or ice.
- Select fresh and wholesome foods (not damaged or rotting) from clean stores / places
- Wash fruits and vegetables, bee products especially if eaten raw
- Cut away damaged bee products, since bacteria can thrive in these places.
- Do not use food beyond their expiry date.



Self-Check #1	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. List down the five keys to safe food in monitoring work area and product material and equipment's.
2. What is monitoring work area?

Note: Satisfactory rating – 3points Unsatisfactory - below -3points

You can ask you teacher for the copy of the correct answers.



Information Sheet 2- Identifying and reporting processes, practices or conditions

2.1. Food Safety Programs Purpose

This Standard is based upon the principle that food safety is best ensured through the identification and control of hazards in the production, manufacturing and handling of food as described in the Hazard Analysis and Critical Control Point (HACCP) system, adopted by the joint WHO/FAO Codex Alimentarius Commission, rather than relying on end product standards alone. This standard enables states and territories to require food businesses to implement a food safety program based upon the HACCP concepts. The food safety program is to be implemented and reviewed by the food business, and is subject to periodic audit by a suitably qualified food safety auditor.

General food safety program requirements

A food business must:

- (a) systematically examine all of its food handling operations in order to identify the potential hazards that may reasonably be expected to occur;
- (b) if one or more hazards are identified in accordance with paragraph (a), develop and implement a food safety program to control the hazard or hazards;
- (c) set out the food safety program in a written document and retain that document at the food premises;
- (d) comply with the food safety program; and
- (e) Conduct a review of the food safety program at least annually to ensure its adequacy.

For proper identification and reporting of food safety processes or condition, it is important to ask ourselves about the way we are checking it and how can we take correction action are considered. See the most important goals below

Goal 1: Ensure that food is safe when you purchase and receive it.(How can I check?)

- Observe whether the driver and the truck are clean and check that the vehicle is not carrying animals or chemicals in the same area as the food.
- Examine the packaging to see if it is damaged.



- Make sure that all products are properly labelled, including the product name and address of the manufacturer, a batch code or date code, ingredient list and allergen and food intolerance information.
- All products should be within their 'best before' or 'use-by' dates.
- Look for any visible signs of insects, insect eggs or other items that should not be in or near food, such as dirt, glass and rubbish.
- Use a probe thermometer to regularly measure the temperature of food deliveries from each supplier of high-risk food.
- For new suppliers, check the temperature of deliveries more often until you are sure that the food is meeting temperature requirements.
- Check the temperature of each delivery for any supplier you feel is not consistently meeting temperature requirements.
- Tap frozen foods to test that they are frozen hard. Make sure an employee of your business is available to check when goods are delivered. If you have an arrangement with your suppliers for food to be delivered outside business hours, check the food before storing it.
- If you collect food from your supplier and transport it yourself, check that it is safe and kept at the right temperature during transport and storage.

Goal 2: Ensure that stored food remains safe (how can I check?)

- Measure core temperatures of high risk food stored in the refrigerator using a probe thermometer regularly (at least one check a day).
- If frozen food is warmer than -15°C , test whether it is frozen hard. If yes, then it is still ok to use
- Check your completed food temperature records (Record 2) to ensure that safe food temperatures are maintained.

Food safety breach

- failure to check delivery temperatures of potentially hazardous chilled food
- failure to place temperature-sensitive food in temperature controlled storage conditions promptly
- failure to wash hands when required
- use of cloths for unsuitable purposes



Information Sheet 3- Taking corrective action

3.1. Respond to non-conformances:

A food safety program enables food establishments to ensure food production methods are safe, hygienic and that they comply with food regulations and legislation. The food safety program systematically identifies the food safety hazards that may be reasonably expected to occur in your workplace. It identifies where and how each hazard can be controlled, describes how these controls are to be monitored, the corrective action required if control conditions are not met, and information to be recorded.

Collect and analyses food safety data

Collecting and analyzing food safety data is an essential component of any food safety program. You should collect and analyses data on an ongoing basis to enable any breaches of food safety procedures to be identified and corrected.

Sources of food safety data

The systems, procedures and support programs that assist with the implementation of food safety programs not only give direction and advice to staff implementing the program, but also provide information and data to supervisors through the use of monitoring forms such as check sheets.

As a supervisor, you will be required to collect this data and analyse it to identify any irregularities and noncompliance with regulations. The data may also highlight areas where improvements could be made to ensure that food quality is maintained.

Standard operating procedures (SOPs)

Standard operating procedures cover all areas of production and support functions, which contribute to the production (and safety) of the final product. Standard operating procedures must comply with the Food Safety Standards and any relevant industry codes. They give staff clear direction for following sound hygiene procedures and often have associated check sheets that provide a range of data.

The Standard operating procedure identifies:

- The staff responsible for the activity (e.g. receiver and stores staff)

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- The nature of their responsibilities (e.g. to ensure acceptable goods are received and nonconforming goods returned following correct procedures)
- Check sheets or reporting sheets that must be completed as part of the procedure.

Standard operating procedures may include:

1. Cleaning schedules
2. Pest control programs
3. Maintenance schedules
4. Calibration of equipment
5. Supplier standards
6. Staff training schedules.

Non-conformance is when the control measures identified in the food safety manual are not being applied or critical limits are not being met. Non-conformance may lead to the food becoming contaminated either by physical, chemical or biological means which can lead to a breach of food safety legislation.

Control measures Control Measure: Any action and activity that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level. Control measures are established to prevent, control and eliminate food safety hazards. Control measures describe how to keep food safe and will also improve food quality. Control measures do not work in isolation they are all closely linked

Control measures for each production step ensure that actions of staff:

- Do not cross-contaminate food through poor personal hygiene, poor standards of cleanliness or the presence of pests
- Do not expose food to chemical or physical contamination
- Do not expose food to the danger zone for sufficient time enabling the growth of food poisoning bacteria.

Before taking corrective actions it is very important identify hazards. So that to keep the food safety it is important to take corrective action / manage hazards according to the sever and extent of hazards.

3.2. Managing hazards procedures

Hazard identification

In any food safety system, all reasonably foreseeable hazards are identified along each stage / process. Hazard identification is the identification of biological, chemical, and



physical agents capable of causing adverse health effects and which may be present in a particular food or group of foods. – Codex

Hazard analysis

Each hazard is then analyzed along the source, what can go wrong, how, when etc. and understanding the conditions that may cause the hazard to be present or to increase.

Hazard characterization

The qualitative and/or quantitative evaluation of the nature of the adverse health effects.

Risk characterization

The qualitative and/or quantitative estimation of the probability of occurrence and severity of adverse health effects.

Control measures

Necessary actions are identified and implemented to reduce or eliminate the hazard
Clearly, hazard analysis is always unique to a company, its products, processes, and circumstances. No two companies will have the same analysis.

For example, refer to the work surfaces illustrated below (Figures 8 and 9).

Control measure:

Action taken to reduce risk / eliminate hazard:

- Change table or repair table to cover work-surface and food contact surface with nontoxic and easily cleanable material e.g. steel or rustproof metal.
- Improve visibility through added lighting.



Self-Check #3	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Describe briefly the difference between hazard identification and hazard characterization
2. List out hazard manage procedures
3. What is hazard Control measures

Note: Satisfactory rating – 3points

Unsatisfactory - below -3 points

You can ask you teacher for the copy of the correct answers.



Information Sheet 4- Raising food safety issues

4.1. Introduction

During the past decade, fruits and vegetables have become leading vehicles of food-borne illnesses. Furthermore, many plant-based foods and ingredients, not previously considered a risk, have been associated with food-borne disease outbreaks. Most of the pathogens that have been identified as causative agents in these illnesses or outbreaks are enteric zoonotic pathogens that are typically associated with animal hosts. Transmission of zoonotic pathogens from animals to plant systems occurs by a variety of routes, but the initial contributing factor is the discharge of animal manure into the environment. Using a “One Health” approach that focuses on animal, human, and environmental health concurrently can provide practical and effective interventions for reducing the incidence of such outbreaks. This paper addresses this concept by providing recent food-borne disease outbreak data related to fruits and vegetables, delineating findings regarding the prevalence of pathogens in animal manures and describing the vehicles that transmit pathogens from manure to produce fields, and discussing the merits of reducing pathogen transmission through interventions that would not adversely affect the health of the environment or animals.

To maintain consumer confidence and industry work has to be done together to promote a preventative approach to food safety. This aligns with international best practice on the production and service of safe food by restaurants, cafes and other catering operations that have opted to implement similar

Food safety program systems. Food safety programs are recognized as a preventative approach to food safety. They are based upon the internationally accepted principle that food safety is best achieved through the identification and control of hazards in the production, manufacturing and handling of food.

This Food Safety Program Tool is a practical step-by-step guide to help you develop a food safety program for your business. It can be used to create your own workable, site-specific food safety program to address the food safety hazards associated with your business and to prevent food borne illness. It can also provide you with the flexibility to manage your own processes to suit your individual situation, a means to minimize the costs of implementing a



food safety program and a source of information to address the needs of your business. Development of your food safety program is not an onerous task and can be incorporated into the day to day running of your business

Keeping food safe in business steps

Avoid cross-contamination from other foods, surfaces, hands or equipment

- Keep raw food separate from cooked or ready-to-eat food.
- Use separate utensils and cutting boards when preparing raw and ready-to-eat food.

Handle and store food in hygienic conditions

- Wash hands thoroughly and regularly.
- Use clean, dry, sanitized cutting boards and equipment.
- Rinse cleaning cloths after each use and replace frequently.
- Store food away from contaminants and protected from pests.

Identify or separate foods containing allergens from other foods

- Identify allergens and label or name them in foods on your menu or display.
- Avoid cross-contaminating other foods with foods that contain allergens.
- For more information about food allergies and intolerances visit: Allergen awareness and food businesses.

Identify or separate foods to which some people are intolerant

- Identify common foods that cause food intolerance symptoms in some people after consuming them. Label or name them in foods on your menu or display.
- Avoid cross-contaminating other foods with these foods.

Symbols used in the food safety program

The following symbols appear in the food safety program template to remind you of specific food safety issues.



Self-Check #4	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (10 points)

1. Describe briefly the ways in which we can raise the food safety issues.
2. List out keeping food safe in business steps

Note: Satisfactory rating – 5points Unsatisfactory - below -5points

You can ask you teacher for the copy of the correct answers.



Operation sheet #1	Taking Corrective actions
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Procedure for taking corrective action

Step1- Prepare the necessary materials

Step2- Measure the food sample using thermometer (Reject potentially hazardous foods delivered b/n 5°C and 60°C) using Temperature Control (4 hour/2 hour guide)

Step3-Reject products in damaged packaging.

Step4- Reject goods that are incorrectly labelled.).

Step5- Reject deliveries if the inside of the delivery vehicle is unclean or is carrying

Chemicals or other matter that may contaminate food.

Step6-Reject suppliers that do not provide food in the agreed manner.

Refer to Record 2 - Approved Food Supplier Agreement Form.

Step7- Record details of any problem/s and the corrective actions taken on

Record 3 - Incoming Goods.

Step8-Report your result



LAP Test	Practical demonstration
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Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within 2 hours.

Task1 Perform corrective action in food safety control.



LG #12

LO # 3- Comply with personal hygiene standards

Instruction sheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Personal hygiene
- Reporting Health conditions and/or illness.
- Wear appropriate clothing and footwear
- Complying movement around the workplace

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- personal hygiene
- Report Health conditions and/or illness.
- wear appropriate clothing and footwear
- comply movement around the workplace

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” which are placed following all information sheets.
5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks)
6. If you earned a satisfactory evaluation proceed to “Operation sheets
7. Perform “the Learning activity performance test” which is placed following “Operation sheets” ,
8. If your performance is satisfactory proceed to the next learning guide,
9. If your performance is unsatisfactory, see your trainer for further instructions or go back to “Operation sheets”.

Information Sheet 1- Personal hygiene

1.1. Personal hygiene

Every person working in handling area maintaining a high degree of personal cleanliness and wearing suitable, clean and, where necessary, protective clothing. People who do not maintain an appropriate degree of personal cleanliness, who have certain illnesses or conditions or whose conduct / behavior is not appropriate to food safety, can contaminate food and transmit illness to consumers.

Hygiene and protective clothing

Food handlers should maintain a high degree of personal cleanliness where appropriate; food handlers must wear suitable protective clothing, head covering, and footwear.



Fig1.1. Suitable PPE

Hand washing

Personnel should always wash their hands when personal cleanliness may affect food safety, for example:

- at the start of food handling activities;
- immediately after using the toilet;
- after handling raw food or any contaminated
- Material; and after smoking.

Personal hygiene is important to prevent food poisoning. When handling food, wash your hands thoroughly and often. If you are sick, do not go to work, because you can



contaminate food more easily. Food handlers should be properly trained in safe food handling.

Good personal hygiene can prevent food poisoning.

Bacteria that cause food poisoning can be on everyone – even healthy people. You can spread bacteria from yourself to the food if you touch your nose, mouth, hair or your clothes, and then food

Good personal hygiene also makes good business sense. Customers like to see food-handling staff who take hygiene seriously and practice safe food handling.

Food handler's personal hygiene tips

To prevent food poisoning using good personal hygiene, follow these tips:

- wash and dry your hands thoroughly before handling food, and wash and dry them again frequently during work
- dry your hands with a clean towel, disposable paper towel or under an air dryer
- never smoke, chew gum, spit, change a baby's nappy or eat in a food handling or food storage area
- never cough or sneeze over food, or where food is being prepared or stored
- wear clean protective clothing, such as an apron
- keep your spare clothes and other personal items (including mobile phones) away from where food is stored and prepared
- tie back or cover long hair
- keep fingernails short so they are easy to clean, and don't wear nail polish because it can chip into the food
- avoid wearing jewelry, or only wear plain-banded rings and sleeper earrings
- completely cover all cuts and wounds with a wound strip or bandage (brightly coloured waterproof bandages are recommended)
- wear disposable gloves over the top of the wound strip if you have wounds on your hands
- change disposable gloves regularly
- Advise your supervisor if you feel unwell, and don't handle food.



Self-Check #1	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention the how we can keep personal hygiene in food safety program.
2. Write Food handler's personal hygiene tips

Note: Satisfactory rating – 3 points Unsatisfactory - below -3points

You can ask you teacher for the copy of the correct answers.

Information Sheet 2- Reporting Health conditions and/or illness

2.1. Health condition of staff

person suffering from, or being a carrier of a disease likely to be transmitted through food or afflicted, for example, with infected wounds, skin infections, sores or diarrhea, permitted to handle any food-handling area in any capacity, if there is any likelihood of direct or indirect contamination?

- Are the health cards maintained for all employees
- Does any person so affected and employed in the establishment and who is likely to come into contact with food report immediately the illness or symptoms, and if possible their causes, to the processing establishment?
- At all stages of production, processing and distribution, is the food protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state?

Sick persons



Fig. 2.1 Sick condition

Sick persons suffering from illness transmitted through food, should not be allowed to enter any food handling area.



Food handler health and working

- Food handlers may contaminate food, so employers and employees must be careful to ensure that no illness is passed on by those working in the industry.
- You should not go work if you are vomiting or have diarrhoea. Don't return to work until your symptoms have stopped for 48 hours. If you are unsure, you should contact your doctor for advice.
- Do not go to work if you sick with an illness that is likely to be transmitted through food. Such illnesses include gastroenteritis (often called 'gastro') including viral gastroenteritis (norovirus or rotavirus) hepatitis A and hepatitis E, sore throat with fever, and fever with jaundice.

2.2. Reporting Staff health condition

Monitor the health of staff. Conditions to be reported for medical examination and/or possible exclusion from food handling are:

- Jaundice;
- Diarrhea;
- vomiting;
- fever;
- sore throat with fever;
- Visibly infected skin lesions (boils, cuts, etc.);
- Discharges from the ear, eye or nose.



Self-Check #2	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention the conditions to be reported for medical examination and/or possible exclusion from food handling.
2. Explain Food handler health and working condition?

Note: Satisfactory rating – 3 points Unsatisfactory - below 3 points

You can ask you teacher for the copy of the correct answers.



Information Sheet 3- Wearing clothing and footwear

3.1. Wearing appropriate Personal Protective Equipment

There are different types of materials, tools and equipments and supplies to perform different activities in food safety program. Therefore, identifying, selecting, using and preparing facilities, supplies according to the working activity are very important aspect of the program.

Personal protective clothing and footwear include:

- Overalls
- Gloves
- Safety goggles
- plastic boots/shoes
- respirator or face mask
- Aprons
- Protective eyewear/hair wear

Protective clothing and footwear should be selected to prevent skin contact with contaminated materials or environments. Consideration should be given to the type of work being performed by the worker when selecting personal protective clothing.



Fig . 3 Overall

An overall is useful while working in an apiary to prevent the bees from going up your selves or into your garments

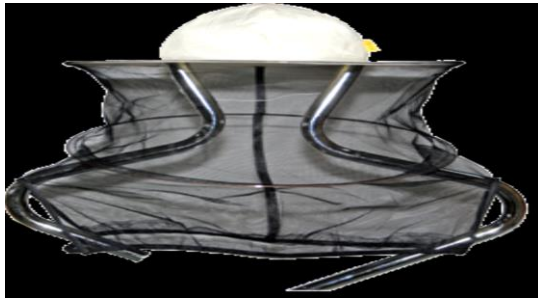


Fig 4. Bee –veil:

It is a head veil made of mosquito- netting & is used – is the material used to protect head region, face & neck from bee’s sting.



Fig. 5. Gloves

It is used to protect the hands and fingers against any hazard

Personnel conduct

People engaged in food handling activities should refrain from conducting themselves in a manner which could result in contamination of food, for example:

- smoking;
- spitting;
- chewing (gum / tobacco) or eating;
- sneezing or coughing over unprotected food and in the premises where food being process

Appropriate clothing and footwear depends on work requirements. It should be designed to ensure that the body and clothing itself, does not contaminate food or surfaces likely to come into contact with food. Examples of clothing designed to prevent contamination by the body include purpose designed overalls or uniforms, hair-nets, beard snoods, gloves and overshoes



Self-Check #3	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention some examples of personal conduct in food handling activities that refrain from conducting themselves in a manner which could result in contamination of food
2. What are the uses of wearing appropriate Personal Protective Equipment?

Note: Satisfactory rating – 3points

Unsatisfactory - below 3 points

You can ask you teacher for the copy of the correct answers.



Information Sheet 4- Complying movement around the workplace

4.1. Control Measures for the Safe Movement of People in the Workplace

The control strategies for managing the risk inherent in the movement of people in a workplace are based on basic health and safety management principles:

- Eliminate the hazard.
- Create a safe place.
- Create a safe person

Use of Signs and PPE

Clearly visible and easily understood signs and markings should be provided so that pedestrians (even those unfamiliar with the workplace) are made aware of hazards and what they must do to avoid them. Signs should conform to relevant standards

Maintenance of a Safe Workplace

Once measures have been taken to ensure that pedestrians can move around the workplace safely, some thought must be given to the maintenance of that safe workplace. People rarely slip on clean, dry floors. Floors in poor condition and bad housekeeping are responsible for most trip injuries at work.

Control measures can be divided into:

- Contamination control preventing contamination, choosing the right cleaning method and ensuring cleaning does not introduce an additional slip risk.
- Access and egress good housekeeping and obstacle removal.
- Environmental considerations such as ensuring good lighting at entrances/exits and in walkways.

Confined space entry

Silos, tanks, mixing vats, hoppers and storage bins are all typical confined spaces found in the food and beverage manufacturing industry. Fatalities in confined spaces are a recurring tragedy and many occur during rescue attempts.

The first step to prevent confined space fatalities is to determine if a confined space hazard exists. Many workplaces have areas that are considered “confined spaces,” because even



though they are not necessarily designed for people, they are large enough for workers to enter to perform required tasks. A confined space also has limited or restricted means for entry or exit and is not meant for continuous occupancy.

Employers must take measures to prevent workers from entering confined spaces, label all confined spaces, and train workers to recognize what constitutes a confined space and the hazards that may be encountered.

Utilities: Each time you have a new work location, check the location of the shutoffs for all of the utilities. That way you will be prepared for an emergency

Electrical: You should make yourself aware of the location of the main panel or sub-panels being used, and you should learn how to shut them off in case of an emergency. If you must shut the power off, notify your supervisor right away. Obtain permission from the electrician before using a new service.

Equipment Safety: Extreme care should be taken when operating equipment. Before you attempt to operate any tool or piece of equipment, you must be fully trained by an experienced operator. Make sure that all guards are in place and function properly and that all electrical connections are properly made.



Self-Check #4	Written Test
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Name..... ID..... Date.....

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions (6 points)

1. Mention important things to followed/observed while moving around the work place in food safety program.
2. What is Equipment Safety?
3. Write Control Measures for the Safe Movement principle?

Note: Satisfactory rating –3 points

Unsatisfactory - below -3points

You can ask you teacher for the copy of the correct answers.



Operation sheet #1	Handle and store food in hygienic conditions
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Procedures for handling and store food in hygienic condition

Step 1-Prepare the necessary materials including PPE.

Step 2-Wash hands thoroughly and regularly.

Step 3-Use clean, dry, sanitized cutting boards and equipment.

Step 4- Rinse cleaning cloths after each use and replace frequently.

Step 5-Store food away from contaminants and protected from pests.

Step 6 - Record each step and activity and report to the concerned body



LAP Test	Practical demonstration
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Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within 1:30 hours.

Task 1. Perform food handling and storing in hygienic conditions



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