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FOOD SAFETY AND CONTROL IN EGYPT

Access to safe and adequate food is a right of each individual contained the universal declaration of human right.

Food must have appropriate nutrient content and must be available in sufficient variety.

It must not endanger consumers health through chemical and microbial contamination and it must be presented in a wholesome manner.

Food safety and quality must be started at the farm level and continue through the preparation and distribution chain to storage to final consumption by the consumer.

To food service industry good agriculture and manufacturing practices including processing distribution and market are essential to ensure consumer protection.

An effective food control system improves the nutritional and health status of the population directly and indirectly.

Simply stated the term food control may be defined as a mandatory activity to ensure the quality and safety of food.

It protects the health of consumer and combat dishonest trade practices and fraud food control is applicable through the entire food system it should not be confused with Cortaid types of other control activities which may be undertaken involving the procurement pricing and distribution of food.

The three basic characteristics of food control in the structure are:

1. food laws and accompanying regulations.
2. food inspectors (food control system under the umbrella of food safety and control department).
3. food laboratories and technical support.

In Egypt food control functions are multisectorial, however the main role in that area is carried out by the ministry of health through its responsible bodies.

1. Food safety and control administration.
2. Institute of nutrition.
3. Public health laboratories.

As far as the basic characteristic are concerned the activities of the **MINISTRY OF HEALTH** in that area could be mentioned in the following:

I. LAWS AND REGULATIONS:

Laws and regulation related food safety are issued by different ministries: health – agriculture – industry, trade and supply economics.

- Ministry of health (MOHP) has the role of implementing the basic laws 281/94 and 10/1966 also several ministerial decrees have been issued by the ministry of health especially in the area of food additives.
- A workshop had been organized by the food safety and control department M.O.H.P, ILSI and W.H.O in June 2002 to discuss and review the existing food regulation. the main objective was to have one basic food law. Different participant involved in food in Egypt shared the workshop activities. The workshop succeeded in having a draft for one basic food law, which is going to be circulated reviewed, than approved to be put into action.
- MOHP have an active participation the different national committees at the Egyptian organization for standardization (E.O.S).

- The enforcement of our national food regulations is administered by the food safety and control department at MOHP such administration is necessary to ensure effective supervision and control and to take follow up action as may be required.
- Food control department coordinates also the food control activities at the different level in the country through:
  - Supreme High committee of food safety, the committee is formed at the MOHP from members of the different governmental control authorities involved in addition to other members from academies and research institutes and the universities. It has the responsibility of different issues in the area of food safety to reach conclusion which help in solving problems, list of additives and contaminants are issued and developed by the committee.
  - Committee of rejected imported food. The committee is formed at the MOHP from members of the different responsible ministries in addition to other members from the research institutes and universities. It has the responsibility to discuss any problems related to imported food.

II. FOOD INSPECTORS:

In Egypt there are nearly 500 food inspectors belonging to MOHP, their main activities are.

Inspection of food establishment food handlers and collect samples from different areas to be submitted to the health laboratories for analysis according to the standard and different regulations, then legal action is going to be taken in case of violation.

There are at least one food inspector in each health office or health unit also there is a food control office in each port (sea-air-...).

III. NUTRITION INSTITUTE

The nutrition institute is responsible for the registration of the foods for special dietary us these include infant and follow up formulae, wee control foods, herbal teas bottle water, etc.).

The quality and safety aspects of such foods are assessed through the different chemical, microbiological and biological investigations at the institute.

IV. PUBLIC HEALTH LABORATORIES:

MINISTRY OF HEALTH & POPULATION

Central Public Health Laboratories

There is a well organized Laboratory network run by Ministry of health and population and Technically Supervised by CPHL in Cairo which act as a reference directorate which supervising technically all Laboratories of MOHP.

The role of CPHL:

1- Preventive services, which include food, water wastewater, food handler analysis.

The safety and quality of food, and water supply are of great concern to the health authorities in Egypt to assure safe, sound, wholesome food and fit for human consumption to protect the consumers from health risk, associated with contaminated or adulterated food. One of the most important role of the CPHL is controlling of food whether locally produced or imported. It also analysis water samples to be sure that it is safe and complain with our Egyptian specification. CPHL receive about 300.000 food samples for chemical, toxicological and microbiological analysis per year.

The food inspectors collect random samples from the locally produced as well as from the imported foods at the sea and airports, from food plants and local market and send the samples to the central Health laboratories (CHL), labs at the ports of entry and the different labs in the 27 Governorates

to be analyzed chemically, microbiologically and biologically according to our laws, regulation, standards and legislation and to be sure that it is fit for human consumption.

A- Microbiological Analysis:

- Microbiological examination to detect any contamination of food with pathogenic organisms such as Salmonella, Shigella, Staphylococcus aureus, Bacillus cereus, E.coli, Listeria, Campylobacter, V.parahaemolyticus, Brucella, Clostridium perfingens, Clostridium botulinim, yeast and moulds.
- Total count of Mesophilic and psychotropic bacteria
- Detection of bacterial toxin in food such as Staphylococcus enterotoxins, Botulinum toxin and Mycotoxins.

B- Chemical analysis:

For food additives, food colors, composition, chemical and physical quality, moisture, fat protein, chemical contaminants, such as lead and cadmium and other heavy metals according to the chemical standard specifications.

- Organoleptic examination.
- examination of tins, of canned food.
- Package and label Examinations for the following information which must be declared on a reading visible location on the label:
    - Name of the food, production date, expiration date.
    - Chemical Composition, name of additives if used.

C- The role of the Toxicology department

Lab. is concerned with:

1. Quantitiative detection of pesticide residues in food.
2. Quantitative detection of fumigant in grain (e.g. Phostoxin).
3. Detection of toxic seeds in grains.
4. Quantitative detection of polychlorinated biphenyl "PCB's "in food.
5. Detection of other toxic substance in food and water.
6. Detection and assay of narcotics in foodstuffs.
7. Quantitative detection of:
    - Polychlorinated Biphenyls,
    - Poly aromatic hydrocarbon,
    - Mono chloro propandodiol,
    - Binsopirin.

2- Water and waste water department:

The central public health laboratories:

1. participate in the higher water committee to put the standard specification and parameters, which regulates the analysis of all types of drinking water & waste water and the substances related.
2. Follow up of drinking water treatment plants and wastewater treatment plants.
3. Monitoring of pollution and determination of the efficiency of water planet treatment through the analysis of water samples intakes and effluents.
4. Analysis of industrial waster and sewage liquids according to parameters of laws.
5. Analysis of substances which are used in the water treatment plants (Sand-Alum'solid – Liquid'-chlorine powder – activated carbon).
6. Analysis of bottled mineral and natural water.
7. Analysis of beaches and swimming pools water samples.

MINISTRY OF AGRICULTURE

Their main job at the area of food safety carried out through:

1. Reference Laboratory for Safety Analysis Of Food of Animal Origin (Ministry of Agriculture and Land Reclamation)

Quality control hygienic status and safety evaluation of food (Locally produced, imported and for exportation) of animal origin (meat, milk, fish, table eggs and their products) as well as animal by – products (hide, hair, wool and their products) for human consumption and uses according to techniques and limits of local and international hygienic standards.

Monitoring, surveillance and diagnosis of causative agents (Bacterial, Viral, fungal and parasitic) of zoonotic diseases transmitted to human via food of animal origin, hygienic regulation.

Analysis, determination and safety evaluation of various residues such as veterinary drugs, food additives, hormones, pesticides, industrial chemical and heavy metals in food of animal origin.

The laboratory Receive approximately 40000 samples annually.

2. Central Laboratory for Food & Feed (CLFF) (Ministry of Agriculture and Land Reclamation)

The Central Laboratory for Food & Feed is officially responsible for controlling all animal and poultry feed and feed ingredients. It controls all imported and locally produced feed.

Now, the quality of imported foodstuff is more strictly Representative samples of new as well as imported products are subjected to analysis before issuing certificates of registration. Advanced analytical methods and new methodologies are also used to enhance control and detection of foodstuff adulteration. It includes 17 departments covering different areas of inspection.

CLFF has updated feedstuff specifications in accordance with international standard together with specification organization.

3. General Organization for Veterinary Services (Ministry of Agriculture & Land Reclamation)

General Organization for Veterinary Services represented by Central Management authority for veterinary quarantine & examination is the 1st line of defense to protect the live stock & human health from imported disease &also from disease causing pathogens, hormones & heavymetals.

General organization of Veterinary services studies the epiderniological condition for all countries depending on the daily information received.

The importer apply for importation of food of animal origin to general organization of Veterinary services which studies the epidemiological condition of the country of origin & if accepted, the case is directed to an upper committee which consists of many experts and can give the license for importation. The imported products must be accompanied by official certificate from country of origin certificate for Halal slaughtering & all documented certificates from the Egyptian Embassy or consulate in the country of origin.

When the shipment arrive, it is examined. The samples are sent to the Egyptian labs of concern (Animal health & heavy metals in food and Central lab. for Food & Feed, labs of Ministry of Health, Atomic power). The shipments are transferred under official supervision and released when it is proved that it is free from pathogenic and health hazards from all these labs.

The quarantine for living animals is 33 days during which the animals are vaccinated against foot & Mouse disease, Rift Vally Fever,Sheep pox, ovine lymphoidenitis.

It is allowed to import living bovine & ovine males of immediate slaughtering from countries which prove that It's condition is safe.

It is allowed to import camel males for immediate slaughtering from countries which prove that it's epidemiological condition is safe to prevent transmission of Reft vally fever.

It's allowed to import deboned frozen meat & it is now allowed to import living animals from countries with round worm.

It is allowed to import pregnant females from countries free from leucosis.

It is allowed to import meat & bone meal from countries free from mad cow diseases.

It is allowed to import heat treated milk & it is products from countries with foot & mouth diseases.

Milk & it is products do not transmit mod low diseases.

4. Egypt's Biosafety system (Ministry of Agriculture and Land Reclamation)

Egypt's national Biosafety system was formally instituted by the Ministry of Agriculture and Land Reclamation (MALR) in 1995.

The system involves several ministries, organization, and, or government agencies involved with the importation, exportation, and local production of natural products.

Biosafety regulation and guidelines were published in draft from January 1994 (MARL 1994) Developing Biosafety policy and procedures for conducting GMO field tests. the guidelines were intended to describe the modalities of use, handling, transfer, and testing of GMOs they address laboratory practices, greenhouse containment, and small – scale field testing.

The guidelines describe the structure, composition, roles, and responsibilities, duties include formulating, implements and updating Biosafety guidelines, conduction risk assessments, issuing permits, coordinating with national and international organization, providing training and technical advice, and reporting to governmental authorities.

Biosafety committee

Egypt's national Biosafety Committee is the official body responsible for ensuring that biotechnology products are used safely facilitating access to modern biotechnology generated abroad.

Procedures for field tests:

Applications to field- test genetically modified plant material are submitted to the chair of the NBC, Genetically modified material to be imported requires on import permit that must be obtained in advance from the supreme committee on food safety, Ministry of Health.

Procedures for commercial releases. Procedures for commercializing GMO crops were established in 1998 by Ministerial decree no 1648 the sequence of steps and interactions among government agencies are diagrammed in the flow chart on the following page (figure 1 <>).

Laboratories for testing genetically modified products are under establishment within the ministry of agriculture and health

MINISTRY OF INDUSTRY:

To which is affiliated the Egyptian organization for standardization E.O.S in which Egyptian standards for different food commodities are issued.

MINISTRY OF EXTERNAL TRADE:

To which is affiliated the general organization for import and export control which is now according to the presidential decrees is a co-ordinating body for all food control activities for import and export control at the ports between ministries of health, agriculture and other authorities.

MINISTRY OF SUPPLY:

It has the responsibility of inspecting food at the local market for compliance with the requirements of the law 281/94 (prevention of adulteration and fraud).

FOOD SAFETY IN EGYPT

INTRODUCTION

Food is a means to sustain and enjoy life but it is also a vehicle for transmitting hazards and causing disease and death; illness due to contaminated food is perhaps the most widespread transmissible health problem in the world.

Proper food control measures reduce food losses and can stimulate world trade in food products, thus creating employment, increasing incomes and improving nutritional well being.

INSTITUTIONS INVOLVED IN FOOD SAFETY:

The responsibility for food safety in most of the countries is multisectorial involvement and each departments or institution has its legislation this important area should include a review of current food legislation, regulation and standards as well as the year of their establishment, implementing authorities and enforcement procedures, systems of coordination between agencies.

Food laws and regulation must cover food alduteration and contamination hygiene, additives, packaging, licensing, inspection and analysis of food.

Reviewing the bodies affiliated to the different ministries having a role in food safety and control activities, we could mention the following:

I- MINISTRY OF HEALTH AND POPULATION THROUGH:

- Food safety and control system
- Committee of rejected imported food
- High Committee of food safety
- HACCP committee
- Health Laboratories.
- Nutrition Institute.

II- MINISTRY OF INDUSTRY THROUGH:

- Egyptian organisation of standardisation
- Industrial control authority

III- MINISTRY OF AGRICULTURE : IT HAS THE INSTITUTES:

- Animal Health research institute
- General organiozation for veterinary services
- Food and feed laboratory
- laboratory of pesticide residues
- Food technology research institute
- High committee of biosafety

IV- MINISTRY OF EXTERNAL TRADE

- General organization for import and export control

V MINISTRY OF SUPPLY

VI MINISTRY OF E;LECTRICITY

- Atomic energy authority

VII- MINISTRY OF TOURISM

VIII- MINISTRY OF EDUCATION

In the last 3 years all legislation have been updating.