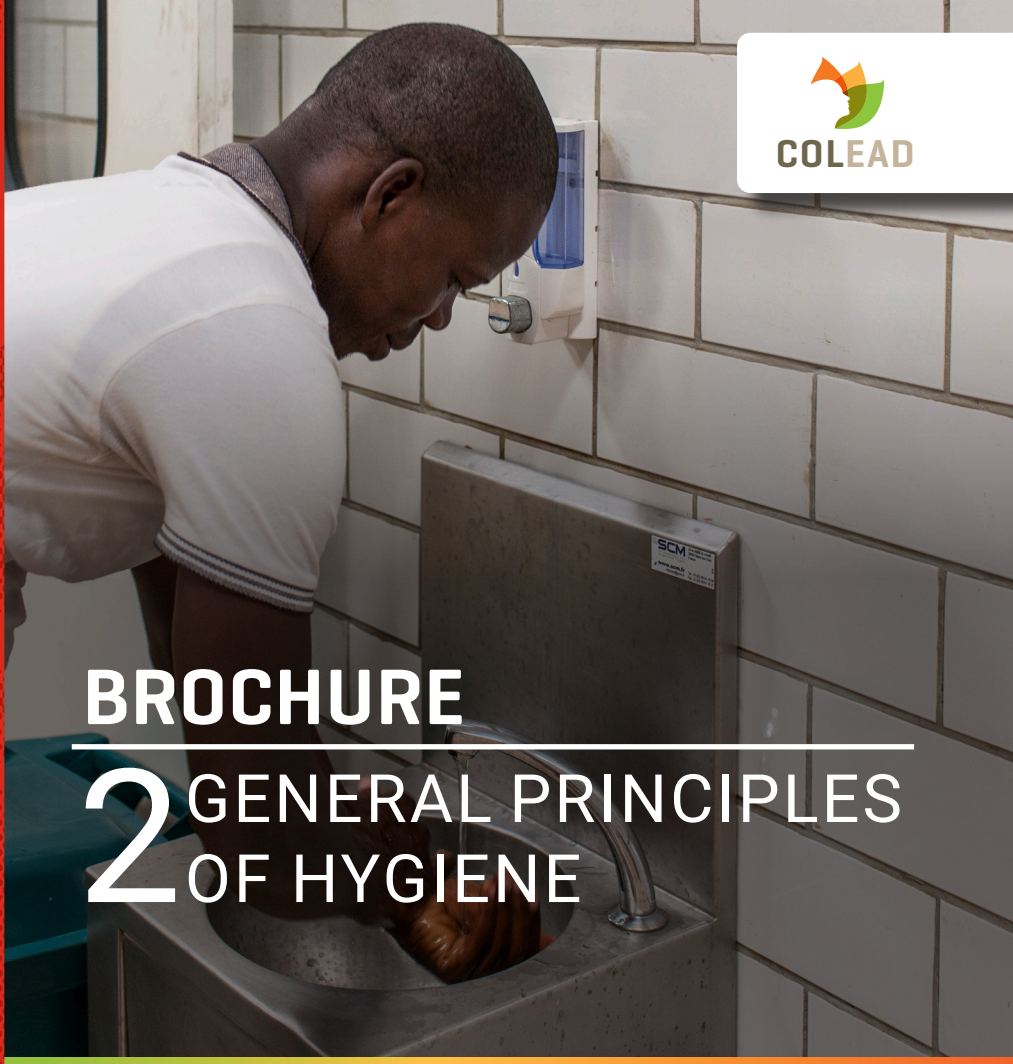
FOOD SAFETY

COLEAD



BROCHURE 2 GENERAL PRINCIPLES OF HYGIENE

HYGIENE MEASURES OF PRODUCTION SITES AND INSTALLATIONS

Funded by the European Union

COLEAD

COLEAD makes this brochure available to producers and exporters of foodstuffs from ACP countries (Africa-Caribbean-Pacific). The instructions illustrated on the next pages are intended for producers and processors seeking to comply with Good Hygiene Practices in production and during packing.

It sets out the main recommendations for production sites and installations laid down in this brochure are part of a set of recommendations to improve compliance with basic hygiene principles. They are based on analysing potential contamination sources using the so-called 5 M method ([raw] material, manpower, [working] method, machinery and milieu).

Brochures on other topics are also available on the COLEAD website (**www.colead.link**).

This publication has been developed by the Fit For Market + programme, implemented by COLEAD within the framework of the Development Cooperation between the Organisation of African, Caribbean and Pacific States (OACPS) and the European Union (EU). It should be noted that the information presented does not necessarily reflect the views of the donors.

This publication is part of a collection of COLEAD resources, which consists of online and offline educational and technical tools and materials. All of these tools and methods are the result of more than 20 years of experience and have been developed progressively through COLEAD's technical assistance programmes, notably in the framework of development cooperation between the OACPS and the EU.

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INTRODUCTION

It is up to each actor in the food production and distribution chain to do everything necessary to ensure that products placed on the market are free of all risks to consumer health.

A large proportion of risks attributable to food lies in the failure to comply with hygiene rules in the production areas - in the field and the packing station, during processing and storage or during product transport. The general hygiene rules applicable in the agri-food sector are therefore also valid for primary production. As some foodstuffs (fish, fruit and vegetables, etc.) are consumed raw, maintaining good hygiene is critical in terms of conformity of these products. The lack of hygiene leads to unhealthy and/or unsafe food, generating losses of products or market shares.

Every company must therefore implement general hygiene measures and practices in line with the special features of the location, the type of product, the methods and technologies used and the staff, in order to control and overcome the food risks and thus encourage the production of healthy food.

Simple or cross contamination of products, before or after harvest, can come from numerous sources: cultivation locations, land, inputs (manure), droppings, work surfaces, equipment and staff are all potential carriers of pathogenic micro-organisms. It is however easy to limit the risk considerably in production and packing by applying a series of simple measures relating to the basic hygiene principles.

The general hygiene principles listed in the COLEAD brochures relate mainly to:

1. Staff hygiene measures
2. Hygiene measures of production sites and installations
3. Aspects relating to the control of operations, traceability and staff training
4. Cleanliness and management and product handling

LIST OF MESSAGES AND INSTRUCTIONS FOR GOOD PRODUCTION AND PACKING CONDITIONS

KEEP THE PRODUCTION SITES CLEAN

1. Avoid waste (droppings, plant protection product residues, irrigation pipes, etc.) and the presence of harmful pests in the production area.
2. Ensure an easy supply of clean water, avoiding the water being contaminated by plant protection products or droppings.
3. Store chemical products in an appropriate, separate room to ensure the safety of people, food products and the environment.

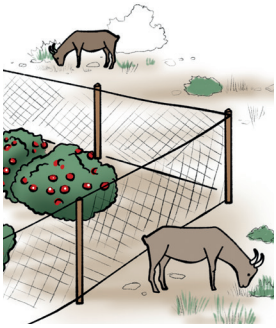
ORGANISE THE INSTALLATIONS CORRECTLY

1. Lay out the premises to define and separate the «clean» and «dirty» areas and respect the principle of forward progress in the production.
2. Check the cleanliness of workers moving from a «dirty» area to a «clean» area, by laying out cleaning and disinfecting points.
3. Place the lavatories and rest and meal areas outside the production and packing areas.

MAINTAIN THE PREMISES AND EQUIPMENT

1. Choose smooth, corrosion-resistant surfaces (stainless) that are leak-tight, non-toxic and easy to keep clean.
2. Design the installations to reduce the build-up of dirt that encourages pests and the development of micro-organisms.
3. Ventilate and insulate the premises correctly in order to avoid condensation that encourages the development of micro-organisms.

THE ENVIRONMENT AROUND PRODUCTION SITES



KEEP THE PRODUCTION AREAS PERMANENTLY CLEAN (FIELDS, NURSERIES, ORCHARDS, ETC.)

- Install the sites in areas that have never served as a waste landfill.
- Collect waste of any kind.
- Fence off the surrounding area to keep animals away.
- Limit access to the workers only.

Waste and droppings both contain huge amounts of microbes that are a health hazard.

MAKE SURE THAT THE WATER USED FOR THE PRODUCTION IS CLEAN (IRRIGATION, WASHING PRODUCTS)

- Install lavatories nearby.
- Place composts and manure well away from the water supply tap.
- Do not clean the plant protection treatment equipment near the water tap.

The water must remain available and clean for the irrigation, hand washing, washing food products, etc.

ARRANGE A STORAGE ROOM SET ASIDE EXCLUSIVELY FOR CHEMICAL PRODUCTS (PESTICIDES, FERTILISERS, BIOCIDES, ETC.)

- Place the storage room far enough away (at least 10 m) from offices, production and packing areas or harvested product storage.
- Lock the room and limit access to it.
- Display the pictograms and safety instructions on the door.

Volatile chemical products can propagate and contaminate food products stored nearby.

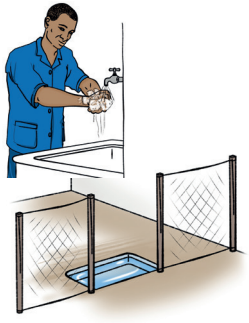
ORGANISATION OF INSTALLATIONS

RESPECT THE PRINCIPLE OF «FORWARD PROGRESS» TO AVOID CROSS CONTAMINATIONS

- Never bring products back into a room they have already passed through.
- Separate physically finished products and raw materials in the storage areas.
- Circulate the waste in the opposite direction from prepared.

The incoming products are contaminated.

They undergo a series of cleaning operations when being prepared (washing, peeling, flaking, etc.) Microbes can be transferred when crossing paths with an unprepared product.

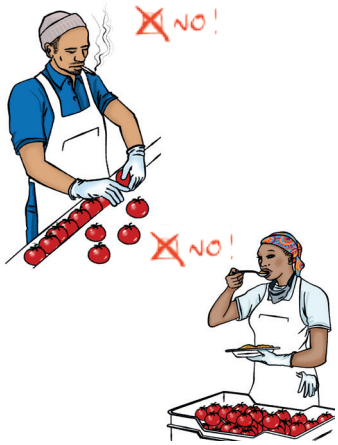


INSTALL CLEANING AND DISINFECTING POINTS AT THE JUNCTION FROM A «DIRTY AREA» TO A «CLEAN AREA»

- Install sinks, with hot water and soap for hand washing.
- Place foot baths to disinfect the soles of shoes and boots.
- If necessary, insist on a worker going back to the cloakrooms to change.

A worker can carry microbes with him when he moves from a “dirty area” into a “clean area”.

ORGANISATION OF INSTALLATIONS



INSTALL THE WORKERS' REST AND MEAL AREAS AND THE LAVATORIES OUTSIDE THE PACKING AREA

- Ban the workers from eating, drinking, smoking or relaxing with their work equipment and near products.
- Keep the lavatories clean.
- Avoid direct access to the lavatories in rooms where products are handled.
- Insist that workers visit the cleaning and disinfecting points every time before returning to their work station.

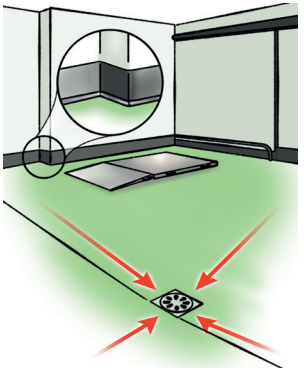
Eating or smoking can contaminate the food products.

ARRANGING PREMISES

KEEP THE SURFACES OF INSTALLATIONS CLEAN (FLOORS, WALLS, CEILINGS, DOORS, TABLES, ETC.)

- Choose smooth, leak-tight surfaces that resist cleaning and corrosion (stainless metal).
- Choose appropriate materials (no paint with tar, etc.).
- Ideally use easily washable leak-tight materials that do not absorb liquids and dry rapidly.
- Maintain the surfaces: remove the rust as soon as possible from metal parts or paint as soon as it starts flaking.

The premises will be much easier to keep clean if all the surfaces lend themselves to being cleaned.



PREVENT THE BUILD-UP OF DIRT IN THE CORNERS

- Round the joints between the walls and the floor to facilitate cleaning.
- Install a sloping floor so that wastewater and liquid waste is easy to evacuate.
- Dismantle the machinery to clean them in the tiniest corners.
- Choose light colours for the walls that make it easy to spot the dirt.

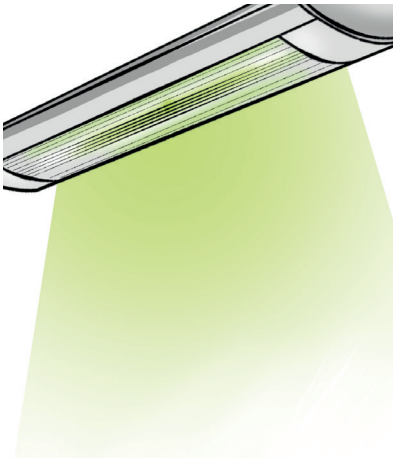
A good initial design for the installations makes cleaning easier.

ARRANGING PREMISES

PREVENT CONDENSATION FROM FORMING

- Install sufficient ventilation.
- Insulate ceilings properly.
- Plan for enough height in rooms.
- Close the doors of refrigerated spaces.

Condensation forms droplets that can (re)humidify the product or make the packaging damp. This encourages the development of micro-organisms.

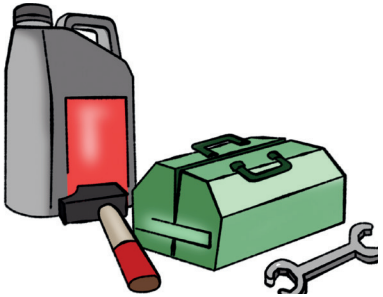


INSTALL SUFFICIENT LIGHTING

- Light all installations (including storage areas).
- Install sufficient bulbs with appropriate amperage.
- Protect the bulbs to prevent glass debris in the finished products.

Good lighting results in quality work and facilitates the visual detection of dirt.

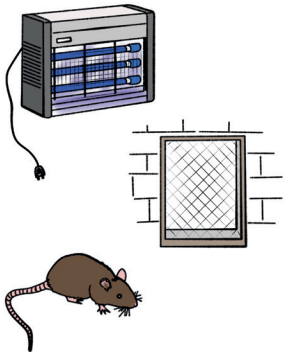
ARRANGING PREMISES



MAINTAIN THE EQUIPMENT PROPERLY

- Use food-grade oil and lubricants for all parts in direct contact with the products.
- Check for leaks regularly.
- Check that there are no detachable parts (nuts, metal shavings, rubber fragments, etc.) in the finished product.

Poorly-maintained equipment can cause chemical or physical contamination.



REDUCE THE RISK OF DESTRUCTIVE AND HARMFUL PESTS (INSECTS, RATS, ETC.)

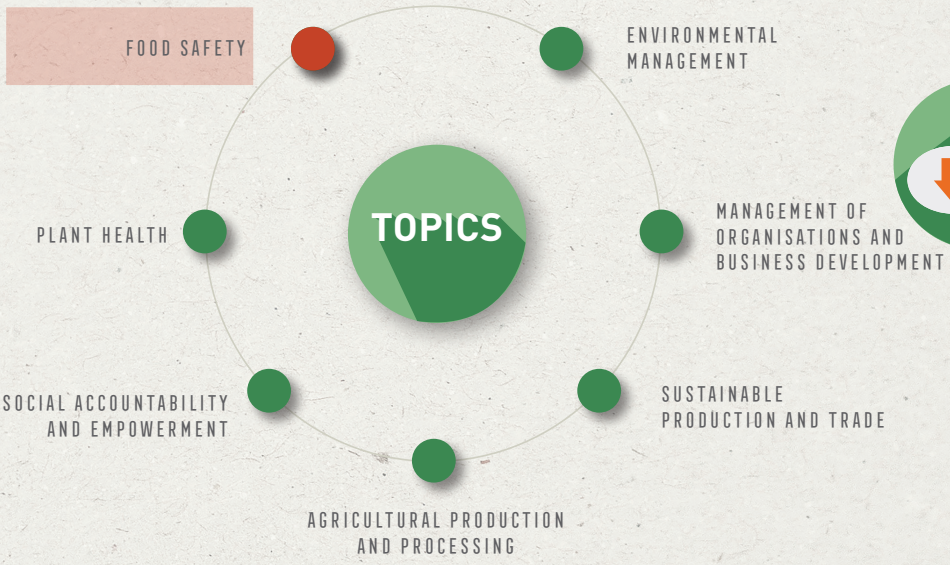
- Fit screens to windows, ventilation outlets and other potential entry points.
- Install traps to detect and capture any harmful pests: fly paper, UV lamps, baited boxes, etc.
- Check for undesirables using traps.

Harmful pests carry with them microbes that are a health hazard for humans. They can also be found in the finished products. Rats can burrow into the packaging and damage the products.

COLEAD E-LEARNING PLATFORM

RECEIVE YOUR ACCESS TO OUR DISTANCE LEARNING PLATFORM. RESERVED FOR STAKEHOLDERS IN THE AGRICULTURAL SECTOR IN AFRICAN, CARIBBEAN AND PACIFIC COUNTRIES.

TEST AND IMPROVE YOUR KNOWLEDGE AT YOUR OWN RHYTHM!



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SUSTAINABLE PRODUCTION AND TRADE

SOCIAL ACCOUNTABILITY AND EMPOWERMENT

PLANT HEALTH

ENVIRONMENTAL MANAGEMENT

FOOD SAFETY

BUSINESS MANAGEMENT AND DEVELOPMENT

AGRICULTURAL PRODUCTION AND PROCESSING

TRAINING METHODOLOGY