

# **Ministry of Agriculture**

## **Export Abattoirs Inspection and Certification Directorate**



# **Meat Handlers Personal Hygiene Guidelines for Export Abattoirs**

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## **Foreword**

This technical document entitled “Meat Handlers Personal Hygiene Guidelines for Export Abattoirs” is one of the documents in a series of guidelines and Standard Operating Procedures that were developed from 2008 to 2010 by the then Ministry of Agriculture and Rural Development in collaboration with the Ethiopian Sanitary and Phytosanitary and Livestock and Meat Marketing Program.

These Guidelines and Standard Operating Procedures are at present reviewed and updated by the Ministry of Agriculture in collaboration with the FAO-ECTAD Ethiopia, Improving Sanitary Capacity and Facilitating Export of Livestock and Livestock Products from Ethiopia Project. The main goal of project is to increase exports of meat and livestock to benefit Ethiopian livestock producers and exporters and to promote national economic development.

This guidelines document is intended to provide guidance for inspectors, export abattoirs operators and other relevant actors on the importance of monitoring the health status, personal hygiene, working habits and use of protective clothing of all personnel that may have direct or indirect contact with the meat and meat products in preventing contamination that may result in spoilage of the products and transfer of microorganisms that can bring food poisoning to the consumers. The guidelines outline specific measures required in creating awareness of all meat handlers and the procedures to follow for ensuring their compliance during their day to day activities of handling meat and meat products.

At this point, the Export Abattoirs Inspection and Certification Directorate of the Ministry of Agriculture would like to thank the FAO-ECTAD Ethiopia, Improving Sanitary Capacity and Facilitating Export of Livestock and Livestock Products from Ethiopia Project, for providing the necessary technical and financial support required for reviewing, updating and publishing this guideline.

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## **1. Introduction**

The importance of meat as a carrier of bacterial and other microbial pathogens is considerable in terms of public health. Safety is always becoming more important than any one of the quality parameters of fresh meat. As consumers demand for quality meat is increasing the meat industry should consistently strive to produce and supply quality meat that is not only nice looking, and tasty but also safe to the consumer.

There are several diseases well known to both the meat industry and the general public that are directly related to consumption of meat and meat products due mainly to poor personal hygiene and processing sanitation practices.

One of the major factors determining the risk level contributing for the contamination of fresh meat and subsequent transmission of disease-causing microbial organisms or their toxic products to consumers is the level of the hygienic practices employed by meat handlers working in export abattoirs and product dispatch facilities. Improvement on the level of hygienic practices require adoption of strict personnel hygienic and health status requirements for any personnel who may have direct or indirect contact with meat and meat products.

## **2. Objective**

The objective of this guideline is to present a reference guide for meat inspectors and abattoir operators that may be used for ensuring the safety of the meat produced in the export abattoirs through maintaining an appropriate degree of personal cleanliness; behavior and operational practices by all personnel who may come in direct or indirect contact with meat and meat products.

## **3. Scope**

The requirements outlined in this guideline will apply to all personnel engaged in the slaughter and dressing of animals or the processing, packaging or handling of meat or any material or article used in the production and packaging of meat destined for export trade.

## **4. Relevance of personnel hygiene for meat safety**

Meat should be safe and suitable for human consumption and all interested parties including government inspectors and abattoir operators have a role in achieving this outcome. Bacteria and related micro-organisms that will cause diseases in consumers or spoilage in meat may be carried and transmitted to meat by workers handling the meat products. To safeguard the

hygienic status of meat and meat products, keeping appropriate degree of personal hygiene and health status should therefore be among the main considerations in the meat industry.

Slaughter and dressing and subsequent inspection and handling procedures present many opportunities for cross-contamination of meat and meat products. Abattoir personnel hygiene practices should prevent undue general contamination, and prevent cross-contamination with micro-organisms that may spoil the meat and cause food-borne diseases to consumers.

Personnel hygiene requirements should control hazards to the greatest extent practicable. Personnel suffering from, or who are carriers of, communicable diseases that can be transmitted as a consequence of handling meat, or who are suffering from any discharge of infective material from the head, neck, hands or arms, should not be allowed to work in areas where meat and meat products intended for human consumption are to be produced, handled, packed or dispatched.

## **5. Responsible bodies**

All relevant actors have a role in achieving the safety and suitability of meat and meat products destined for human consumption. In this regard, the responsibilities of the major actors are indicated below.

### **5.1 Regulatory authority**

The veterinary inspectors have a legal and professional responsibility to:

- ❖ Monitor and verify fulfilment of all sanitary requirements including personnel hygiene and health status throughout the meat production and handling areas of the export abattoir.
- ❖ Organize and deliver regular training programs for meat handlers working in export abattoirs including meat transporters and cargo terminal workers on the relevance of sanitation and personal hygiene measures in keeping meat safe and suitable for consumption.

### **5.2 Export abattoir operators**

The abattoir operator has a legal responsibility to ensure that the meat is produced and handled in accordance with the regulatory meat hygiene requirements. For this, the operator should ensure that:

- ❖ all personnel who are involved in the handling and slaughter of food animals, dressing, processing and handling of meat products, including inedible meat products, packaging materials, etc receive appropriate training on hygienic practices,



on personal hygiene and on the process and tasks for which they are responsible and are qualified to perform their duties.

- ❖ A person responsible for monitoring the health and sanitary status of employees daily, and report to the relevant authority when corrective actions are required to be taken should be identified.
- ❖ All necessary clean protective materials and sanitary supplies are available and accessible to abattoir workers at all times while handling meat and meat products.

### **5.3 Cargo terminal employers**

Cargo terminal employers have a responsibility to provide airport cargo terminal meat handlers (workers) with clean and appropriate protective clothing and required sanitary supplies such as soap, toilet paper, etc on a daily basis.

## **6. Personnel health status**

- ❖ A number of disease-causing micro-organisms can be transmitted to consumers if someone handling the meat product is not healthy and contaminates the meat product. To minimize the risk of contamination of fresh meat, the following guidelines should be implemented in export abattoirs:
  - ❖ Persons who come in contact with meat in the course of their work should have a medical examination prior to their employment and regular check up every six months and at other times when necessary.
  - ❖ The establishment should maintain relevant personal health records of persons who come into direct or indirect contact with meat in the course of their work.
  - ❖ No person while known or suspected to be suffering from, or to be a carrier of a disease likely to be transmitted through meat (typhoid, dysentery, salmonella and cholera) or while afflicted with infected wounds, skin infections, sores or with diarrhea is permitted to work in any meat handling area
  - ❖ Any person who has or appears to have symptoms of a disease or illness that could be transmitted through a meat product should be made to report the symptoms, disease or illness to the operator or designated supervisor of the establishment.
  - ❖ Conditions which should be reported to the abattoir management so that any need for medical examination and/or possible exclusion from meat handling can be considered should include the following:
    - jaundice; diarrhoea; vomiting;

- fever; sore throat with fever;
  - visibly infected skin lesions (boils, cuts, etc.);
  - discharges from the ear, eye or nose.
  - persistent sneezing or coughing.
- ❖ On receiving the report, the abattoir operator should determine whether the person should undergo a medical examination or be excluded from certain areas of the establishment.
  - ❖ After any specific period of absence where the person was known or suspected of suffering a disease which could represent a risk to meat or meat products there should be a medical clearance to recommence work.
  - ❖ Any person who has a cut or wound should not be allowed to handle meat or meat contact surfaces until the injury is completely protected by a water proof covering which is firmly secured to avoid dislodgement.
  - ❖ The water proof covering used to cover wound dressings shall be brightly colored so that wound dressing are more likely to be detected in products if they become dislodged.

## **7. Personal cleanliness**

People who do not maintain an appropriate degree of personal cleanliness, who have certain illnesses or conditions or who behave inappropriately, can contaminate meat and transmit illness to consumers. Persons who come into direct or indirect contact with edible parts of meat in the course of their work should maintain appropriate personal cleanliness and behavior and should not be clinically affected by communicable agents likely to be transmitted by meat.

Meat handlers should, where appropriate, wear suitable protective clothing, head covering, and footwear. Where personnel with cuts and wounds are permitted to continue working, the cuts or wounds should be covered by suitable waterproof dressings. Personnel should always wash their hands when personal cleanliness may affect meat safety, for example:

- ❖ at the start of meat handling activities;
- ❖ immediately after using the toilet;

- ❖ after handling any contaminated material, where this could result in contamination of meat and meat products.
- ❖ after any contact with the face, mouth or nose or after coughing, sneezing or touching the face or hair or using a handkerchief or tissue
- ❖ When moving from one operation area to another.
- ❖ Before putting on or changing gloves.
- ❖ After any clean up activity such as sweeping, mopping, or wiping counters.

## **8. Personal behavior and sanitary work habits**

All meat handlers and abattoir employees should comply with the following guidelines while they are in the abattoir premises or transporting and dispatching meat products:

- ❖ Use of chewing gum, snuff and tobacco in any form in the meat handling areas should be prohibited.
- ❖ Liquor or any intoxicating substance should not be brought into any part of the premises and an intoxicated person should not be allowed to enter any part of a meat handling plant.
- ❖ Eating and drinking should be confined to the designated lunchroom areas.
- ❖ Scratching of the head, face, placing of fingers in or around the mouth or nose, coughing, sneezing and spitting should be avoided. If incase, unavoidably happens, hands or gloved hands (as appropriate) should be cleaned after each episode.
- ❖ Rules such as “No Smoking; No Eating, No Nose Fingering etc” should be clearly written and placed in areas where all employees can have a look at it and should be strictly adhered to.
- ❖ One should avoid the use of nail polish, hand creams and lotions when handling meat.
- ❖ Fingernails should not be excessively long and should be kept clean.
- ❖ Cosmetics, false nails or eyelashes and strong perfumes should not be allowed because of the risk of contamination and even tainting of the meat
- ❖ Employees should be neatly and cleanly dressed, wear head coverings that properly cover their hair (if appropriate, a beard and moustache covering), avoid any unwarranted contact with the product such as contact with the forearms
- ❖ Facial adornments that cannot be removed or are not removed because of any religious or cultural reason have the potential to fall or otherwise contaminate the meat product if they are improperly attached. In view of the fact that these

adornments pose a food safety hazard and that it is impracticable to verify if they are worn securely, they should be either removed or adequately covered when worn in meat preparation and packaging areas.

- ❖ Persons handling materials or products capable of contaminating the end product should not come in contact with any end product unless and until they discard all protective clothing worn by them and have changed in to clean protective clothing.
- ❖ Hand wash facilities should be used by everyone upon entering the meat production area.
- ❖ Hands should always be washed and disinfected immediately, with 100ppm chlorine or 15-ppm iodine solution or liquid soap under running warm water, before commencing work after using the toilet or handling any material, which might be capable of transmitting disease.
- ❖ Every person, while on duty on the slaughtering or meat handling area, should wash his hands thoroughly as soon as his hands come in contact with blood or any other dirt with a suitable hand cleaning preparation such as liquid soap under running warm water.



Fig. 1. Wash hands thoroughly

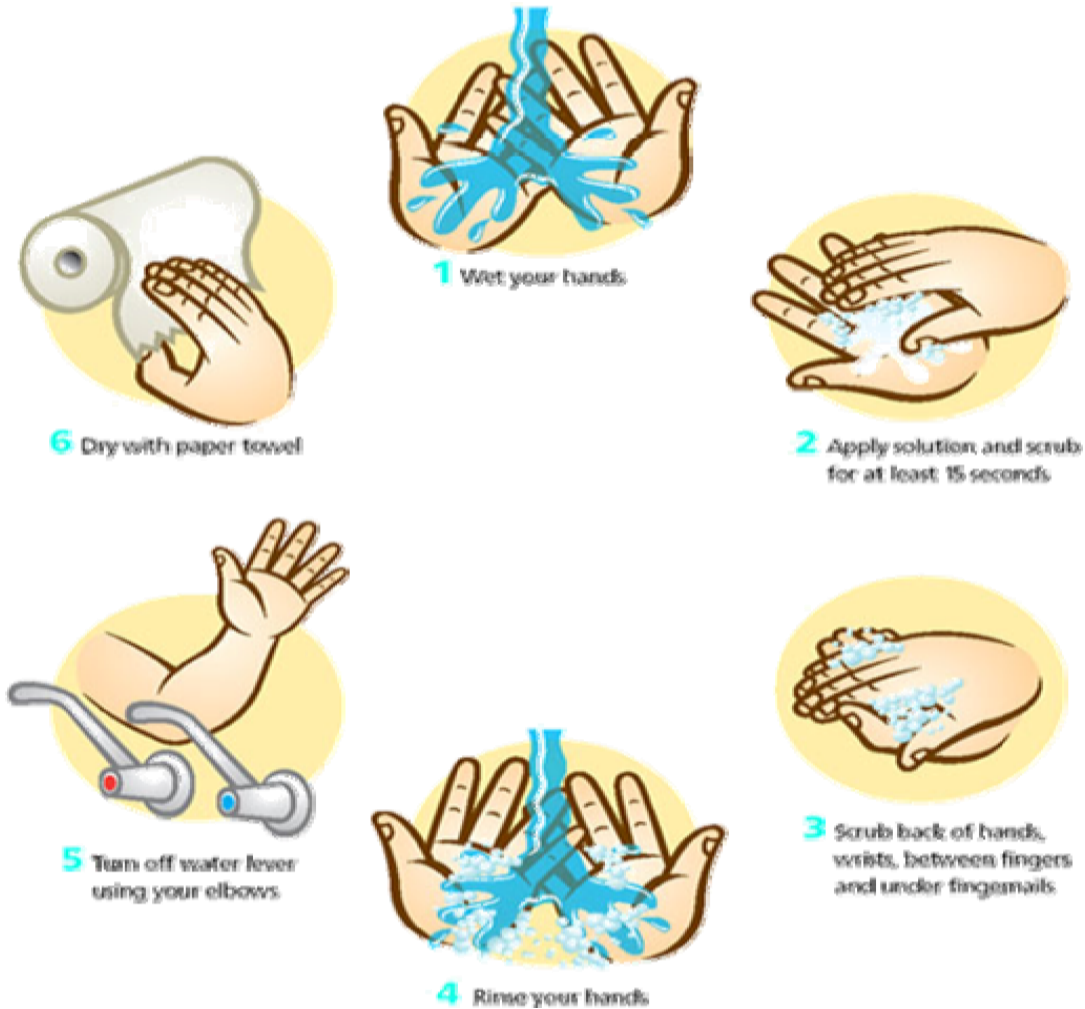


Fig. 2 Hand washing procedures:

- Rinse hands with warm water;
- Apply soap and rub well into all parts of the hands and fingers;
- Using a small brush, scrub under the fingernails, and in the creases of the hands and fingers;
- Rinse the hands with warm water;
- Re-apply soap and rub well in;
- Rinse well;
- Dry hands thoroughly

## **9. Working apparel**

In meat handling practices the type of clothing that meat handlers or visitors may wear and the level of their cleanliness influences the outcome of the abattoir sanitation program in minimizing the risk of meat contamination by dirt or microbiological organisms. The following guidelines should be followed in export abattoirs:

- ❖ Any person entering a meat handling area should wear protective clothing covering at least the head, shoes and any street clothing within the potential meat contact zone (in the majority of cases, only involve a coat that may leave street clothes exposed below the knee), to prevent the transfer of contaminants to meat, equipment and the processing environment.
- ❖ All personnel engaged in wet processing areas who are required to handle unprotected meat should wear a clean waterproof covering that covers at least the worker's body to the full extent of the potential meat contact zone, e.g. from the shoulder line to below the lowest point on the carcass in the case of personnel who work with suspended carcasses;
- ❖ Staff who may lift beef quarters or sheep and goat carcasses should wear clean protective neck shields, or hooded overalls.
- ❖ Protective clothing should fit reasonably well, for example, coats that are too small may not cover outer clothing properly, and clothing or footwear that is the wrong size may limit movement and lead to accidents.
- ❖ Protective clothing designed to avoid contamination of the meat product should preferably be light colored so that contamination is easily seen but livestock handlers should wear suitably dark clothing to prevent animals from being distracted.
- ❖ Personnel engaged in activities of a similar hygienic status should wear protective clothing of the same color that will allow presence of any soil or dirt is clearly distinguishable.
- ❖ Protective clothing should be provided in such a number as to be sufficient for the abattoir employees and meat inspectors for changing every day and some more spare protective clothing that are to be used for visitors should be provided.
- ❖ All persons working or entering areas where meat products are open to exposure should wear appropriate head coverings. The head coverings should cover all exposed hair.

- ❖ Non-disposable protective clothing such as overalls, gowns aprons, head coverings, and foot wears should be made of such material as to render them easily cleaned and durable enough to stand frequent washing at high temperatures.
- ❖ Disposable protective clothing should be sufficiently robust to afford the required level of protection.
- ❖ All personnel who are required to handle unprotected meat should wear footwear that can be effectively cleaned before entering any meat handling area.
- ❖ The boots to be used in the dressing and other meat handling areas of the abattoir should be of a material impervious to moisture and should be of a color distinct from other footwear and these boots should be worn only at the workrooms.
- ❖ Other footwears should be utilized when walking to and from the workstation.
- ❖ Gloves should be worn by all personnel engaged in handling unprotected meat product.
- ❖ Gloves should be cleaned before use and whenever they become visibly contaminated.
- ❖ Hands should be cleaned before gloves are donned and after gloves are removed.
- ❖ Work clothing that may contact meat products should be suitably washed, ironed (other than boots and aprons) and maintained.
- ❖ Work clothing should not be worn or stored in incompatible areas (washrooms, lunchrooms, lockers used for street clothing, outside the abattoir, etc.).
- ❖ Personnel should not sit or lie on the ground in their protective clothing during rest periods and may never wear protective clothing outside the premises.
- ❖ Any insecure jewelry or jewelry that cannot be adequately disinfected should be removed from the hands of employees working in the slaughterhouse.
- ❖ Jewelry items, which cannot be removed such as continuous loop earrings, wedding bands, bracelets or necklaces, etc. should be adequately covered.
- ❖ Items such as pens, pencils, thermometer etc., should not be kept in coat/shirt pockets where they may accidentally fall into products.
- ❖ Meat handlers should change their protective clothing if it becomes excessively soiled
- ❖ Each set of protective clothing should be washed and ironed at the end of the day's operation.

- ❖ Those types of protective clothing such as aprons and foot wears should be washed by hand held sprays as soon as contaminated by blood or gut contents.
- ❖ Hand tools such as knives used to slaughter or dress one animal or a carcass should be washed before re-using it for slaughtering any other animal or dressing a carcass.
- ❖ If any hand tools and equipment such as knives are found contaminated with blood, gut content or any dirt matter during slaughtering, flaying and other subsequent operations, they should be sanitized (washed in a sanitizing solution such as a 200 ppm chlorine solution or in hot water of 82°c for two minutes and rinse them in water) before proceeding to the next activity.
- ❖ Gloves used in the handling of meat products, should be maintained in a clean and sanitary condition by washing with hot detergent (soap) solution and rinsed with water.
- ❖ At the end of operations, work clothing and equipment such as knives, hooks, steels, mesh gloves, etc should be cleaned and sanitized and be available for the next day pre-operational inspection.

## **10. Visitors**

Visitors to meat production or handling areas should, where appropriate, wear protective clothing and adhere to the other personal hygiene provisions of this guideline.



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