September 1, 2004

VIA ELECTRONIC MAIL

Dr. Perfecto Santiago
U.S. Codex Office
Food Safety and Inspection Service
United States Department of Agriculture
Washington, DC 20250-3700

RE: Comments on Draft Code of Hygienic Practice for Meat (ALINORM 04/27/16, Appendix II)

Dear Dr. Santiago:

The American Meat Institute (AMI), the National Cattlemen's Beef Association (NCBA), the National Food Processors Association (NFPA) and the National Turkey Federation (NTF) appreciate the opportunity to provide comments on the Codex Committee on Meat Hygiene Draft Code of Hygienic Practice for Meat (ALINORM 04/27/16, Appendix II). Our members are very active in international trade, exporting and importing a multitude of meat and poultry products. They are dedicated to providing safe products to consumers domestically and abroad.

In general, the undersigned Associations support the concepts outlined in the draft Code. However, given that the document will be finalized at the upcoming meeting in February 2005, we recommend the following changes for clarity and correctness and to enhance the document's impact on meat and poultry safety worldwide.

Section 3. Definitions

Food safety objective: The definition needs to be revised to be consistent with that which was sent forward by the Codex Committee on Food Hygiene and that has been adopted on an interim basis by the Codex Committee on General Principles. The definition should be revised to read "**Food Safety Objective (FSO): The maximum frequency and/or concentration of a hazard in a food at the time of consumption that provides or contributes to the appropriate level of protection (ALOP).**"

Performance criteria: As with FSO, the definition needs to be revised to be consistent with that which was sent forward by the Codex Committee on Food Hygiene and that has been adopted on an interim basis by the Codex Committee on General Principles. The definition should be revised to read "**Performance Criterion: The effect in frequency and/or concentration of a hazard in a food that must be achieved by**

Section 4. General Principles for Development of Risk-Based Post-Mortem Meat Inspection Procedures

The first bullet under ii states "Involve application of a risk management framework to the greatest extent appropriate and practicable." We see no reason to qualify the application of a risk management framework with "to the greatest extent appropriate and practicable." The risk management framework, as outlined in paragraph 6, is very general (preliminary risk management activities, evaluation of risk management options, implementation of management decisions, and monitoring and review of the decision taken). It is unclear how one would develop a risk-based post-mortem inspection without taking this approach. We recommend the bullet read "**Apply a risk management framework**."

Annex II. Microbiological Verification of Process Control of Meat Hygiene

This section was originally written prior to expansion of the code to encompass not only "raw" meat but processed meat. When looking at the annex in the context of both raw meat and meat products, it is clear some qualifications should be made to some of the statements, as we note below.

Section 1. Introduction

As noted for Annex I, the last sentence in paragraph 2 has a footnote referencing the Draft Code of Hygienic Practice for Meat. We question whether this footnote is needed since this section is now an annex to that code.

Paragraph 3 states "Where possible, microbiological performance criteria should be established for verification by microbiological testing." The "Where possible" should be changed to "**where appropriate**," as it is often possible to establish microbiological performance criteria where they are not needed. For example, microbiological performance criteria would be unwarranted for commercially sterile products.

In paragraph 4 the "to" should be changed to "from" in the statement "…microbiological performance criteria are different to microbiological criteria" so it reads **"…microbiological performance criteria are different from microbiological criteria."**

Section 2. Verification of Process Control by Microbiological Testing

In paragraph 5, the second sentence states "Once process control has been validated, verification by microbiological testing is necessary to assure that required food safety outcomes are being met on an on-going basis." However, this is not true for all meat products (e.g., canned meat), therefore we recommend that "is necessary" be changed to "can be important" so the sentence reads "**Once process control has been**

4

FPA
FOOD PRODUCTS ASSOCIATION

1350 I Street, NW
Suite 300
Washington, DC 20005
202-639-5900
www.fpa-food.org

WASHINGTON, DC

DUBLIN, CA

SEATTLE, WA

July 11, 2005

Docket Clerk
US Department of Agriculture
Food Safety and Inspection Service
300 12th St, SW
Room 102 Cotton Annex
Washington, DC 20250

02-019P
02-019P-4
Lloyd Hontz

[Docket No. 02-019P] Addition of Chile to the List of Countries Eligible to Export Meat and Meat Products to the United States; 70 *FR* 24485; May 10, 2005

Dear Sir or Madam:

The Food Products Association (FPA) submits the following comments on the docket referenced above.

FPA (formerly the National Food Processors Association) is the voice of the $500 billion food processing industry on scientific and public policy issues involving food safety, food security, nutrition, technical and regulatory matters and consumer affairs. FPA's scientific centers and international office (Bangkok, Thailand), its scientists and professional staff represent food industry interests on government and regulatory affairs and provide research, technical assistance, education, communications and crisis management support for the Association's US and international members. FPA members produce processed and packaged fruit, vegetable, and grain products, meat, poultry, and seafood products, snacks, drinks and juices, or provide supplies and services to food manufacturers.

FPA supports the FSIS proposal to add Chile to the list of countries eligible to export meat and meat products to the US.

Per its normal process for determining eligibility of foreign countries to export meat or poultry products to the US, the FSIS review of Chile's laws, regulations, and other materials showed that its meat inspection system includes requirements equivalent to all provisions in the Federal Meat Inspection Act (FMIA) and its implementing regulations.

According to the FSIS audit report for Chile, the FSIS on-site review team concluded that Chile's implementation of meat slaughter and processing standards and procedures was equivalent to those of the US. Under these circumstances, the US is under WTO obligation to permit the import of certified products from Chile (assuming compliance with APHIS and US Customs requirements as well).

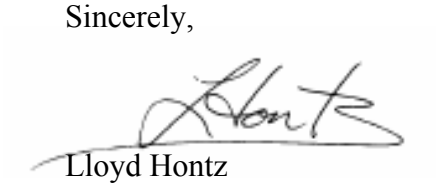
We concur with FSIS that listing Chile as eligible to export meat products to the United States will expand international markets and enhance the free flow of trade with Chile. This action is supportive of US trade initiatives and USDA's policy of liberalizing agricultural trade with Chile, and would honor US obligations to the World Trade Organization (WTO).

We also recognize that besides relying on its initial determination of a country's eligibility, coupled with ongoing reviews to ensure that products shipped to the US are safe, wholesome, and properly labeled and packaged, FSIS randomly reinspects meat and poultry products as they are offered for entry into the US.

We also believe that benefits would include increased availability to US manufacturers and US consumers of a greater quantity of meat items. Both nations would benefit from an expansion of trade in meat as part of a wide range of commodities.

We appreciate the opportunity to comment on this issue.

Sincerely,



Lloyd Hontz
Senior Director, Food Inspection Issues
Food Safety Programs

codex alimentarius commission

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

WORLD HEALTH ORGANIZATION

JOINT OFFICE: Viale delle Terme di Caracalla 00100 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

ALINORM 04/27/16

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Twenty-Seventh Session

Geneva, Switzerland, 28 June - 2 July 2004

REPORT OF THE TENTH SESSION OF THE CODEX COMMITTEE ON MEAT HYGIENE

Auckland, New Zealand, 16 - 20 February 2004

Note: *This report includes Codex Circular Letter CL 2004/4-MH*

Appendix I

LIST OF PARTICIPANTS

CHAIRPERSON:
PRESIDENT:
PRESIDENTE:

Dr Andrew McKenzie

New Zealand Food Safety Authority
PO Box 2835 Wellington
New Zealand
Tel: +64 4 463 2502
Fax: +64 4 463 2501
Email: andrew.mckenzie@nzfsa.govt.nz

ARGENTINA
ARGENTINE

Marcelo Oscar BALLERIO
Servicio Nacional de Sanidad y Calidad Agroalimentaria
Secretaria Agricultura
ARGENTINA
Tel: +054 11 5443482548
Email: maball@mimprod.sagpya.gov.ar

Andrés SCHONELLER
Director of Animal Product Inspection
SENASA
ARGENTINA
Tel: +054 11 43422725
Fax: +054 11 43422725
Email: dfpoa@com4.com.ar

AUSTRALIA
AUSTRALIE

Stephen BAILEY
Principal Advisor, Food Exports Group
Australian Government Department of Agriculture, Fisheries and Forestry
Australian Quarantine and Inspection Service
GPO Box 858
Canberra ACT 2601
AUSTRALIA
Tel: +61 2 6272 5589
Fax: +61 2 6272 4112
Email: steven.bailey@daff.gov.au

Bob BOYD
Chief Medical Advisor
Food Standards Australia New Zealand
PO Box 7186
Canberra BC Act 2610
AUSTRALIA
Tel: +64 4 473 9942
Fax: +64 4 473 9855
Email: bob.boyd@foodstandards.gov.au

Robin BUTTON
Food Inspection Section / National President
Commonwealth Public Sector Union
CPSU Food Inspection Section
Level 1, 40 Brisbane Av
Barton ACT 2600
AUSTRALIA
Tel: +61 2 8204 6918
Fax: +61 2 8204 6926
Email: robinvb@bigpond.com

Jeff FAIRBROTHER
Executive Director
Australian Chicken Meat Federation Inc
PO Box 579
Level 7, 122 Walker Street|
North Sydney, NSW 2059
AUSTRALIA
Tel: +612 9955 4885
Fax: +612 9925 0627
Email: jeff.fairbrother@chicken.org.au

Duangdao WONGSOMMART
Medical Scientist 7
Department of Medical Sciences
Ministry of Public Health
THAILAND
Tel: +662 9510000 EXT. 99604-8
Fax: +662 9511023
Email: duangdaow@dmsc.moph.go.th

UNITED ARAB EMIRATES
EMIRATS ARABES UNIS
EMIRATOS ÁRABES UNIDOS

Sami Abdulla GARGASH
Head of Veterinary Services Section
Dubai Municipality
PO Box 67 Dubai
UNITED ARAB EMIRATES
Tel: +9714 289 1114
Fax: +9714 289 1123
Email: sagargash@dm.gov.ae

Ahmed Ahmed Mohamed Balkaila AL AMERI
Food and Environment Control Centre
Ali Ain Municipality
UNITED ARAB EMIRATES
Tel: +9713 7624666
Fax: +9713 76336338

Mohamed Osman ELOBEID
Food and Environment Control Centre
Ali Ain Municipality
UNITED ARAB EMIRATES
Tel: +9713 7624666
Fax: +971137636338
Email: elobeid@hotmail.com

Kanna Saeed Rashed Masoud AL MESKARI
Student Service Department
United Arab Emirates University
UNITED ARAB EMIRATES
Tel: +9715 04484499
Fax: +9713 7554157
Email: kannas@uaeu.ac.ae

Nawal Abdulla Mohammed Khamis AL ORAIMI
Student Service Department
United Arab Emirates University
UNITED ARAB EMIRATES
Tel: +9715 06634463
Fax: +9713 7554157
Email: nawala@uaeu.ac.ae

Mouza SAI MUHAIRI
Student Service Department
United Arab Emirates University
UNITED ARAB EMIRATES
Tel: +9715 06188580
Fax: +9713 7554157
Email: mahairi.m@uaeu.ac.ae

UNITED KINGDOM
ROYAUME-UNI
REINO UNIDO

Kenneth CLARKE
Veterinary Adviser
Food Standards Agency
Newcastle-upon-Tyne
NE15 8 NZ
ENGLAND
Tel: +44 191 229 5409
Fax: +44 191 229 5446
Email: kenneth.clarke@foodstandards.gsi.gov.uk

UNITED STATES OF AMERICA
ÉTATS-UNIS D'AMÉRIQUE
ESTADOS UNIDOS DE AMÉRICA

Perfecto SANTIAGO
Executive Associate for Program Development
Office of Policy and Program Development
Food Safety and Inspection Service
U.S. Department of Agriculture
300 12th Street, SW
Room 402 Annex Building
Washington, DC 20250
UNITED STATES
Tel: +202 205 0699
Fax: +202 401 1760
Email: perfecto.santiago@fsis.usda.gov

William JAMES
Senior Director
Office of Public Health and Science
Food Safety and Inspection Service
U.S. Department of Agriculture
1400 Independence Avenue, SW
Room 343 Aerospace Building
Washington, DC 20250
UNITED STATES
Tel: +202 690 6556
Fax: +202 690 6388
E-mail: william.james@fsis.usda.gov

Rebecca BUCKNER
Consumer Safety Officer
U.S. Food and Drug Administration
Center for Food Safety and Applied Nutrition
Harvey W. Wiley Federal Building
5100 Paint Branch Parkway
College Park, MD 20740-3835
UNITED STATES
Tel: +301 436 1486
Fax: +301 436 2632
Email: rebecca.buckner@cfsan.fda.gov

Mark DOPP
Senior Vice President
Regulatory Affairs
American Meat Institute
1700 North Moore Street, Suite 1600
Arlington, VA 22209
UNITED STATES
Tel: +703 841 3677
Fax: +703 527 0938
E-mail: mdopp@meatami.com

Maureen A HOLOHAN
Staff Assistant
U.S. House of Representatives
Committee on Appropriations H-218
The Capitol
Washington, DC 20515
UNITED STATES
Tel: +202 225 2638
Email: maureen.holohan@mail.house.gov

Kevin M KEENER
Associate Professor
North Carolina State University
Department of Food Science
Raleigh, NC 27695-7624
UNITED STATES
Tel: +919 515 9518
Fax: +919 515 7124
Email: kevin_keener@ncsc.edu

Edith E. KENNARD
Staff Officer
U.S. Codex Office
Food Safety and Inspection Service
U.S. Department of Agriculture
1400 Independence Avenue, SW
Room 4861-South Building
Washington, DC 20250
UNITED STATES
Tel: +202 720 5261
Fax: +202 720 3157
E-mail: edith.kennard@fsis.usda.gov

Lynn KOSTY
Director Regulatory Affairs
American Meat Institute
1700 North Moore Street, Suite 1600
Arlington, VA 22209
UNITED STATES
Tel: +703 841 3649
Fax: +703 527 0938
E-mail: lkosty@meatami.com

Garry McKEE
Administrator
Food Safety and Inspection Service
U.S. Department of Agriculture
1400 Independence Avenue, SW
Room 331E-JLW Building
Washington, DC 20250
UNITED STATES
Tel: +202 720 7025
Fax: +202 205 0158
Email: garry.mckee@fsis.usda.gov

Bryce R QUICK
Assistant Administrator
Office of Public Affairs, Education and Outreach
USDA/FSIS
1400 Independence Avenue, SW
Room 35E, JLW Building
Washington, DC 20205
UNITED STATES
Tel: +202 720 8218
Fax: +202 720 2025
Email: bryce.quick@fsis.usda.gov

Patricia A RAYMOND
Majority Clerk, Subcommittee on Agriculture,
Rural Development and Related Agencies
Committee on Appropriations
United States Senate
Washington, DC 20510
UNITED STATES
Tel: +202 224 1394
Fax: +202 224 3956
Email: pat_raymond@appro.senate.gov

Jenny SCOTT
Senior Director
Food Safety Programs
National Food Processors Association
1350 I Street, NW
Suite 300
Washington, DC 20005
UNITED STATES
Tel: +202 639 5985
Fax: +202 639 5991
Email: jscott@nfpa-food.org

Karen STUCK
Assistant Administrator
Office of International Affairs
Food Safety and Inspection Service
U.S. Department of Agriculture
1400 Independence Avenue, SW
Room 3143 – South Building
Washington, DC 20250
UNITED STATES
Tel: +202 720 3473
Fax: +202 720 7990
Email: karen.stuck@fsis.usda.gov

VIETNAM
VIET NAM

Phan Thi KIM
Director General
Vietnam Food Administration
Ministry of Health
VIETNAM
Tel: +844 84663702
Fax: +844 8463739
Email: cucgltp@hn.vnn.vn

Nguyen Thi Ngoc DAO
Institute of Biotechnology – NCST of Vietnam
VIETNAM
Tel: +844 8362599
Fax: +844 8363144
Email: nndao@ibt.ac.vn

OBSERVER ORGANISATIONS

Centre de Liason des Industries Transformatrices de Viandes de L'U.E. (CLITRAVI)

Dirk DOBBELAERE
Secretary General
Centre De Liason Des Industries Transformatrices De Viandes De L'U.E. (CLITRAVI)
Boulevard Baudouin 18 (Bte 4)
B-1000 Bruxelles
Tel: +32 2 203 51 41
Fax: +32 2 203 32 44
Email: devries@skypro.be

Food and Agriculture Organisation (FAO)

Jose GARCIA-DE-SILES
Senior Animal Production Officer
Meat Technology and Hygiene
Food and Agriculture Organisation
Cerviño 3101, Buenos Aires
ARGENTINA
Tel: +54 11 4801 3888
Fax: +54 11 4801 3330
Email: FAO-AR@fao.org

Institut International du Froid
International Institute of Refrigeration

Guill Le ROUX
Team Leader – Food Safety
AgResearch Limited
Ruakura MIRINZ Centre
Private Bag 3123
Hamilton
NEW ZEALAND
Tel: +64 7 838 5177
Fax: +64 7 838 5625
Email: guill.leroux@agresearch.co.nz

The International Association of Consumer Food Organizations (IACFO)

Caroline SMITH DE WAAL
Director of Food Safety
Centre for Science in the Public Interest
1875 Connecticut Ave., N.W.
Washington, D.C. 20009
Tel: +202 777 8366
Fax: +202 265 4954
Email: csmithdewaal@cspinet.org

Office International des Epizooties (OIE)

Alejandro THIERMANN
President OIE International Animal Health Code Commission
Office International des Epizooties
12, Rue De Prony
75017 Paris
FRANCE
Tel: +33 1 44 15 18 69
Fax: +33 1 42 67 09 87
Email: a.thiermann@oie.int

Annex I

RISK-BASED[1] EVALUATION OF ORGANOLEPTIC POST-MORTEM INSPECTION PROCEDURES FOR MEAT

1. INTRODUCTION

1. Post-mortem meat inspection procedures are a set of food hygiene measures that are unique to the production of meat. Such procedures are regarded as a component of overall process control, which is defined as "all conditions and measures applied during the production process that are necessary to achieve safety and suitability of meat"[2].

2. The General Principles of Food Hygiene state that "in deciding whether a (food control) requirement is necessary or appropriate, an assessment of the risk should be made, preferably within the framework of the HACCP approach" [3]. Many long-standing post-mortem meat inspection procedures are often complex, labour-intensive, undifferentiated for different classes of slaughtered livestock, and poorly evaluated in terms of their relative contribution to reducing food-borne risks to public health. For these reasons, competent authorities in a number of countries are carrying out investigations into the scientific basis of current procedures[4].

3. The principles and guidelines presented in this Annex could be adapted to evaluation of organoleptic post-mortem inspection procedures for determining the suitability of meat.

4. This Annex generally applies to the evaluation of routine on-line organoleptic inspection procedures. The performance of other inspection technologies, e.g. tissue imaging, relative to organoleptic procedures, may also be considered.

2. OBJECTIVES OF RISK-BASED POST-MORTEM INSPECTION PROCEDURES FOR MEAT

5. A risk-based approach to post-mortem inspection for meat can achieve the following objectives:

- Determination of the level of consumer protection provided by specified post-mortem inspection procedures;
- Relative measurement of the contribution of post-mortem inspection to the overall level of control of hazards in meat (and risks to consumers), thereby allowing risk managers to allocate meat hygiene resources proportionate to their greatest benefit in preventing meat-borne risks;
- Comparison of the effectiveness of different inspection procedures applied for the same purpose and in the same context, e.g. positive predictive value;
- Provision of information that allows appropriate evaluation of different risk management options e.g. regionalisation of inspection programmes, feasibility and comparative costs of different post-mortem inspection procedures, potential for cross-contamination;
- Full integration of post-mortem inspection procedures into a "production-to-consumption" approach to meat hygiene.

---

1 The term "risk-based" can be applied to a food safety measure, a group of measures, a food safety programme or a food safety system. For the purposes of the CCMH, "risk-based" is defined as "containing performance criteria and/or process criteria developed according to risk analysis principles"

2 Draft Code of Hygienic Practice for Fresh Meat (ALINORM 03/16A, Appendix III)

3 General Principles of Food Hygiene CAC/RCP 1-1969, Rev. 4-2003

4 Competent authorities have different approaches to defining the respective roles of industry and competent authority personnel in delivering meat hygiene activities, and this issue is not covered in this Annex

3. RISK ANALYSIS

3.1. RISK MANAGEMENT FRAMEWORK

6. Development and implementation of risk-based post-mortem inspection procedures should utilise a risk management framework[5]. The four components are: preliminary risk management activities, evaluation of risk management options, implementation, and monitoring and review. All components require effective risk communication among risk assessors, risk managers and other interested parties as necessary. Utilisation of a risk management framework is the subject of on-going work within the Codex system, and is described in a number of Codex documents[6].

3.2. RISK ASSESSMENT

7. If required, a risk assessment is commissioned during preliminary risk management activities. A risk assessment consists of four steps: hazard identification, hazard characterisation, exposure assessment, and risk characterisation. The output of this process should be qualitatively integrated with all other factors relating to post-mortem meat inspection to make risk management decisions on appropriate procedures for control of hazards.

8. In the ideal situation, risk estimates will be quantified in terms of risks to human health, and risk management decisions on an appropriate level of protection (ALOP) will dictate the nature and intensity of the post-mortem inspection procedures to be applied. However, risk assessment of microbiological hazards in meat is currently limited by a lack of quantitative risk assessment models. Nevertheless, appropriate assembly of scientific information and qualitative risk characterisation as to the probable impacts on human health can provide an objective basis for decision-making. In any case, risk management decisions will revolve around the acceptability of the likely human health impact of differences in hazard levels brought about by different inspection procedures.

4. GENERAL PRINCIPLES FOR DEVELOPMENT OF RISK-BASED POST-MORTEM MEAT INSPECTION PROCEDURES

i. Risk-based post-mortem inspection procedures should be derived from the application of risk analysis principles.

ii. Development of risk-based post-mortem inspection procedures should:

- Involve application of a risk management framework to the greatest extent appropriate and practicable;
- Include quantitative risk assessment where appropriate and practicable;
- Take into account all relevant information available from the food chain;
- Take into account disease prevalence;
- Take into account all relevant information from primary production and ante-mortem inspection of the animals.

iii. Inspection procedures should be evaluated for application within a specific context e.g. species and class of slaughtered animal, defined geographical region, defined animal husbandry system.

iv. Where different inspection procedures that have the same purpose and context are being evaluated:

- An objective basis for comparison of the level of control of hazards associated with these procedures, should be established;
- The efficacy of each inspection procedure in detecting abnormalities and visible contamination affecting the safety of meat should be taken into account;

[5] Working Principles for Risk Analysis for Application in the Framework of the Codex Alimentarius. Codex Procedural Manual, 13th Edition

[6] Risk Analysis Policies of the Codex Alimentarius Commission. Twenty-fourth Session of the CAC. ALINORM 01/9. FAO 2001

- Other risk management factors should be taken into account as appropriate e.g. potential for inadvertent cross-contamination, feasibility, and practicality.

v. Where needed, representative and sufficiently large field trials should be undertaken to determine the performance attributes of specified inspection procedures e.g. sensitivity, specificity, and non-detection rates for abnormalities.

vi. Where appropriate, laboratory investigations should be designed to detect the range of hazards of possible public health importance that have been described in hazard identification.

vii. Routine application of post-mortem inspection procedures should not inadvertently increase cross-contamination with microbiological hazards.

viii. Irrespective of inspection delivery systems, the competent authority should be responsible for defining the role of personnel involved in post-mortem inspection procedures, and verifying that any performance criteria.are met.

ix. Alternative inspection procedures (e.g. serology) may be utilised to complement post-mortem inspection, which might be reduced to visual inspection.

5. GUIDELINES FOR THE DEVELOPMENT OF RISK-BASED POST-MORTEM INSPECTION PROCEDURES

5.1. IDENTIFICATION OF THE MEAT HYGIENE ISSUES

9. A hazard identification process should be undertaken to determine the likely range of hazards of public health significance that may be present in the abnormalities or visible contamination that are the target of the inspection procedure(s) being evaluated. Following this, field trials should be undertaken to determine the performance attributes of specified inspection procedures or new technologies relative to the hazards that may be present.

5.2. FIELD TRIALS

10. Once the likely range of hazards has been established, field trials may be an appropriate means to establish the prevalence of these hazards in the animal population, the potential exposure of consumers to these hazards and the potential impact of different inspection procedures on this exposure. Field trials should be carried out under competent authority supervision and employing competent personnel. The number of animals examined by the inspection procedures under evaluation should give a statistically valid estimate of the detection rate of abnormalities achieved by specific post-mortem inspection procedures.

11. Sampling plans should be representative of the slaughter population, and cater for known biological variation in respect of the type and prevalence of abnormalities e.g. influence of animal age, geographical region, farming type and season. Different trial designs may be employed, depending on the prevalence of abnormalities in the slaughter population, and the logistics of detailed inspection.

12. Where different post-mortem inspection procedures are being compared: all procedures should be applied to the same animals, each inspection station should be designed to provide independent results, and the trial should include enough samples so as to allow definite conclusions as to the consequences of changing inspection procedures. The possibility of target tissues acting as “indicators” for detection of abnormalities in other tissues and/or disposition of other tissues may be included in the design of field trials. Detailed recording of trial results is necessary, including appropriate pathological descriptions of all abnormalities detected.

13. Laboratory investigations e.g. microbiological examination and histology, should be designed to identify the range of hazards of possible public health importance that have been identified in the hazard identification process. A representative number and range of samples should be taken from abnormalities, so as to confirm the outcome of the hazard identification process and provide as much information as possible on the prevalence (and concentration) of hazards in target tissue. Trial design should include representative surveying of the prevalence (and concentration) of hazards in target tissues that are organoleptically normal, so as to provide a comparison with the prevalence (and concentration) of hazards in those tissues that are organoleptically abnormal.

5.3 PERFORMANCE ATTRIBUTES

14. An understanding of the level of consumer protection that is achieved by particular inspection procedures requires knowledge of the level of control of hazards that is attained in meat. These would be reflected in microbiological performance criteria and/or process criteria[7] where these have been defined. Performance attributes[8] for post-mortem inspection procedures should achieve these microbiological performance criteria and/or process criteria.

15. The performance attributes of the inspection procedures e.g. visual inspection, palpation, and/or incision, should be determined within appropriate statistical limits established by the competent authority. The intended end-use of the target tissues has an important influence on the development of risk-based post-mortem inspection procedures.

16. The sensitivity of a post-mortem inspection procedure is the probability of correctly identifying abnormalities that are likely to contain public health hazards. An inspection procedure with a high sensitivity will result in a low non-detection rate for abnormalities containing hazards i.e. few false negatives.

17. The specificity of an inspection procedure is the probability of correctly identifying abnormalities that do not contain public health hazards. An inspection procedure with a high specificity will result in a low detection rate for abnormalities that do not contain hazards i.e. few false positives.

18. The true prevalence of abnormalities affecting the tissues subject to post-mortem inspection ("gold standard") should be determined as part of the above process.

5.4 RISK MANAGEMENT DECISIONS

19. Risk management decisions on the acceptability or otherwise of specified post-mortem inspection procedures will generally be based on the worst case of non-detection of abnormalities included in an appropriate statistical confidence interval. Decisions should take into account the comparative public health risks associated with:

- The prevalence (and concentration) of hazards in target tissues that are organoleptically abnormal;
- The prevalence (and concentration) of hazards in target tissues that are organoleptically normal;
- The overall prevalence (and concentration) of hazards being transmitted by all pathways throughout the production of meat.

20. In the general case, new or alternative inspection procedures should provide a level of consumer protection that is at least equivalent to that provided by existing procedures, unless there are strong mitigating factors that may influence a different risk management choice e.g. unacceptable introduction of new hazards, undue risks from occupational exposure.

21. Required regulatory outcomes for post-mortem inspection may include performance attributes expressed as limits on non-detection rates for particular abnormalities. Those performance attributes may be derived quantitatively from risk assessment models, or qualitatively from baseline surveys of current performance.

---

7 Microbiological performance criteria and process criteria are as defined by CCFH on "Proposed Draft Principles and Guidelines for the Conduct of Microbiological Risk Management"

8 A working definition of performance attribute is: a quantitative parameter derived from estimates of sensitivity and/or specificity of a meat inspection procedure.

22. Where detailed information on the health status of slaughtered animals is available from primary production, risk-based post-mortem inspection procedures may be modified on a lot-by-lot basis, with the competent authority having responsibility for determining the frequency and extent of the procedures.

23. The competent authority should regularly analyse results of post-mortem inspection at both the establishment and national level, and provide appropriate feedback to establishments and other interested parties on the performance of risk-based post-mortem inspection procedures. The competent authority could consider an incentive for improving the system, e.g. recognition of performance, decreased farm inspection frequency, additional change of inspection procedures, etc.

24. The competent authority may change presentation requirements and the sequence of inspection procedures as a result of scientific evaluation of different post-mortem inspection procedures, and allow introduction of new inspection tools e.g. mirrors. Alternative technologies for detecting abnormalities e.g. tissue imaging, should be acceptable to the competent authority if validated as being as effective as current procedures.

Food and Agriculture Organization of the United Nations

World Health Organization

Agenda Items 4 and 6.1

Conference Room Document 23
English only

SECOND FAO / WHO GLOBAL FORUM OF FOOD SAFETY REGULATORS

Bangkok, Thailand, 12-14 October 2004

Building Consensus on Food Safety Programs among Consumer and Public Health Organizations

(Prepared by Safe Food International)

INTRODUCTION

The Center for Science in the Public Interest (CSPI),[1] a non-profit consumer advocacy group in Washington, D.C. with nearly 900,000 members in both the United States and Canada, is collaborating with the World Health Organization (WHO) and the Food and Agriculture Organization (FAO) to organize an international meeting of consumer and public health groups from around the world to develop a common vision of food safety. This project is called Safe Food International (SFI), and it is staffed by an international team of experts in food safety, law, and communications.

BACKGROUND

With the globalization of the world's food supply, food contamination knows no borders. Due to innovations in transportation and refrigeration, food is rapidly moved across countries and between continents. While consumers benefit from having access to fresh affordable food from all parts of the world, the risks are growing. Food contamination that originates in one area is distributed widely and can cause illness in large numbers of people in distant places. Globalization of the world's food supply also increases the risks of intentional contamination.[2]

In both developing and developed countries, increasing consumers' protections from both intentional and unintentional contamination of the food supply will require improvements in many existing systems. It makes little difference whether those changes come about in response to terrorist concerns or as a general effort to modernize food safety control services. Improvements in such areas as outbreak response and investigation will result in many immediate benefits for consumers. Strong inspection systems also serve to prevent and deter many food safety problems.

DISCUSSION

In detailed analysis of food-borne illness outbreaks in the United States, CSPI has identified a number of trends. First, many outbreaks are occurring from foods, such as meat, seafood, produce, eggs and poultry, that are widely traded on the world markets. While meat and poultry are the most commonly suspected cause of outbreaks, CSPI's analysis of 3,500 outbreaks in the U.S. reveals that a majority of outbreaks are caused by non-meat items, such as seafood, fruits, vegetables, and eggs.[3]

Second, a single contamination point in a production chain can cause hundreds or even thousands of people to become ill. For example, in 1994, Schwann's Ice Cream contaminated with *Salmonella* sickened more than 200,000 people in the United States; the contamination point was a single tanker truck.[4] An unusual outbreak traced to breakfast cereal in 1998 was linked to over 200 confirmed cases in twenty-three states in the U.S.; the contamination point was a single room in a production plant where vitamins were sprayed onto the cooked cereal.[5] And numerous outbreaks involving fresh produce, including an outbreak of Hepatitis A last fall traced to raw green onions from Mexico, demonstrate that a single farm can be a contamination point. This green onion outbreak was one of the largest outbreaks traced to vegetables ever recorded in the United States, with over 500 illnesses and 3 deaths.

Worldwide, outbreaks of this magnitude are not uncommon. In 1988, a Hepatitis A epidemic in China associated with the consumption of clams affected 292,000 people, killing nine of them.[6] In a 1996 Japanese outbreak, at

least 9,578 individuals (mainly schoolchildren) suffered from severe *E. coli* infections linked to white radish sprouts.[7] In 2000, an outbreak from milk in Japan resulted in almost 6,000 illnesses; the contamination point was a production line valve that became contaminated.[8]

Finally, examples of outbreaks caused by intentional contamination illustrate the ease with which food could be used for terrorist purposes. In a 1984 outbreak in the United States, members of the Rajneeshee cult contaminated a salad bar in Oregon with *Salmonella,* causing 751 illnesses.[9] In 1996, a disgruntled employee at a Texas hospital intentionally contaminated pastries, causing twelve cases of *Shigella dysenteria.*[10] In Japan, curry laced with arsenic and sold at a community fair resulted in 60 illnesses and four deaths.[11] More recently, in 2002, a baker in Nanjing, China spiked the flour of a competitor with rat poison, killing thirty-eight people.[12] In a 2003 episode in the U.S., 200 pounds of meat at a Michigan grocery store were poisoned intentionally with an insecticide, sickening over 100 people.[13] On a larger scale, events like these could be devastating to national and even world markets.

Food is also an obvious target for food scares. During the 2003 America's Cup race in New Zealand, a group calling itself "September 11" threatened to contaminate the food supply with cyanide. In letters addressed to the British and Australian High Commissions and the U.S. Embassy in Wellington, the group said it was "fighting for the rights of free Islamic people" and warned that 25 kilograms of cyanide had been stockpiled and would be put in the food supply if Iraq was invaded. A national security alert, including a warning to consumers to "Watch what you eat," set off a flurry of discussions about the effects of such a threat— the economic damage it might do to the multimillion-dollar America's Cup restaurant and hotel business, deterioration of relations with Arab countries, and the number of deaths it could cause.[14]

The globalization of the food industry makes New Zealand's problem emblematic of what every nation faces. The extent to which New Zealand authorities— or authorities in any country — are prepared to detect and prevent such threats has an effect on all nations.

If disaster strikes, quick, efficient, and comprehensive action is an absolute necessity, on both governmental and non-governmental levels. Furthermore, such action must be coordinated and standardized so that appropriate authorities in each region can apply compatible methods to contain the risk and prevent the spread of disease to large numbers of consumers. Without a unified approach, we increase the risk for serious food-related outbreaks in the event of intentional or unintentional contamination of our food supply.

ROLE OF CONSUMER ORGANIZATIONS

As crucial stakeholders, consumer organizations can play an important and constructive role in building strong food safety control systems. Historically, consumer organizations have educated the public about food safety risks, and influenced government policies and corporate practices on many public health issues. The principal objective of Safe Food International is to involve consumer and public health organizations in developing guidelines for non-governmental organizations (NGOs) to evaluate and help strengthen their national food safety programs. Those guidelines would aid consumer organizations in promoting changes to help ensure that national governments have the tools and the resources to manage food safety problems in a comprehensive and effective manner and to respond promptly to contamination events.

In brief, Safe Food International aims to unify and focus the efforts of consumer organizations worldwide in a collaborative effort to ensure that national food safety programs: a) address common food safety problems; b) approve both foods that are consumed domestically and those imported or exported for consumption; and c) provide deterrence for those who might consider using food as a target of intentional contamination.

SFI will present its "Guidelines for Consumer Organizations to Promote Food Safety in their National Governments" at an international meeting in Geneva, Switzerland during the spring of 2005.[15] Consumer and public health organizations from developed and developing countries will be invited to attend the meeting and contribute to the Guidelines which will be finalized at the conference. Participants will include representatives of consumer and public health organizations from around the world. The final Guidelines will be distributed after the conference to NGOs and governments worldwide.

In collaboration with the WHO, FAO and the NTI Foundation, CSPI is undertaking this effort for the purpose of establishing dialogue and consensus among consumer groups internationally in order to establish a more unified approach to food safety advocacy.

CSPI has provided more than 200 NGOs worldwide with information on the project.[16] Nearly fifty groups have already shown strong interest in attending the international conference and participating in the discussions which will shape a final, consensus-based document. Once the conference is formerly announced, interest among NGO will likely escalate further.

To better inform the conference, SFI has researched food safety problems in different regions of the world, in consultation with the consumer organizations in the various regions. In a set of regional reports, we have documented the wide variety of concerns consumer organizations on every continent share, including street food in India, clean water in many African countries, genetically modified foods in Europe, and common food-borne bacteria in North America.[17] This type of information is extremely helpful in developing a more complete overview of food safety concerns in different parts of the world. Comments and suggestions on these regional reports are invited.

The regional reports and the Guidelines in English, Spanish and French are posted on our website, www.safefoodinternational.org. In the future, the website will also feature news and links to food safety educational materials from consumer organizations in various parts of the world.

CONCLUSION

SFI, in collaboration with the WHO, FAO, and the NTI Foundation, is taking the growing concern among consumer organizations worldwide about the safety of the food supply and channeling that concern into a consensus document for monitoring and improving national food safety systems. The landmark conference in Geneva, Switzerland will be the first formal discussion among consumer organizations about universal standards for strengthening national food safety control services and the beginning of improved international cooperation among advocates who wish to protect both the food and consumer confidence.

---

[1] CSPI is also one of the founding members of the International Association of Consumer Food Organizations (IACFO), an international association of non-governmental organizations that represent consumer interests in the areas of food safety, nutrition, and related matters. IACFO has been granted observer status before the Codex Alimentarius Commission. For more information on IACFO, please see http://www.cspinet.org/reports/codex/iacfosum.html.

[2] World Health Organization, Terrorist Threats for Food: Guidance for Establishing and Strengthening Prevention and Response Systems, FOOD SAFETY ISSUES 10, 2002.

[3] C. Smith DeWaal & K. Barlow, OUTBREAK ALERT! CLOSING THE GAPS IN OUR FEDERAL FOOD-SAFETY NET (S. Watkins ed., CSPI 6th ed. 2004), available at http://cspinet.org/new/pdf/outbreakalert2004.pdf.

[4] T.W. Hennesy, C.W. Hedberg, L. Slutsker et al., A National Outbreak of *Salmonella Enteritidis* Infections From Ice Cream, 334 NEW ENG. J. MED. 1281-86 (1996).

[5] Personal conversation between Caroline Smith DeWaal, CSPI, and CDC personnel during the outbreak investigation (1998).

[6] M. L. Halliday, L. Y. Kang, T. K. Zhou, et al., "An epidemic of hepatitis A attributable to the ingestion of raw clams in Shanghai, China", JOURNAL OF INFECTIOUS DISEASE, November 1991; 164(5), pp. 852-859.

[7] WHO Weekly Epidemiological Record, Vol. 71, No 35, 1996.

[8] ASSOCIATED PRESS, Bad Milk Sickens Japanese, July 1, 2000.

[9] J. McDade & D. Franz, Bioterrorism as a Public Health Threat, EMERGING INFECTIOUS DISEASES, July-Sept. 1998, at 493-494, available at http://www.cdc.gov/ncidod/eid/vol4no3/mcdade.htm (last visited Aug. 24, 2004).

[10] Maryland Dep't of Health & Hygiene, Chemical and Biological Terrorism Events: Historical, BIOTERRORISM NEWSLETTER, June 2001, at page 2, available at http://www.dhmh.state.md.us/labs/pdf/btnews/bioterr0601.pdf.

[11] ASSOCIATED PRESS, Bad Milk Sickens Japanese, July 1, 2000.

[12] ASSOCIATED PRESS, China Food Poisoning Investigated, Sept. 16, 2002.

[13] M. Boulton et al., Nicotine Poisoning After Ingestion of Contaminated Ground Beef—Michigan, 2003, MORBIDITY MORTALITY WEEKLY REP., May 9, 2003, at 413-16.

[14] P. Gower, P. Oliver & A. Perrott, Cyanide Letter Threat to Cup, NEW ZEALAND HERALD, Feb. 26, 2003, at A1.

[15] The Guidelines were developed by Caroline Smith DeWaal, J.D., Food Safety Director at CSPI.

[16] Dr. Lilly Papaioannou, a psychologist from Greece with a specialty in linguistics, is responsible for project-related communications with NGOs internationally.

[17] The regional reports were prepared by Nadine Robert, a lawyer trained in France.

International Organization for Standardization

Press releases

Ref. 966
1 September 2005

ISO 22000 for safe food supply chains

ISO 22000, published today, is a new International Standard designed to ensure safe food supply chains worldwide.

ISO 22000:2005, ***Food safety management systems – Requirements for any organization in the food chain***, provides a framework of internationally harmonized requirements for the global approach that is needed. The standard has been developed within ISO by experts from the food industry, along with representatives of specialized international organizations and in close cooperation with the Codex Alimentarius Commission, the body jointly established by the United Nations' Food and Agriculture Organization (FAO) and World Health Organization (WHO) to develop food standards.

A major resulting benefit is that ISO 22000 will make it easier for organizations worldwide to implement the Codex HACCP (Hazard Analysis and Critical Control Point) system for food hygiene in a harmonized way, which does not vary with the country or food product concerned.

Food reaches consumers via supply chains that may link many different types of organization and that may stretch across multiple borders. One weak link can result in unsafe food that is dangerous to health – and when this happens, the hazards to consumers can be serious and the cost to food chain suppliers considerable. As food safety hazards can enter the food chain at any stage, adequate control throughout is essential. Food safety is a joint responsibility of all the actors in the food chain and requires their combined efforts.

ISO 22000 is therefore designed to allow all types of organization within the food chain to implement a food safety management system. These range from feed producers, primary producers, food manufacturers, transport and storage operators and subcontractors to retail and food service outlets – together with related organizations such as producers of equipment, packaging material, cleaning agents, additives and ingredients.

The standard has become necessary because of the significant increase of illnesses caused by infected food in both developed and developing countries. In addition to the health hazards, food-borne illnesses can give rise to considerable economic costs covering medical treatment, absence from work, insurance payments and legal compensation.

As a result, a number of countries have developed national standards for the supply of

safe food and individual companies and groupings in the food sector have developed their own standards or programmes for auditing their suppliers. The plethora of more than 20 different such schemes worldwide generates risks of uneven levels of food safety, confusion over requirements, and increased cost and complication for suppliers that find themselves obliged to conform to multiple programmes.

ISO 22000, backed by international consensus, harmonizes the requirements for systematically managing safety in food supply chains and offers a unique solution for good practice on a worldwide basis. In addition, food safety management systems that conform to ISO 22000 can be certified – which answers the growing demand in the food sector for the certification of suppliers – although the standard can be implemented without certification of conformity, solely for the benefits it provides.

Developed with the participation of food sector experts, ISO 22000 incorporates the principles of HACCP, and covers the requirements of key standards developed by various global food retailer syndicates, in a single document.

“Public sector participation in the development of the ISO 22000 family is also significant,” ISO Secretary-General Alan Bryden commented, “notably that of the FAO/WHO’s Codex Alimentarius Commission, which is responsible for the well-known HACCP (Hazard Analysis and Critical Control Point) system for food hygiene. Thanks to the strong partnership between ISO and Codex, ISO 22000 will facilitate the implementation of HACCP and the food hygiene principles developed by this pre-eminent body in this field.”

Another benefit of ISO 22000 is that it extends the successful management system approach of the ISO 9001:2000 quality management system standard which is widely implemented in all sectors but does not itself specifically address food safety. The development of ISO 22000 was based on the assumption that the most effective food safety systems are designed, operated and continually improved within the framework of a structured management system, and incorporated into the overall management activities of the organization.

While ISO 22000 can be implemented on its own, it is designed to be fully compatible with ISO 9001:2000 and companies already certified to ISO 9001 will find it easy to extend this to certification to ISO 22000. To help users to do so, ISO 22000 includes a table showing the correspondence of its requirements with those of ISO 9001:2000.

ISO 22000:2005 is the first in a family of standards that will include the following documents:

- ISO/TS 22004, *Food safety management systems – Guidance on the application of ISO 22000:2005*, which will be published by November 2005, provides important guidance that can assist organizations including small and medium-sized enterprises around the world.
- ISO/TS 22003, *Food safety management systems – Requirements for bodies providing audit and certification of food safety management systems*, will give harmonized guidance for the accreditation (approval) of ISO 22000 certification bodies and define the rules for auditing a food safety management system as conforming to the standard. It will be published in the first quarter of 2006.
- ISO 22005, *Traceability in the feed and food chain – General principles and guidance for system design and developmen*t, will shortly be circulated as a Draft International Standard.

In partnership with the International Trade Centre (ITC) – the technical cooperation agency of the United Nations Conference on Trade and Development (UNCTAD) and the World Trade Organization (WTO) – ISO is also preparing an easy-to-use check-list for

small businesses and developing countries, entitled *ISO 22000: Are you ready?*

ISO 22000 and ISO/TS 22004 are the output of working group WG 8, *Food safety management systems*, of ISO technical committee ISO/TC 34, *Food products*. Experts from 23 countries participated in the working group, together with international organizations with liaison status. In addition to the Codex Alimentarius Commission, these included the Confederation of the Food and Drink Industries of the European Union (CIAA), the CIES/Global Food Safety Initiative, and the World Food Safety Organization (WFSO). They have been joined for the development of ISO/TS 22003 by experts from the ISO committee on conformity assessment, ISO/CASCO, the International Accreditation Forum (IAF) and the IQNet international certification network.

ISO 22000:2005, *Food safety management systems – Requirements for any organization in the food chain*, costs 118 Swiss francs and is available from ISO national member institutes (see the complete list with contact details) and from ISO Central Secretariat (see below).

ISO Store: to order **ISO 22000:2005, *Food safety management systems – Requirements for any organization in the food chain***

More information:
- **ISO 22000 standard for safe food supply chains**
  Article from ISO Management Systems 4/2005 (PDF, 132 KB)
- **ISO 22000 to ensure integrity of food supply chain**
  Article from ISO Management Systems 5/2004 (PDF, KB 312)

Enquiries about orders:
Ms. Sonia Rosas Friot
Marketing Services
Tel. +41 22 749 03 36
Fax +41 22 749 09 47
E-mail sales@iso.org

Press contact:
Roger Frost
Press and Communication Manager
Public Relations
Tel. +41 22 749 01 11
Fax +41 22 733 34 30
E-mail frost@iso.org

© ISO | ISO name and logo | Privacy policy

アメリカン・ミート・セーフティガイドブック (第二版)

飼育・加工工場に関する食肉の安全性情報

― American Meat Safety Guidebook (2nd ed) ―

【はじめに】

皆様には、平素よりアメリカン・ミートに対し、格別のご理解、ご愛顧を頂き誠にありがとうございます。

2001 年の秋以降、食の安全性の基準に関しての意識が、これまで以上に高まっており、また、安全性に関する情報開示の要求も強まっています。この「American Meat Safety Guidebook 」も、2001 年夏に刊行してから、食肉業界のみならず一般消費者からの問い合わせも多くいただき、5000 部を超える増刷せねばならないほど好評をいただきました。

本書では、アメリカン・ミートの安全性に関する最新の情報、データをまとめています。このガイドブックは、食肉の安全性確保を目的に、米国政府、研究機関、さらに生産者、食肉加工業者などが行っている施策を具体的に紹介したものです。

まずは第 1 章の米国における食肉の安全管理システムを読まれ、アメリカの安全性への体制をご理解下さい。その後は、ご興味のあるテーマを読まれることをお勧めいたします。研修での参考書として、また辞書としてご利用されていると聞いております。

一面的な情報に惑わされず、様々な情報をもとに多角的な視点から食の安全性を判断しコミュニケーションをとることが重要だと考えております。皆様には、アメリカン・ミートの安全管理および品質保証に関する基本的な資料として、お役立ていただければ幸いです。

米国食肉輸出連合会（USMEF）