

DEVELOPMENT OF CONSUMER INFORMATION AND EDUCATION PROGRAMME TO ENHANCE SAFE HANDLING OF MEAT AND POULTRY PRODUCTS

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The food borne disease prevention system will depend on the extent of food safety controls in place throughout food production, processing and distribution. Process control exists when procedures are monitored at various points in the production process. An integrated quality control system is a system of process control, which involves every facet of the food chain from farm to table, including production, processing, distribution and preparation. Most countries have adopted ISO 9001 standards for food production and handling. A meat industry site may be registered as meeting the related quality standards after providing necessary specific documentation and completing a successful audit of the quality system.

The establishment of WTO has set in the process of globalisation and the world is emerging as a single market place for all products. The changes lead to fierce competition in the domestic as well as international market places. Consumers give emphasis to quality, suitability and safety of food products rather than price competitiveness and technological compatibility. The food manufacturers have to assure and instill confidence in consumers that the food being produced is safe. This is all the more important in the case of meat and meat products as they provide an excellent medium for the growth of a wide range of spoilage microorganisms.

New International Food Laws

These laws are Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT). The agreement for these two has been signed under the WTO regime. Consequently, international trade comes under the purview of the SPS/TBT agreements. National food laws are in tune with that of the international reference organization viz. the Codex Alimentarius Commission (CAC), Office International Epizootics (OIE) and International Plant Protection Council (IPPC). Among the various quality assurance systems, the Codex recognizes only a HACCP (pronounced as Hassip) based approach to enhance food safety. This exercises control throughout the food chain. i.e., from "farm to fork". HACCP system must be

complemented by other pre-requisites viz. Good Manufacturing Practices (GMP), Good Hygiene Practice (GHP), Standard Laboratory Practices (SLP), Standard Operating Procedures (SOP), etc.

Food safety and sanitation are absolutely essential in assuring the production of safe meat and meat products. Only HACCP complemented by GMP and GHP has been internationally regarded as a logical tool in achieving this goal. These programmes will succeed if they are participative at all levels in true sense. Therefore, education and training of all those who prepare and process meat and meat products, in addition to consumers, is a critical need. Without this "holistic" approach, meat industry cannot survive lucratively in future especially from 2005 on implementation of the agreement. Developing and implementing such programmes in meat industry will require a strong commitment from local administrative bodies, government and regulatory authorities, veterinarians, animal producers, butchers, manufacturers, packers, distributors, retailers, consumers and all those involved in food chain.

Risk Analysis:

Risk analysis is a formal process that is being adopted by governments throughout the world to evaluate existing programmes in food safety and to develop new programmes. This is the way of the future for the prevention of food borne diseases. By identifying problem areas in the food production cycle, risk analysis will make government programmes more efficient by allocating economic resources to areas of greatest need. They must ensure the safety of the people and livestock industries of importing countries that in the past have not been exposed to the global market. Risk analysis involves risk assessment, management and communication. These will lead to HACCP programmes covering all aspects of food safety from the farm to the preparation of food at home. An awareness of HACCP programme to all is desirable.

HACCP:

This is a system of process control. Hazard analysis is the

identification of sensitive ingredients or areas in the production and processing of food that represent critical points that must be monitored to ensure food safety. Critical Control Points are those areas in the food chain where the loss of control can result in an unacceptable risk to food safety. Hazard is an unacceptable contamination with production or persistence in food of pathogenic organisms or toxic chemical. Severity is the seriousness of the hazard. Risk is an estimate of the likelihood of an occurrence of a hazard. Criteria are specified limits or characteristics of a physical, chemical or biological nature. Monitoring is the surveillance to determine if the procedure instituted at each CCP meets the established criteria is functioning properly and is under control. Verification is the use of supplemental procedures to ensure that the system is in place and functioning properly.

Two categories of CCP are used based on the level of confidence that hazards can be prevented. Action at CCP1 will ensure effective control of the hazard (fumigation, chilling and freezing, cooking etc.), whereas action at CCP2 will minimise risk but cannot absolutely guaranty control of hazard (scalding, singeing, evisceration, flaying, etc.).

Steps in HACCP System of Control:

1. Assess hazards and risks associate with growing, harvesting, raw materials and ingredients, processing, manufacturing, distribution, marketing, preparation and consumption of the food.
2. Determine CCPs required to control the identified hazards.
3. Establish the critical limits (criteria that must be met at each identified CCP).
4. Establish procedures to monitor CCPs.
5. Establish corrective action to be taken when there is a deviation identified by monitoring a CCP.
6. Establish effective record keeping systems that provide documentation of the HACCP plan.
7. Establish procedures for verification that the HACCP system is working correctly (auditing).

Public Awareness on Food Safety through Education:

The deliberate implementation of the acts and rules relating to nation wide inspection of meat and poultry slaughtering and meat processing plants is of paramount importance. A concerted effort from all regulatory agencies and government is indispensable for this.

Other programme of significance in consumer health and safety include the proper labeling of meat and meat products designed to prevent labeling, which could confuse or mislead consumers. Dissemination of the information on food safety, food borne diseases, sanitation and hygiene through various media and toll-free meat and poultry Hotline is to be developed to keep abreast with the current developments and to confront competition in the trade. Animal disease outbreaks and the consequent panic among producers and consumers can be alleviated through this system. The caller receives a warm individualized service, which has important positive effect on food handler behaviour and credibility in government policies.

The Hotline can be staffed by a small number of part-time professionals (vets), nutritionists and microbiologists who have experience in meat industry, government and clinical aspects. A computerized system for analyzing Hotline calls would make the job easier. The electronic accessibility for consumer education would replace paper based distribution system in the future, through that too is important.

Nutritional labeling of all meat and poultry products both imported and domestic, should be made mandatory because dietary patterns are limited to disease prevention and health promotion. The nutrition facts will complement current ingredient information to assist consumers, to make sensible dietary choices. Co-operation of all regulatory agencies, rather than working individually, would successfully enable consumer and manufacturer education programme on food safety. The educational strategy and materials are planned together and the resource development and dissemination costs shared. The educational database developed can be shared with non-profit and private sector educators and the public. The consumer education agency can contact with other organisations with similar objectives, eg. Meat trade associations and possible funding sources. This process can help identify lacunae in provision and focus food safety education to ensure comprehensive coverage, rather than unnecessary duplication of effort.

Conclusion:

If educational analysis, planning and evaluation were conducted appropriately, using the scientific process, it would improve public confidence in consumer, meat food producers and government regulators.