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ALINORM 76/15

JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX ALIMENTARIUS COMMISSION
Eleventh Session, 1976

REPORT OF THE CODEX COMMITTEE ON MEAT HYGIENE
Third Session, 25-29 November 1974
New Zealand High Commission, London

INTRODUCTION

1. The Codex Committee on Meat Hygiene held its Third Session at the New Zealand High Commission in London, from 25 to 29 November 1974, by courtesy of the Government of New Zealand under the Chairmanship of Dr. A.T. Johns, Director General, Ministry of Agriculture and Fisheries, Wellington.
2. The Chairman welcomed the participants, and said that although the intention of the Codes was to promote international harmonisation, care should be taken in their preparation to ensure that requirements which might unnecessarily increase the cost of meat were avoided. The need for meat to be prepared economically should not be overlooked while considering the protection of the health of the consumer. The Chairman expressed the hope that it would be possible to finalize the work of the Committee during the present session.
3. Representatives from the following thirty countries were present:

Argentina	Finland	Spain
Australia	France	Sudan
Austria	Fed. Rep. of Germany	Sweden
Belgium	Hungary	Switzerland
Botswana	Ireland	Turkey
Brazil	Italy	United Kingdom
Canada	Kenya	United States of
Colombia	Netherlands	America
Czechoslovakia	New Zealand	Uruguay
Denmark	Norway	
Egypt	Poland	

Observers were present from the European Economic Community (EEC). Officers of FAO and WHO were also present. A list of participants is contained in Appendix I to this Report.

TRIBUTE TO THE LATE DR. A. GINSBERG

4. The great enthusiasm of Dr. Ginsberg for the work of the Committee and his large contribution in the drafting of the original documents presently under elaboration by the Committee were commemorated. The Committee observed a minute's silence in memory of Dr. Ginsberg.

STATEMENT OF REPRESENTATIVE OF WHO

5. The representative of WHO briefly reviewed present and planned activities in areas of interest to the members of the Committee.

ELECTION OF RAPPORTEURS

6. On the proposal of the Chairman, the Committee appointed Dr. W.R.P. Hildebrand (United Kingdom), Professor C. Flachet (France) and Dr. J. Staehle (Uruguay) as Rapporteurs of the Session.

ADOPTION OF PROVISIONAL AGENDA

7. The Committee adopted the provisional agenda unanimously. It agreed to consider under the item "Other Business" a document *on* Post-Mortem Judgment of Slaughter Animals, elaborated by the Animal Production and Health Division of FAO, which was distributed to the participants at the beginning of the Session.

8. The need to harmonize standards of training and the responsibilities of Meat Inspectors and those responsible for their supervision was raised by the Swedish delegation. A proposal was made by that delegation, supported by others, that a working group be formed to look into this matter. The Committee recommended that FAO and WHO consider the matter further in collaboration with experts in this field. The meeting was informed that FAO in collaboration with WHO had already initiated activities related to the subject, and the representative of WHO expressed the interest of his Organization to host the first meeting to discuss the problems involved.

RECONSIDERATION OF DRAFT CODE OF HYGIENIC PRACTICE FOR FRESH MEAT AT STEP 7

9. The Committee had before it the above-named document, as contained in Appendix II to ALINORM 74/15. At its Second Session it had agreed to deal specifically with a number of issues on which no final agreement had been reached (see ALINORM 74/15, para 81). Government observations on these particular questions, as well as some other comments, had been compiled in documents CX/MH 74/4 + Addenda 1, 2 and 3. Comments from Australia, the EEC, Egypt and Sudan were made available during the meeting (conference documents 2, 3, 4 and 5).

10. The Committee further had before it a paper prepared by Sweden on "The Use of Cotton Gloves when cutting up Meat" (see CX/MH 74/2).

11. It was agreed to consider the question of hygienic requirements for Mobile Slaughterhouses after having dealt with the present code.

Section I - Scope

12. The Committee reaffirmed its agreement with the general purpose of the Code and decided to leave the scope as it stood.

Section II - Definitions

13. There was general agreement with the written observations from France that, to the extent possible, definitions in codes under elaboration by this Committee and by the Codex Committees on Food Hygiene and on Processed Meat Products should be harmonized.

14. "Contamination" (Def. 5). There was some discussion on whether a distinction should be made between contamination and pollution. It was stated that, as these terms (in English) were synonymous, separate definitions would not be necessary. The question was raised whether "matter", in the context of the definition, also covered biological - in addition to chemical - substances. It was agreed that this was the case, and it was therefore not considered necessary to distinguish between microorganisms, particularly pathogens, and "objectionable matter". In order to broaden the definition the reference to meat was deleted.

15. "Controlling Authority" (Def. 6). The proposal was made to relate the control of hygiene by the official authority to meat hygiene in particular. The Committee was of the opinion that the work of the controlling authority was not limited to meat hygiene only, but included the broad hygienic aspect of abattoirs and establishments. The definition was not amended.

16. "Disinfection" (Def. 7). A large number of written comments had been received, which were discussed extensively. It was agreed not to make the application of chemical and physical agents exclusive of each other to permit simultaneous use of these by inserting the words "and/or". Several suggestions were discussed to clarify the meaning of the words "with the intention of eliminating micro-organisms". It was agreed not to change the present text as it was thought to be sufficiently clear that the elimination of micro-organisms in the definition referred in the first instance to pathogenic organisms by destruction or inactivation; at the same time, however, spoilage micro organisms would also be reduced.

17. "Dressed" or "Dressing" (Def. 8b). The proposal was made to delete the reference to the removal of the external acoustic duct for slaughtered pigs. The Committee agreed to retain the present requirement.

18. "Dressed" or "Dressing" (Def. 8c). There was also some discussion on the necessity of requiring the heads of caprines and ovines to be skinned. As this might be misunderstood and could complicate proper identification of the origin of the carcase, the Committee agreed to make a change to this effect in the text. The word "lambled" was replaced by the words "gave birth", which was thought to cover more accurately sheep as well as goats.

19. The delegation of Argentina stated that in the definition for "Dressed" or "Dressing" a number of operations were not covered, and suggested the addition of a sub-paragraph (e): "All other operations contributing to the proper presentation of the carcase".

20. "Fresh Meat" (Def. 12). At the last session of the Codex Committee on Food Hygiene, it had been pointed out that "refrigeration" could be misunderstood, and it had therefore been proposed to refer to chilling and freezing instead. The Committee held the view that in the context of the definition "refrigeration" could not lead to any misunderstanding, and agreed to retain the present word.

21. "Inspector" (Def. 13). The Committee agreed, to avoid any misinterpretation, to substitute the word "control" for "supervision" as part of the task of the inspector. In order to be consistent with the definition of "controlling authority", the reference to meat in relation to hygiene was deleted. There was some discussion on the need to state whether the veterinarian supervising the work of the inspector with regard to meat hygiene and inspection of meat should be required to be present in the abattoir. As this was thought to be too restrictive, it was agreed not to amend the text.

22. The delegation of Sweden expressed the view that in its opinion it was necessary to lay down clearly the required level of Schooling for meat inspectors in order better to define the work of inspectors and veterinarians and to describe their duties and responsibilities. The representatives of FAO and WHO stated that this question was presently being studied by their Organizations. An expert meeting to discuss this matter and make proposals might in due time be convened by WHO.

23. In the written comments of Argentina it was stated that Argentina could not agree to the definition for meat (15) on account of its qualifying as meat, tissues or anatomical parts of the animal which are in fact not meat, solely because they come from any mammal slaughtered in an abattoir. Such a criterion seriously restricts the international meat trade in animals which for obvious reasons have not been slaughtered in the manner established by the definition of "meat". It proposed the following definition: "The muscular parts and connected tissues surrounding the skeleton of a mammal fit for human consumption". The Committee did not agree with this suggestion,

24. "Sick and Suspect Animals" (Proposal for new Definition). It was agreed to defer consideration of the necessity for the possible inclusion of a definition for sick and suspect animals to a later stage in the meeting (see paragraph 39).

Section IV - Transport

25. The Committee agreed to clarify the title to read: "Transport of Slaughter Animals".

Construction of Conveyances

26. Concerning the construction of means of transport, it was agreed to require also that:

- 20(d) (new) ventilation is adequate
- 20(d) (old) = 20(e) (new)
- 20(f) (new) it is easy to clean and disinfect

Maintenance of Conveyances

27. An addition was made to the provision in sub-section 21 stating that conveyances should be maintained in a sound state of repair.

28. The delegation of Argentina stated that it wished the clause "by cleaning and if necessary disinfecting" to be replaced by "by washing with water under pressure and disinfecting with suitable disinfectants".

Section V - Establishment facilities and operating requirements

Registration

29. It was pointed out that the requirement in sub-section 22 that abattoirs and establishments should be approved and registered by the controlling authority was

already contained in the definitions of the two terms. The Committee agreed to delete the provision.

Construction

30. The delegation of Sweden reiterated its objections against coved angles between walls and walls and floors ((new) 22(h)(ii)). Other delegations drew attention to the hygienic advantages derived from this requirement. The present text was retained.

31. The Committee agreed to delete sub-section (old) 27(h) and to include it in the provision dealing with the disposal of plant effluent ((new) 22(i)).

32. To avoid the exclusion of different methods of watering animals the Committee agreed to delete in sub-section (new) 23(b)(i) the specific reference to water troughs.

33. The Committee again had a full discussion on whether or not the emptying of digestive organs should be carried out in separate rooms or whether, under clearly-defined conditions, dispensations from this requirement should be provided ((new) 23(e)). It was pointed out that the controlling authority, when reviewing the layout of the abattoir, would have to take all hygienic aspects into account. The location of the various areas requiring particular supervision could be selected in relation to the hygienic requirement appropriate to the specific operations carried out. And thus, in the view of some delegations, separate rooms for emptying and rinsing of digestive organs were unnecessary.

34. Other delegations were of the opinion that separate rooms were an absolute necessity. The Committee finally agreed to delete the reference to fixed equipment as an alternative for a separation. The provision to which a footnote was added would thus read: "A separate room for emptying and rinsing the digestive organs" and (footnote) "However, the controlling authority may approve other systems in the light of new technological developments". The delegations of Argentina and Uruguay reserved their positions.

35. With regard to facilities for tripe and gut dressing, a discussion along similar lines as for the emptying and rinsing of digestive organs ensued. It was ultimately agreed to merge the text of (old) 24(f) and (h) (= (new) 23(f)) to read: "A separate room for the further preparation of emptied and rinsed digestive organs". The same footnote as for (new) 23(e) was included. The delegations of Argentina and Uruguay reserved their positions.

36. It was pointed out that the provision in sub-section (new) 23 (g.) as set out implied that edible fat had to be stored separately. The Committee agreed that this was not the intention. It was further pointed out that not all abattoirs or establishments might be equipped with rendering facilities. The provision was revised to read "if necessary, separate facilities for the preparation of edible fats".

37. It was agreed to reinsert a provision ((new) 23(h)) for separate rooms for the storing of hides, horns and hooves, which had been inadvertently omitted when the Code was typed.

38. To make certain that all meat was properly refrigerated, the word "effective" was inserted before "cooling and storage" in sub-section (new) 23(i).

39. The Committee discussed at great length the desirability of including in the Code a definition for "sick and suspect animals". It was finally agreed to delete reference to such animals by including in the provision in sub-section (new) 23(j) a cross-reference to paragraphs 21 to 24 of the Code of Ante and Post-Mortem Inspection of Slaughter

Animals. The text of the provision was amended editorially. (See also para 24 of this Report).

40. The Committee also discussed in this connection a possible new definition for "emergency slaughter". A large number of written observations from governments had been received on the Code of Ante-Mortem and Post-Mortem Inspection of Slaughter Animals concerning the Polish proposal (ALINORM 74/15, para 85) for inclusion of a definition for "emergency slaughter". The majority being in favour of having such a definition, the following text was agreed: "'Emergency slaughter" means slaughter by necessity of any animal which has recently suffered accident or injury".

41. As the term "establishment" had been defined, it was agreed to delete the reference to this word in sub-section (new) 23(m) and to replace it with "premises".

42. During the discussions on boning-out and cutting-up, rooms, some delegations proposed to establish maximum room temperatures as had been done in the Code of Hygienic Practice for Processed Meat Products. The delegation of Norway suggested that if maximum room temperatures were stipulated, consideration should be given to meat temperature as well as labour comfort. Several delegations held the view, however, that room temperatures should not be specified in the present Code, and the Committee agreed not to extract the relevant provisions from the Code of Hygienic Practice for Processed Meat Products.

43. A long discussion ensued on the need for packing wrapped meat in cartons in a room separate from rooms for boning and cutting. This operation was considered by a number of delegations to be a potential hygienic hazard. Other delegations held the view that, provided proper precautions were taken, no undue risk was involved, and separation of the various activities would raise costs unnecessarily.

44. As a compromise, it was proposed that the provision (new) 24(c) should read: "Room, temperature controlled, for boning and cutting, physically separated from other rooms. Boning, cutting and primary wrapping should be separated from packaging operations. However, the controlling authority may approve other systems in the light of technological developments".

45. The Committee agreed, however, to leave the text unamended. The delegations present of the European Economic Community (Belgium, Denmark, France, Federal Republic of Germany, Ireland, Italy, the Netherlands and the United Kingdom) and of Argentina and Uruguay reserved their position.

46. To make it clear that it should not be possible to operate taps for hand washing by hand, the relevant provision in sub-section (new) 26(n) was changed to state that they should not be of a hand-operated type.

47. A similar change was made in sub-sections (new) 27(a) and (b), which were re-edited to be consistent with each other.

48. It was pointed out that provision (new) 33(e) was in contradiction with sub section (new) 30, as it was realized that skips or trolleys containing inedible material would be moved from departments where edible material was handled to areas where inedible material was handled. It was agreed to delete the words "or is used in".

49. At the last Session of the Committee, WHO had been requested to look into the frequency and character of medical examinations (ALINORM 74/15, para 49). In response to this request, WHO had come up with a proposal for revision of sub-sections 37 and 38 (old) (CX/MH 74/4, Addendum 3). The Committee expressed its gratitude to

the representative of WHO for the work done by his Organization and adopted the proposal with minor amendments.

50. The Committee noted that the Codex Committee on Food Hygiene intended to revise the Recommended International Code of Practice - General Principles of Food Hygiene. It was thought that WHO observations on medical examinations of food handlers would also be of interest to the Codex Committee on Food Hygiene.

51. The Committee agreed to an editorial amendment of sub-section (new) 37(a) to read: "Every slaughter animal must undergo ante and post-mortem inspection".

52. The Committee agreed to add to the list of measures to be observed during skinning operations of pigs ((new) 37(k)(i)) that "the water in the scalding tanks should be changed as frequently as practicable".

53. The Committee considered the written comments of the Philippines to elaborate further the possible adverse effects on the efficiency of meat inspection ((new) 37(u)(iii)). After due consideration the proposed addition was not considered necessary.

54. In order that hygienic conditions would prevail for hot-boning, it was decided to amend sub-section (new) 39(b) requiring that the rooms used for pre-rigor cutting-up and boning should be temperature-controlled.

55. The Committee considered a proposal made by Czechoslovakia in their written comments to restrict the transport of meat to special conveyances, to be used exclusively for that purpose (sub-section (new) 41(a)). It was decided to leave the text as it stood.

56. It was pointed out that changes in temperature during transportation of frozen meat would be detrimental to the quality and hygienic condition of the product, even at temperatures below zero. The provision of sub-section (new) 41(g) was amended to state that efforts should be made to prevent temperature changes in general, and not only thawing.

STATUS OF THE CODE

57. It was agreed that the Code should be advanced to Step 8 of the Procedure for submission to the Commission at its Eleventh Session. The revised Draft Code is contained in Appendix II to this Report. The delegations of Argentina, Belgium, France, Federal Republic of Germany, Ireland, Italy, the Netherlands, United Kingdom and Uruguay after reconsideration reserved their position with regard to advancing the Code to Step 8. They regarded the question of the need for separate rooms for wrapping and packaging as not yet having been satisfactorily resolved.

58. The delegation of Argentina stated that in its view the substance of some definitions was not acceptable to its country.

MOBILE SLAUGHTERHOUSES

59. At the last Session of the Committee, a document prepared by the delegation of, Norway, in collaboration with Finland and Sweden, for the construction and operation of mobile slaughterhouses had been considered (ALINORM 74/15, para 79). The Committee had agreed that comments should be sought from governments on the document. The author country was requested to revise the paper *on* the basis of government observations to be received.

60. The delegation of Norway informed the Committee that the comments it had received had not warranted a revision of the document. Several delegations stated their

continued interest in the subject. In this connection the delegation of Kenya also mentioned game cropping.

61. The delegation of Sweden reiterated its anxiety that meat obtained from animals slaughtered in field or mobile slaughterhouses which did not fully comply with the provisions in the Code of Hygienic Practice for Fresh Meat might be refused by importing countries. It was pointed out that, on the basis of bi-lateral agreements, any possible difficulties could be overcome.

62. Moreover, in certain countries reindeer and similar semi—domestic animals seem to be slaughtered in nationally approved field and mobile slaughterhouses, and were subjected to ante-mortem and post-mortem inspection.

63. At the request of the Chairman the interested countries drafted and the Committee adopted a text regarding field and mobile slaughterhouses, pointing out the specific position of these particular slaughterhouses. This is attached to the present Code.

CONSIDERATION OF DRAFT CODE OF ANTE-MORTEM AND POST-MORTEM INSPECTION OF SLAUGHTER ANIMALS AT STEP 7

64. The Committee had before it the above-named document, as contained in Appendix III to ALINORM 74/15, which had been revised, as requested by the Committee at its Second Session. . The revised document was contained in CX/MH 74/5. Government observations have been compiled in documents CX/MH 74/6 + Addendum 1.

65. The Committee noted that the Executive Committee, at its 19th Session, had as an exceptional measure authorized the Secretariat to obtain Government comments on the Code prior to its consideration at Step 5 by the Commission. The Commission at its Tenth Session decided to advance the Code to Step 6 (ALINORM 74/44, para 108).

Section II - Definitions

66. It was agreed to make the same corrections to the definitions in this Code as had been made in the Code of Hygienic Practice for Fresh Meat, and further to include a definition for "Emergency Slaughter".

67. The delegation of Argentina proposed to add a new sub-section 8(e) to the definition for "Dressed" or "Dressing": "and all operations which contribute to the adequate presentation of the carcass". The Committee held the view that this general phrase was not really necessary and decided not to include the proposal.

Section III - General Requirements

68. It was agreed to modify slightly the introductory sentence of the section and to amend sub-section (new) 15(c) to read: "undergo ante- and post-mortem inspection unless delay in carrying out ante-mortem inspection would cause undue suffering to animals requiring emergency slaughter".

69. The proposal was made to specify that meat derived from an animal killed by emergency slaughter should not be exported. It was further proposed that such meat should also be subjected to microbiological examination. It was pointed out, however, that to provide in the Code for two classes of meat - for the home market and for export - ran counter to some other provisions of the Code. The Committee noted that a special section "Laboratory Examination" was included in the Code, and that requirements for

particular examinations to be carried out could be included in that Section. It was agreed to make no further amendments to the text.

Section IV - Ante-Mortem Inspection

70. In line with the change made in sub-section (new) 15(c) an amendment was made to sub-section (new) 17(a) in the list of pre-requisites for ante-mortem inspection by adding: "Exceptions may be made in cases of emergency slaughter".

71. There was general agreement that sub-section (old) 16(c) should be moved and included in the provision for "Disposition of Animal after Ante-Mortem Inspection" (to follow para (new) 24).

72. In the provision for "Ante-Mortem Inspection Procedure", sub-section (new) 18(c)(ii); was amended to read "state of nutrition". Sub-section (new) 18(c)(vi) was made more comprehensive: "appearance of the urinogenital system, including . vulva, mammary glands, prepuce and scrotum".

73. In sub-section (new) 18(x) reference to camels, by general agreement, was deleted.

74. After a full discussion the Committee decided to revise sub-section (new) 24, which was considered by some delegations to be one of the most important provisions of the Code. In particular reference was made in the provision to residues which animals which had been given drugs might be carrying and which, at the time of slaughter, might not have been excreted or metabolized, and the procedure to be followed was prescribed.

Section V - Post-Mortem Inspection (General)

75. A proposal was made to delete the provision stating the "purpose of post-mortem inspection", which was considered to be too general to be of particular value. The Committee decided, however, to retain the provision (new) 27, with a small amendment.

76. In discussing "pre-requisites for post-mortem inspection" ((new) 29), the delegation of Sweden pointed out that it was not only the duty of the management to present the carcasses and viscera in such a way that adequate inspection could be carried out, but that these should also be presented in a hygienic manner. The Committee agreed with this proposal but did not follow the suggestion of the same delegation to specify that "carcasses, lungs, hearts, livers and (if not still in the carcass) kidneys should preferably be presented in a hanging position". It was considered that the suggestion, as it appertained in particular to the method of dressing, was not quite suitable for inclusion in the Code.

77. In order to avoid a repetition of provisions readily available in the Code of Hygienic Practice for Fresh Meat, it was proposed to refer in sub-section (new) 31 to the number of certain provisions of that Code which had now been reproduced in full. The Secretariat pointed out that if the two Codes could be published at the same time this would be done; if, however, this were not possible, a quotation in full seemed preferable. The Committee agreed with this.

78. In accordance with the decision taken with regard to sub-section (new) 29 as to presentation in a hygienic manner, it was agreed to require in sub-section (new) 32 that the inspection should also be carried out in a hygienic manner.

79. The Committee agreed to expand the provision detailing the "post-mortem inspection procedure" in sub-section (new) 35(iii) by not permitting the removal of "any

mark of identification from the carcass, head or viscera until the inspector had completed his inspection and given his decision".

80. As had been agreed earlier, to strengthen the section on "Laboratory Examination", it was decided to delete the last sentence of sub-section (new) 37.

81. The Committee agreed that carcasses and viscera which were retained should be kept separate from carcasses, viscera and heads which had been inspected, and consequently amended sub-section (new) 38.

82. It was pointed out that the provision contained in sub-section (old) 39 did not relate to the subject of the Code and it was moreover covered by the Fresh Meat Code. It was agreed to delete this.

83. It was pointed out that where metal loops were used for presenting heads for inspection a two-step inspection procedure was used. A sentence taking this method of inspection of heads into account was inserted in provision (new) 42(a). The text contained between square brackets was deleted.

84. Concerning the second part of the inspection of heads, the Committee agreed to allow for multiple incisions of the regional lymph nodes (new) 42(b). It was further agreed that one or more linear incisions could be made in internal as well as external muscles of mastication.

85. In discussing the various details for the inspection of viscera of adult bovines, the Committee agreed to make a number of changes which would also be included in similar provisions for the other animal species covered by the Code: (i) because of the potential hygienic hazard connected with incisions in gastro-intestinal tracts, uteri, and udders, it was agreed to insert a footnote stating that "If incisions are made every precaution should be taken to prevent any contamination of the premises, equipment and personnel"; (ii) the particular reference to the need for incising lungs, etc, used for human consumption was considered to be too restrictive, and it was agreed that incisions would only be made if necessary; (iii) for the inspection of udders a differentiation was made for those which had been or were in a lactating state.

86. The delegation of Argentina expressed the view that incision of the lymph nodes of the gastro-intestinal tract, liver, and lungs should be a routine procedure, and the limiting clause "if necessary" should be deleted. It considered, however, that for kidneys incisions could be made if necessary.

87. The delegations of Australia, Canada and the USA were of the opinion that the palpation of udders need not be done routinely but only if necessary, and reserved their position.

88. The delegation of Argentina, supported by the delegations of Brazil and Uruguay, was further of the opinion that routine incisions should be made during the inspection of carcasses of all slaughter animals. It held the view that the inspection procedure should be extended also to pre-scapular and precrucial lymph nodes. The delegation of Brazil suggested that, in addition to these, the ischiatic lymph nodes should be routinely incised.

89. It was pointed out that the incision of the masseter muscles and tongues in areas where the infection rate of cysticercosis in calves was insignificant was not necessary. The provision (new) 45 was amended to allow for acceptance and was further re-edited.

90. It was not considered necessary that during the inspection of viscera of young calves the oesophagus should be separated and viewed. The provision was deleted.

The Committee agreed to adopt the proposed alternative provision for livers and to specify that the heart should be opened where cysticercosis was endemic.

91. For the inspection of carcasses of young calves, it was agreed that the umbilical region should be viewed. In view of the eating habits in certain areas of the world, it was agreed to include a reference to the inspection of testicles of ovines and caprines where these organs were saved for human consumption ((new) 54(i)).

92. For the inspection of heads of porcines a provision was included allowing the head to be split lengthwise (new) 56.

93. The delegation of Argentina expressed the view that the gastro-intestinal lymph nodes in porcines should be routinely incised, not only to diagnose the possible presence of tuberculosis but also in relation to other pathological conditions.

94. In order to allow the veterinary inspector to have all information which might be necessary to make a judgment on fitness for human consumption, sub-section (new) 60(a) was amended. It was further agreed that laboratory methods to be used should be such procedures as were scientifically recognized.

STATUS OF THE CODE

95. The Committee unanimously agreed to advance the Code to Step 8 of the Procedure for submission to the Commission at its Eleventh Session. The revised Draft Code is contained in Appendix III to this Report.

POST-MORTEM JUDGMENT OF SLAUGHTER ANIMALS

96. In response to the Committee's consideration at its Second Session of the possibility of elaborating a Code on Post-Mortem Judgment of Slaughter Animals, the Animal Production and Health Division of FAO prepared for the information of the Committee a paper on this subject. Many countries emphasized the difficulties involved in elaborating an international code in this field but recommended that as a possible first step FAO and WHO should convene a meeting of experts to consider the approach to the subject as well as the elaboration of a draft code. The Committee endorsed this proposal and stressed that the Codex Alimentarius Commission, the Committee and National Codex Contact Points be kept informed of developments. At an appropriate stage the draft code, when elaborated, should be circulated to Governments through their National Codex Contact Points.

CONCLUSION

97. The Committee expressed its appreciation to the New Zealand authorities for having hosted the Codex Committee on Meat Hygiene and noted that the Committee would adjourn sine die pending the outcome of the consideration of the two Codes of Practice by the Codex Alimentarius Commission at Step 8.

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APPENDIX I

LIST OF PARTICIPANTS *
LISTE DES PARTICIPANTS
LISTA DE PARTICIPANTES

- * The Heads of Delegations are listed first; Alternates, Advisers and Consultants are listed in alphabetical order.
Les chefs de délégations figurent en tête et les suppléants, conseillers et consultants sont énumérés par ordre alphabétique.
Figuran en primer lugar los Jefes de las delegaciones; los Suplentes, Asesores y Consultores aparecen por orden alfabético.

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DRAFT CODE OF HYGIENIC PRACTICE FOR FRESH MEAT
(Advanced to Step 8 of the Codex Procedure for the
Elaboration of Codes of Practice)

NOTE

In the preparation of this Code recognition has been given to the need to avoid precluding the adoption of new technical developments provided these are consistent with the hygienic production of wholesome meat.

SECTION I - SCOPE

This Code of Hygienic Practice applies to fresh meat intended for human consumption, whether by direct sale or through further processing. It contains the minimum requirements of hygiene of meat production from slaughter of animals up to and including the transport of meat and is intended to assure a healthful and wholesome meat supply.

SECTION II – DEFINITIONS

For the purpose of this Code:

1. "Abattoir" means premises approved and registered by the controlling authority used for the slaughter of animals for human consumption.
2. "Brand" means any mark or stamp approved by the controlling authority and also includes any tag or label bearing such mark or stamp.
3. "Carcase" means the body of any slaughtered animal after bleeding and dressing.
4. "Cleaning" means the removal of objectionable matter.
5. "Contamination" means the direct or indirect transmission of objectionable matters.
6. "Controlling authority" in relation to an abattoir or establishment means the official authority charged by the government with the control of hygiene including meat inspection.
7. "Disinfection" means the application of hygienically satisfactory chemical and/or physical agents and processes to cleaned surfaces with the intention of eliminating micro organisms.
8. "Dressed" or "Dressing"
 - (a) in relation to slaughtered animals except for pigs, sheep and lambs, goats and kids, means the removal of head, hide or skin, viscera (including or not including kidneys), genital organs, urinary bladder and feet up to the carpal and tarsal joints, and udders of lactating animals, animals that have calved or are in advanced pregnancy; and
 - (b) in relation to slaughtered pigs, means the removal of hair and bristles or skin, claws, eyelids, viscera (including or not including kidneys), genital organs, urinary bladder, udders in the case of lactating animals, animals that have farrowed or are in

advanced pregnancy, and the external acoustic duct unless in respect of that part an alternative effective form of cleaning is carried out; and

(c) in relation to sheep and lambs, goats and kids means the removal of the head (except in the case of young lambs and young kids), the pelt or skin, including that of the head, viscera (including or not including the kidneys), genital organs, urinary bladder and feet up to the carpal and tarsal joints, and udders of lactating animals, animals that have given birth or are in advanced pregnancy;

(d) in relation to cattle, pigs and solipeds includes where necessary splitting of the carcass. To split means dividing the carcass lengthwise on the medial line.

9. "Edible offal" in relation to slaughtered animals means such offals as may be passed as fit for human consumption.

10. "Establishment" means any premises approved and registered by the controlling authority in which fresh meat is prepared, handled, packed or stored.

11. "Fit for human consumption" in relation to meat means an article which has been passed and appropriately branded by an inspector and in which no changes due to disease, decomposition or contamination have subsequently been found.

12. "Fresh meat" means meat which has not yet been treated in any way to ensure its preservation, except that if it has been subjected to refrigeration, it should continue to be considered as "fresh" for the purpose of this Code.

13. "Inspector" means a properly trained officer appointed by the controlling authority of a country for the purpose of meat inspection and control of hygiene. The supervision of meat hygiene including the inspection of meat should be the responsibility of a veterinarian.

14. "Manager" in relation to an abattoir or establishment includes any person for the time being responsible for the management of the abattoir or establishment.

15. "Meat" means the edible part of any mammal slaughtered in an abattoir,

16. "Potable water" means water that is pure and wholesome at the point of usage in accordance with WHO requirements contained in the "International Standards for Drinking Water".

17. "Protective clothing" means special garments intended to prevent the contamination of meat and used as outer wear by persons in an abattoir or establishment and includes head coverings and footwear.

18. "Slaughter animal" means any mammal brought into an abattoir for slaughter.

SECTION III - REQUIREMENTS CONCERNING SLAUGHTER ANIMALS

19. Where a person has reason to believe that, as a result of any accident or by reason of any defect or disease, or by the administration of any drug or chemical, the meat derived from any animal might not be suitable for human consumption, he should not send the animal to any abattoir where animals are slaughtered unless the animal is certified by a veterinarian to the effect that he has attended the animal and it is in his opinion suitable to be slaughtered for human consumption. However, the veterinarian in charge of meat inspection at the abattoir should be the sole judge of whether an animal is fit- for slaughter, irrespective of any certificate which may have been given.

SECTION IV - TRANSPORT OF SLAUGHTER ANIMALS

Construction of conveyances

20. Every means of transport should be so constructed that:
- (a) animals can be loaded and unloaded easily;
 - (b) animals of different species are physically separated during transport;
 - (c) soiling by excreta deposited on the vehicle floor is minimized by the use of floor gratings or similar devices;
 - (d) ventilation is adequate;
 - (e) animals conveyed on the lower deck of a vehicle or railway truck having more than one deck are to be protected by an impervious floor below the grating of the upper deck; and
 - (f) it is easy to clean and disinfect.

Maintenance of conveyances

21. Every means of transport used to convey animals to any abattoir should be maintained in a sound state of repair. They should also be maintained in a clean and sanitary condition by cleaning and if necessary disinfecting as soon as practicable after the animals have been unloaded therefrom.

SECTION V - ESTABLISHMENT FACILITIES AND OPERATING REQUIREMENTS

A. Establishment Construction and Lay-out

Construction

22. (a) Abattoirs and establishments should be located in areas not subject to regular and frequent flooding and free from objectionable odours, smoke, dust or other contaminants.
- (b) Abattoirs or establishments should provide adequate working space for the satisfactory performance of all operations.
- (c) The construction should be sound and ensure adequate ventilation, good natural or artificial lighting and easy cleaning.
- (d) The building and facilities of the abattoir or establishment should be kept in good repair at all times.
- (e) The abattoir or establishment should be laid out and equipped so as to facilitate proper supervision of meat hygiene including performance of meat inspection.
- (f) The abattoir or establishment should be of such construction as to protect against the entrance and harbouring of insects, birds, rodents or other vermin.
- (g) In every abattoir or establishment there should be a physical separation between departments in which edible and inedible material is handled.
- (h) In all rooms in an abattoir or establishment other than rooms provided for the accommodation of workers and inspectors:
- (i) Floors should be of water-proof, non-toxic, non-absorbent materials, easy to clean and disinfect. They should be non-slip and without crevices and, except in the case of rooms where meat is frozen or stored, should slope sufficiently for liquids to be drained off to trapped outlets protected by a grill.

- (ii) Walls should be of water-proof, non-toxic, non-absorbent materials, which are easy to clean and disinfect, smooth, and at a height appropriate to the operation conducted; they should be light coloured and washable. The angles between the walls and the angles at the wall to floor junctions should be covered.
 - (iii) Ceilings should be so designed and constructed as to prevent the accumulation of dirt and condensation and should be easy to clean.
 - (i) Abattoirs and establishments should have an efficient effluent and waste disposal system which should at all times be maintained in good order and repair. All effluent lines (including sewer systems) must be large enough to carry peak loads. All lines must be water-tight and have adequate traps and vents. Catch-basins, traps, save-alls and sumps should at all times be kept separate and apart from any department in which meat is prepared, handled, packed or stored. Disposal of waste should be effected in such a manner as to avoid contamination of potable water supplies. The effluent lines and the manner of waste disposal should be approved by the controlling authority..
23. Abattoirs should include the following:
- (a) Adequate and well equipped areas reserved for the use of the meat inspection services.
 - (b) Covered accommodation large enough to house the animals, or, where climatic conditions permit, suitable uncovered holding facilities. These should' comply with the following requirements:
 - (i) Accommodation or facilities should be so arranged as to permit proper inspection of the animals before slaughter; the lairages and yards should be suitably constructed and maintained, paved or slatted, well drained and furnished with an adequate piped water supply.
 - (ii) Sufficient waterline connections with adequate water pressure should be available to enable the lairages, yards, races and unloading ramps and livestock transport vehicles to be cleaned.
 - (iii) There should be a sufficient number of paved or slatted pens to facilitate ante-mortem inspection and there should also be covered restraining devices such as chutes, squeeze gates, boxes or any other effective device for restraining animals requiring close examination.
 - (iv) Lairages and yards should be of such a layout that cross traffic of animals of different species is avoided.
 - (v) Where the climate is suitable, washing facilities for animals prior to slaughter should be available.
 - (c) Separate facilities for the physical isolation of sick animals or animals suspected of being sick. These facilities should be covered if climatic conditions require this and should be lockable. The drains of these pens should not connect with any of the open drains running through the remaining lairages and yards.
 - (d) Slaughter and dressing rooms which enable the work to be performed in a satisfactory manner. A special area should be reserved for pigs where appropriate. If other classes of animals are slaughtered or dressed at the same time as pigs, facilities

for scalding and dehairing of pigs should be situated in an area separated from other areas.

- (e) A separate room for emptying and rinsing the digestive organs. ^{1/}
- (f) A separate room for the further preparation of emptied and rinsed digestive organs. ^{1/}
- (g) If necessary separate facilities for the preparation of edible fats.
- (h) Separate rooms for the storing of hides, horns and hooves and inedible animal fats unless these are removed daily from the abattoir.
- (i) Refrigerated rooms suitable for the effective cooling and storage of meat.
- (j) For the slaughter of animals as specified in paragraphs 21 to 24 of the Code of Ante-Mortem and Post-Mortem Inspection of Slaughter Animals, special facilities capable of being locked solely for the slaughter of such animals and the holding of meat derived therefrom. These facilities should be located within easy reach of the pens reserved for isolation of such animals. Meat passed as being fit for human consumption in this room should be conveyed to the edible section of the abattoir or establishment in such a manner as to prevent its contamination. These special facilities should not be required in abattoirs where the killing of such animals is prohibited by the rules of the controlling authority of the country concerned.
- (k) Separate facilities in the form of a separate room or portion of a room capable of being controlled and capable of being locked, as required, for storing suspect meat and designed so as to prevent the risk of contaminating other meat and the risk of substitution.
- (l) Room capable of being locked and suitable for the secure holding of condemned meat, unless other adequate arrangements for disposal exist.
- (m) Facilities for the control of the entrances and exits of the slaughter premises.
- (n) Suitably located facilities for the adequate cleaning and disinfecting of vehicles.
- (o) Specially arranged location for the deposit of manure and adequate arrangements for its disposal.

^{1/} However, the controlling authority may approve other systems in the light of new technological developments.

24. Establishments in which meat is boned-out and cut-up should include the following:

- (a) Adequate and well equipped areas reserved for the use of the meat inspection services.
- (b) Refrigerated room or rooms for the holding of meat.
- (c) Rooms for boning and cutting physically separated from other rooms. The packing of boned-out and cut-up meat should take place in the same room where it is boned and cut-up, but, where this is not possible the packing may take place in a separate room. These rooms should be temperature controlled.

25. Refrigeration facilities. The construction and lay-out of any chilling room or freezer should satisfy the requirements of this Code.

26. Sanitary facilities and controls -

(a) Those operations which carry a risk of contamination of meat suitable for human consumption should be sufficiently separated from other operations to avoid the risk of such contamination.

(b) Rooms, equipment and utensils provided for slaughtering and dressing should be used for this purpose only and not for boning-out, cutting-up, holding or other handling of meat.

(c) Abattoirs and establishments should be laid-out and equipped so as to ensure that meat does not come into contact with floors, walls or other fixed structures, except those which are specifically designed for contact with meat.

(d) Slaughtering rooms should preferably be fitted with equipment enabling animals to be bled and carcasses to be dressed in a hanging position; if, however, metal cradles are used for flaying, they should comply with the provisions of sub-section 27(n) and should be high enough to ensure that the meat cannot touch the floor.

(e) Abattoirs and establishments should be equipped with an overhead rail for transporting meat so installed as to prevent contamination of the meat.

(f) An ample supply of potable water under adequate pressure should be provided with adequate facilities for its storage and distribution and with adequate protection against contamination and pollution.

(i) All water used in abattoirs and establishments should be potable.

(ii) Non-potable water may be used for such purposes as producing steam, refrigeration and fire control. Such water should be carried in completely separate lines, identified preferably by colour, and with no cross connection or back-siphonage with the lines carrying potable water.

(g) An adequate supply of hot potable water at no less than 82°C should be available at all times during working hours.

(h) Adequate natural or artificial lighting which does not alter colours should be provided throughout the abattoir or establishment. The intensity should not be less than:

540 lux (50 foot candles) at all inspection points;
220 lux (20 foot candles) in work rooms;
110 lux (10 foot candles) in other areas.

Light bulbs and fixtures suspended over meat in any step of preparation should be of the safety type or otherwise protected to prevent contamination of meat in case of breakage.

(i) Adequate ventilation should be provided to prevent excessive heat, steam and condensation and ensure that the air of premises is not contaminated with odours, dust, vapour or smoke. Ventilation openings should be screened. Windows should be fitted with whole panes and those which open should be screened. The screens should be made so as to be easily movable for cleaning. Internal window sills, if present, should be sloped to prevent use as shelves.

(j) All doors should be sufficiently wide and those opening from departments where edible material is handled, unless provided with an effective and operating air screen, should be solid, as far as practicable self-closing, or snug-fitting double action doors.

(k) All stairs located in any room used in any department where edible material is handled should be so constructed that:

(i) They can be easily cleaned and no contamination can be caused by material passing through the risers or treads;

(ii) They should have side curbs that are at least 10 cm in height measured at the leading edge of the treads.

(l) Lift cages should be so constructed as to afford adequate protection of the meat against contamination. In particular the base and sides should be finished to a smooth impervious surface. Lift shafts should be smoothly finished or tiled. If painted, a light colour should be used. The floor of lift shafts should be drained so as to permit effective cleaning.

(m) Platforms, ladders, chutes and similar equipment in any room used for the preparation of meat should be constructed so as to be capable of being effectively cleaned and should consist of material which is resistant to fracture, abrasion or corrosion and which can be effectively cleaned. Where chutes are provided they should be constructed with inspection and cleaning hatches.

(n) All rooms used for slaughtering, dressing, de-boning, preparation, packing or other handling of meat should be equipped with adequate facilities for washing hands, furnished with waste pipes leading to drains and conveniently located for the use of personnel during operations. The water used for the washing of hands should be warm. Taps of hand-washing facilities should be of a non-hand operable type. An adequate supply of odourless liquid soap or other cleansing agents should be provided.

(o) (i) All rooms used for slaughtering and dressing, boning, preparing, packing or other handling of meat should be equipped with adequate facilities for cleaning and disinfecting implements, conveniently located for the use of personnel during operations. These facilities are for use exclusively in the cleaning and disinfection of knives, steels, cleavers, saws and other implements.

(ii) All facilities for cleaning and disinfecting implements should be of such nature and size as to permit proper cleaning and disinfection of implements. These facilities should be constructed of corrosion-resistant materials and should be capable of being easily cleaned.

(iii) All facilities for cleaning and disinfecting of implements should be fitted with suitable means of supplying water in sufficient quantity at a temperature of not less than 82°C at all times while animals are being slaughtered or dressed or meat is being handled in that part of the abattoir or establishment.

27. Every abattoir and establishment should include the following amenities:

(a) Facilities for employees: adequate changing room accommodation, drying room, lunch room, toilets with flushing water closets, showers and handwashing facilities which should have adequate lighting, ventilation and heating, and should not open directly to any work areas. Handwashing facilities with hot and cold water with taps of a non-hand operable type and suitable hygienic means of drying the hands should be provided adjacent to every toilet. Where paper towels are used, a sufficient number of dispensers with paper towels and receptacles for used towels should be provided

adjacent to each washing facility. Waste from these facilities should not join the plant effluent system prior to the final save-all; and

(b) Facilities for meat inspection personnel: adequate changing room accommodation, drying room, lunch room, toilets with flushing water closets, showers and handwashing facilities. The amenities reserved for the meat inspection service, and toilets, and shower and handwashing facilities should have adequate lighting, ventilation and heating. Handwashing facilities with hot and cold water with taps of a non-hand operable type and suitable hygienic means of drying the hands should be provided adjacent to every toilet. Where paper towels are used, a sufficient number of dispensers with paper towels and receptacles for used towels should be provided adjacent to each washing facility.

28. Office accommodation should be provided for the exclusive use of the meat inspection service. Laboratory facilities should be readily available for the purpose of meat inspection and meat hygiene,

B. Equipment and Utensils

29. All equipment, implements and utensils used in abattoirs or establishments which come in contact with meat should present a smooth impervious surface and be resistant to corrosion and should be made of a material which is non-toxic, does not transmit odour or taste, smooth, free from pits, crevices, non-absorbent and capable of withstanding repeated exposure to normal cleaning and disinfection. Stationary equipment should be installed in such a manner as will permit easy access and thorough cleaning and disinfection. Such equipment should be so constructed that it may be easily cleaned.

30. Equipment and utensils used for inedible or condemned materials should be so identified and should not be used for edible products.

31. Equipment and utensils for slaughtering and dressing should be used for this purpose only and not for cutting-up or boning-out or further preparation of the meat.

32. No containers, particularly wooden crates, wooden boxes or cartons, should be assembled and no containers, equipment, or utensils should be stored in any part of an abattoir or establishment in which animals are slaughtered or dressed or where meat is cut-up or boned-out, prepared, handled, packed or stored unless the container, equipment or utensils are required for use in that part.

C. Hygienic Operating Requirements

33. (a) Amenities provided for the use of employees and the meat inspection service including the meat inspection office space should be kept clean at all times.

(b) All equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws and containers should be cleaned at frequent intervals during the day, and immediately and thoroughly cleaned and disinfected whenever they come in contact with diseased material, infective material or become contaminated. They shall also be cleaned and disinfected at the conclusion of each working day.

(c) The manager should ensure that washing down, cleaning and disinfection are carried out in compliance with this Code.

(d) Carcasses or meat should not be contaminated during cleaning or disinfection of rooms, equipment or utensils.

(e) Where any skip or trolley or any container used in a department where edible material is handled enters an area where inedible material is handled, it should be cleaned and disinfected immediately before re-entering any edible department.

(f) Detergents, sanitizing agents and disinfectants should conform to public health requirements and should not be allowed to come into contact with meat. Any residue of these cleaning agents used for the washing of floors, walls or edible product equipment should be removed by thorough rinsing with potable water before the area or equipment is again used for handling meat. Prior to use of the equipment any residue

(g) of sanitizing agents or disinfectants should be removed by thorough rinsing with potable water.

(h) No cleaning preparation or material, or any paint likely to contaminate meat should be used in any abattoir or establishment where any animal is or may be slaughtered or dressed or meat is or may be prepared, handled, packaged or stored.

(i) Except as required for purposes of hygiene no substance which may contaminate meat should be handled or stored in any part of any abattoir or establishment in which animals are slaughtered or carcasses dressed or in which meat is prepared, handled, packed or stored. However, materials employed in the construction or maintenance of an abattoir or establishment may be used at any time when an inspector is satisfied that there would be no danger of contamination of meat.

34. Pest Control -

(a) An effective and continuous programme for the control of insects, birds, rodents or other vermin within the abattoir or establishment should be maintained.

(b) Abattoirs or establishments and surrounding areas should be regularly examined for evidence of infestation with insects, birds, rodents or other vermin.

(c) Should pests gain entrance to abattoirs or establishments approved eradication measures should be instituted. The eradication of pests should always be carried out under skilled supervision and with the full knowledge of the inspector.

(d) Only pesticides approved for use in an abattoir or establishment by the competent authority should be used in an abattoir or establishment and the greatest care should be exercised to prevent any contamination of the meat. Pesticides should only be employed if other precautionary methods cannot be used effectively.

(e) Before pesticides are applied all meat should be removed from the room and all equipment and utensils covered. After spraying, the equipment and utensils should be thoroughly washed prior to being used again.

(f) Pesticides or other toxic substances should be stored in separate locked rooms or locked cabinets and dispensed or handled only by authorized and properly trained personnel. Every precaution should be taken to avoid contaminating meat.

35. No animals other than animals for slaughter should be allowed to enter in any part of an abattoir, except those animals which are used for transporting and delivering animals for slaughter or delivering meat. No animals are allowed to enter establishments.

Hygiene and Health of Personnel

36. (a) Managers of abattoirs and establishments should arrange for adequate and continuing training of every employee in hygienic handling of meat and clean habits

so that the employees are able to take the necessary precautions to prevent contamination of meat. Instructions should include relevant parts of this Code.

(b) It is recommended that national legislation should provide for a medical examination of meat handlers, meat inspectors and other persons who come into contact with meat in abattoirs and establishments. This medical examination should be carried out just prior to employment and should be repeated when clinically or epidemiologically indicated. The medical examination should pay particular attention to 1) infected wounds and sores; 2) enteric infections including parasitic diseases and carrier states especially with respect to *Salmonellae*; and 3) respiratory diseases.

(c) The management should take care to ensure that no employee, while known or suspected to be suffering from or to be a carrier of a disease capable of being transmitted through meat, or while afflicted with infected wounds or sores or diarrhoea, is permitted to work in any area of an abattoir or establishment in a capacity in which there is a possibility of such a person directly or indirectly contaminating meat with pathogenic micro-organisms. Any ill person should immediately report to management that he is ill.

(d) Any person who is cut or injured should discontinue working with meat and until he is suitably bandaged should not engage in any abattoir or establishment in the preparation, handling, packaging or transportation of meat. No person working in any abattoir

(e) or establishment should wear any exposed bandage unless the bandage is completely protected by a waterproof covering which is conspicuous in colour and is of such a nature that it cannot become accidentally detached.

(f) The manager of any abattoir or establishment should, if required to do so by an inspector, produce for perusal by the inspector any medical certificate produced to the manager by an employee of the abattoir or establishment.

(g) Every person engaged in an abattoir or establishment should wash his hands frequently and thoroughly with soap or detergents under running warm potable water while on duty. Hands should be washed before commencing work, immediately after using lavatory, after handling contaminated material, and whenever else necessary. After handling diseased or suspect material hands must be washed and disinfected immediately. Notices requiring hand-washing should be displayed.

(h) Every person engaged in an area in an abattoir or establishment where meat is handled should maintain a high degree of personal cleanliness while on duty, and should at all times while so engaged wear suitable protective clothing including (a) head covering and (b) footwear, all of which articles should be washable unless designed to

(i) be disposed of and which should be maintained in a clean condition consistent with the nature of the work in which the person is engaged. Aprons and similar items should not be washed on the floor.

(j) Every person who visits an area in an abattoir or establishment where carcasses or meat are handled should wear clean protective clothing.

(k) No part of an abattoir or establishment used for slaughter of animals, dressing of carcasses, preparation, handling, packaging or storing of meat should be used for deposit of personal effects or clothing.

(l) Protective clothing, knife pouches, belts and working implements should be deposited in a place provided for the purpose where they will not contaminate any carcase or meat.

(m) Any behaviour which can potentially contaminate the meat, such as eating, use of tobacco, chewing, should be prohibited in any part of an abattoir or establishment used for slaughtering or dressing of carcasses or for the preparation, handling, packaging or transportation of meat.

(n) Gloves if used in the handling of meat should be maintained in a sound, clean and sanitary condition. The wearing of gloves does not exempt the operator from having thoroughly washed hands. Gloves should be made of an impermeable material except where their usage would be inappropriate or incompatible with the work involved.

(m) Management should arrange for sufficient supervision to ensure that provisions (c), (d), (f), (g), (h), (i), (j), (k) and (l) are observed.

D. Operating Practices and Production Requirements

Principles to be observed during slaughtering, dressing and preparation of meat

37. (a) Every slaughter animal must undergo ante- and post-mortem inspection.

(b) No animal should be slaughtered or dressed in any abattoir or establishment except when an inspector is present.

(c) Any animal in an unreasonably dirty condition should be cleaned to the satisfaction of the inspector before it is allowed to enter the killing floor, so as to lessen the risk of contamination.

(d) All animals brought into rooms for slaughtering, should be slaughtered with out delay.

(e) The bleeding should be as complete as possible. If blood is intended to be used in food preparation, it should be collected and handled hygienically and should in no case be stirred with the hand but only with hygienically acceptable implements.

(f) Stunning, sticking and bleeding of any animals should not be allowed to proceed at a rate faster than that at which the carcasses can be promptly accepted for * dressing.

(g) The sticking, bleeding and dressing should be carried out with care so as to ensure the production of a clean carcase, head and edible offals. None of the parts should come in contact with the floor and all contamination should be avoided.

(h) Carcasses should be separated from each other to avoid contact and contamination once the removal of the hide, skin or pelt has commenced. Separation of carcasses, heads and viscera should be maintained until they have been examined and passed by the inspector. Carcasses should come in contact only with surfaces or equipment essential to handling, dressing and inspection. .

(i) Before the removal from any head of any meat or brain intended for human consumption, the head should, except in the case of pigs, be skinned then thoroughly washed and rendered clean with running potable water to the satisfaction of the inspector.

(j) Where the tongue is dropped it should be done in such a way that the tonsils are not cut.

- (k) The following points should be noted in skinning operations:
- (i) All species, except pigs, should be skinned and this should be done before the carcass is eviscerated in such a manner as to avoid contamination of the carcasses. Pumping of air between the skin and the carcass to facilitate skinning should be forbidden. Pigs should be scoured of all bristles, scurf and dirt and may be skinned or partly skinned. The water in the scalding tanks should be changed as frequently as practicable.
 - (ii) Skinned carcasses should not be washed in a manner which will allow water to enter either the abdominal or thoracic cavities prior to evisceration.
 - (iii) Lactating or obviously diseased udders should be removed from all classes of animals. Removal of such udders should take place at the earliest appropriate time during dressing. No secretion should be allowed to contaminate the carcass and therefore udders should be removed in such a manner that teat and udder substance remains intact and without any milk duct or sinus being opened.
- (l) Evisceration should be effected without delay,
- (m) During dressing the following should be observed:
- (i) The discharge of any material from the oesophagus, paunch, intestines or rectum, or from the gall bladder, urinary bladder, uterus or udder should be effectively prevented.
 - (ii) Any offals intended for human consumption should be removed from the carcass in a manner that will prevent contamination of the organ removed.
 - (iii) Intestines should not be severed from the stomach during evisceration and no other opening should be made during evisceration into any intestine, except as necessarily required by a dressing procedure. In such a case, the intestines should be tied before severing. In the case of sheep, lambs and pigs, the removal of stomach and intestines should be carried out without separation.
 - (iv) Spermatic cords and pizzles should be removed from the carcass.
- (n) No carcass, meat or edible offal should be washed in any abattoir other than with running potable water.
- (o) No paper, cloth, wad, sponge or brush should be used in the washing of any carcass. However, this will not apply with respect to the use of brushes in the dressing of singed pig carcasses.
- (p) No person should, whether by mechanical or any other means, inflate with air any carcass, meat or edible offal unless ritual procedures require the inflation of lungs.
- (q) No hides, skin or pelts should be washed or defleshed or left in any part of the abattoir or establishment used for the slaughtering or dressing of animals or the preparation or holding of any meat intended for human consumption.
- (r) All stomachs and intestines and all inedible material derived from the slaughtering or dressing of animals should be removed as soon as possible but in

accordance with the inspection procedure from the dressing room in such a manner as to avoid contaminating the floor and walls or any carcase, meat or edible offal.

(s) All stomachs, intestines and all inedible material should subsequently be treated in parts of the abattoir or establishment destined for this purpose in accordance with recognized practices which should pay attention to cleanliness and hygiene.

(t) Faecal and other objectionable matter contaminating carcasses during dressing should be carefully trimmed off.

(u) Where the inspector considers that the manner in which animals are being slaughtered or dressed or under which the carcasses or meat are being handled, prepared or packaged, will adversely affect

- (i) the cleanliness of the carcase or meat; or
- (ii) the hygiene of production; or
- (iii) the efficiency of meat inspection,

he may require the manager to take action to correct the deficiency or to reduce the rate of production or to suspend operations for the time being in any specified section of the abattoir or establishment.

(v) (i) In abattoirs, post-mortem inspection should be performed immediately after slaughter.

(ii) Prior to the final examination, all parts required for inspection of the slaughtered animal should remain identifiable with the carcase.

(iii) Prior to the final examination, no part must be removed without consent of the inspector.

Branding of meat passed for human consumption

38. (a) Meat which has been passed by the inspector as fit for human consumption should be branded according to the requirements contained in the Code of Ante-Mortem and Post-Mortem Inspection of Slaughter Animals.

(b) Brands and stamps bearing the marks of inspection should be kept clean while in use. They should be held in the custody of the inspector and used only under his supervision.

(c) Only firebrands or suitable branding ink should be applied to the meat.

Operating practices following post-mortem inspection including storage

39. (a) Meat passed as fit for human consumption should be handled, stored or transported in a manner that will protect the meat from contamination and deterioration.

(b) Meat passed as fit for human consumption should be removed without undue delay from the dressing area. It should be placed under refrigeration under close supervision of the inspector. However, it is permitted to carry out pre-rigor cutting-up and boning. In this event, the meat should be transported directly from the slaughter-hall to the cutting-up and boning rooms. These rooms should be temperature controlled and situated near to each other in the same establishment. Cutting-up, boning and packing should be done without delay and immediately thereafter the meat should be transported to chilling rooms or to the processing rooms.

(c) The following provisions should apply where carcasses, parts of carcasses or edible offals are placed in chilling rooms, freezing rooms or frozen storage as the case may be:

(i) Entry should be restricted to personnel necessary to carry out operations efficiently.

(ii) Doors should not be left open for extended periods and should be closed immediately after use.

(iii) No chilling room, freezing room or freezer store should be loaded beyond its designed capacity.

(iv) Where refrigerating equipment is not manned, automatic temperature recorders should be installed.

(v) If no automatic device is installed temperatures should be read at regular intervals and the readings recorded in a log book.

(vi) A record should be maintained of all meat placed in or taken out of the chilling room, freezing room or freezer store.

(d) Where carcasses, parts of carcasses or edible offals are placed in a chilling room for chilling, the following provisions should be observed in addition to those in sub-paragraph (c) of this paragraph:

(i) There should be a reliable method of monitoring the chilling of carcasses or edible offals which are placed in a chilling room for chilling.

(ii) Meat should be hung or placed in suitable corrosion-resistant trays, in a manner permitting adequate circulation of air around the meat.

(iii) Meat should be held in a manner which precludes drip from one piece falling on to any other piece.

(iv) Temperature, degree of relative humidity and air flow should be maintained at a level suitable for the preservation of meat.

(v) Condensation should be prevented by the efficient operation of refrigerating facilities combined with proper insulation of walls and ceilings, the application of heat near the ceilings, or by any other suitable method. If overhead refrigerating coils are installed, insulated drip pans should be placed beneath them. All floor type refrigerating units should be placed within curbed and separately drained areas unless located adjacent to floor drains.

(e) Where carcasses, or parts of carcasses, or edible offals are placed in a freezing room for freezing, the following provisions should be observed in addition to those in sub-paragraph (c) of this paragraph:

(i) Meat which is not in cartons should be hung or placed on suitable corrosion-resistant trays in a manner permitting adequate circulation of air around the meat. Cartons should be stacked to permit adequate circulation of air around each carton.

(ii) Meat which is not in cartons should be held in a manner which precludes drip from one piece of meat falling on to any other piece.

(iii) Where meat is held on trays care should be taken to avoid contact between the base of any tray and meat stored beneath.

- (iv) Refrigerating coils should be defrosted frequently to prevent excessive accumulation of ice and loss of refrigerating efficiency. Provision should be made for removal, without affecting the product, of water resulting from defrosting.
- (f) Where carcasses, or parts of carcasses, or edible offals to be stored are placed in any freezer store, the following provisions should be observed in addition to those in sub-paragraph (c) of this paragraph:
 - (i) No meat should be placed in a freezer store until the mean temperature of the meat has been reduced to an acceptable level.
 - (ii) Meat should not be stacked directly on the floor but should be placed on pallets or on dunnage. Stacks of meat in carcase form or in cartons should be placed so that there is adequate air circulation around the stacks.
 - (iii) The freezer store should be operated at a temperature which will give adequate protection to the type of product. Temperature fluctuations in the freezer store should be kept to a minimum. Where unpackaged meat is stored, the temperature difference between the evaporator and the meat should be kept to a minimum.
 - (iv) Refrigerating coils should be defrosted as required to prevent excessive accumulation of ice and loss of refrigerating efficiency. Provision should be made for removal, without affecting the product, of water resulting from defrosting.

Packaging and Packing Material

40. If the meat is packaged or wrapped, the following considerations should be taken into account:
- (a) Packaging material should be stored and used in a clean and sanitary manner.
 - (b) The wrapping should be sufficient for the purpose of protecting the meat from contamination in the conditions under which it is to be handled, transported or stored.
 - (c) The wrapping should be non-toxic and should not leave harmful deposits of any kind on the meat, or otherwise contaminate it.
 - (d) The wrapping or covering of warm or cold meat transported within an establishment or from one establishment to another should be optional, but care should be taken that the meat is not contaminated.
 - (e) Cases or cartons used for the packing of meat should be provided with a suitable inner liner. However, the liner may not be required if individual pieces of meat, such as cuts or boneless meat, are individually wrapped before packing.

Transportation

41. (a) Meat should not be carried in any means of transport which is used for conveying live animals.
- (b) Meat should not be carried in the same means of transport as other goods in a way which may adversely affect the meat.
 - (c) Stomachs should only be transported when thoroughly cleaned or scalded, and heads and trotters only when skinned or scalded or dehaired.

(d) Meat should not be placed in any means of transport which has not been cleaned before loading and if necessary also disinfected.

(e) Carcasses, sides and quarters, other than those which are adequately wrapped and frozen, should be hung during transport or placed in a suitable manner on racks or similar equipment.

(f) Means of transport or containers should comply with the following conditions:

(ii) All internal finishes should be made of corrosion-resistant material, be smooth, impervious and easy to clean and disinfect. Joints and doors should be sealed so as to prevent the entry of pests and other sources of contamination.

(iii) The design and equipment should be such that the required temperature can be maintained throughout the whole period of transport.

(iv) Vehicles intended for the transport of meat should be equipped in such a manner that the meat does not come into contact with the floor.

(v) Suitable closed containers should be used for the transport of unwrapped edible offal. Offal should be transported under refrigeration unless the period of transport is less than two hours when an insulated container may be used.

(g) Every effort should be made to prevent changes in temperature of frozen meat at any time during storage and transport but where accidental thawing takes place the meat should be examined and evaluated by the inspector before any further step is taken.

Meat unsuitable for human consumption

42. (a) Meat being condemned or otherwise unfit for human consumption should forth with be placed in clearly identified chutes, containers, trucks, trolleys, skips, or rooms, or other adequate arrangements provided for these purposes (23(l)) and held under the supervision of the inspector. For the purpose of clear identification, cuts or brands may be made to show this meat is condemned or unfit for human consumption. The transport of such meat to the rendering station should be performed to the satisfaction of the inspector to ensure that no removal of such meat is possible and no contamination could be caused by such meat.

(b) No person should remove or cause to be removed from any abattoir or establishment, any carcase, meat, organ, viscera or fat that has been condemned or retained by the inspector, except under his direction and supervision.

(c) Where in any abattoir or establishment any carcase, meat, organ, viscera or fat is found to be unsuitable for human consumption, it should be the duty of the manager to cause the carcase, meat, organ, viscera, or fat to be removed to a by-products plant in accordance with the rules of the controlling authority.

E. Programme for Veterinary Supervision and Hygiene Control

43. All aspects covered by this Code should be supervised by an official veterinarian. In particular, care should be taken that for every abattoir or establishment at least one official veterinarian is appointed for the supervision of hygiene including meat inspection.

44. It is desirable that each abattoir or establishment in its own interest designates a single individual, whose duties are preferably divorced from production, to be held

responsible for the cleanliness of the abattoir or establishment. His staff should be a permanent part of the organization or employed by the organization and should be well trained in the use of special cleaning tools, methods of dismantling equipment for cleaning and in the significance of contamination and the hazards involved. A permanent cleaning and disinfection schedule should be drawn up to ensure that all parts of the abattoir or establishment are cleaned appropriately and that critical areas, equipment and material are designated for cleaning and/or disinfection daily or more frequently if required.

F. Laboratory Control Procedures

45. In addition to the routine control carried out by the meat inspection services, it is desirable that each establishment in its own interest should have access to laboratory control. Analytical procedures used should follow recognized or standard methods in order that the results may be readily interpreted.

Appendix to the Code of
Hygienic Practice for Fresh Meat

FIELD AND MOBILE SLAUGHTERHOUSES

Reindeer and semi-domesticated game animals may be slaughtered in approved field and mobile slaughterhouses if they are stunned, bled and dressed at the slaughterhouse and undergo ante-mortem and post-mortem inspection.

The Code of Hygienic Practice for Fresh Meat and the Code of Ante-mortem and Post-mortem Inspection should be valid in the applicable parts also for approved field and mobile slaughterhouses.

DRAFT CODE OF ANTE-MORTEM AND POST-MORTEM
INSPECTION OF SLAUGHTER ANIMALS

(Advanced to Step 8 of the Codex Procedure for
the Elaboration of Codes of Practice)

NOTE

This Code should be read in conjunction with the Draft Code of Hygienic Practice for Fresh Meat (ALINORM 76/15, Appendix II)
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SECTION I - SCOPE

This Code applies to the ante-mortem and post-mortem inspection of slaughter animals intended for human consumption.

SECTION II – DEFINITIONS

For the purpose of this Code:

1. "Abattoir" means premises approved and registered by the controlling authority used for the slaughter of animals for human consumption.
2. "Brand" means any mark or stamp approved by the controlling authority, and also includes any tag or label bearing such mark or stamp.
3. "Carcase" means the body of any slaughtered animal after bleeding and dressing.
4. "Cleaning" means the removal of objectionable matter.
5. "Contamination" means the direct or indirect transmission of objectionable matters.
6. "Controlling authority" in relation to an abattoir means the official authority charged by the government with the control of hygiene, including meat inspection.
7. "Disinfection" means the application of hygienically satisfactory chemical and/or physical agents and processes to cleaned surfaces with the intention of eliminating micro-organisms.
8. "Dressed" or "Dressing"
 - (a) in relation to slaughtered animals except for pigs, sheep and lambs, goats and kids, means the removal of head, hide or skin, viscera (including or not including kidneys), genital organs, urinary bladder, and feet up to the carpal and tarsal joints, and udders of lactating animals, animals that have calved or are in advanced pregnancy;
 - (b) in relation to slaughtered pigs, means the removal of hair and bristles or skin, claws, eyelids, viscera (including or not including kidneys), genital organs, urinary bladder, udders in the case of lactating animals, animals that have farrowed or are in advanced pregnancy, and the external acoustic duct unless in respect of that part as an alternative an effective form of cleaning is carried out;
 - (c) in relation to sheep and lambs, goats and kids, means the removal of the head (except in the case of young lambs and young kids), the pelt or skin (including that

of the head), viscera (including or not including the kidneys), genital organs, urinary bladder and feet up to the carpal and tarsal joints, and udders of lactating animals, animals that have given birth or are in advanced pregnancy;

(d) in relation to cattle, pigs and solipeds, includes where necessary splitting of the carcass. To split means dividing the carcass lengthwise on the medial line.

9. "Emergency slaughter" means slaughter by necessity of any animal which has recently suffered accident or injury.

10. "Fit for human consumption" in relation to meat means an article which has been passed and appropriately branded by an inspector and in which no changes due to disease, decomposition, or contamination, have subsequently been found.

11. "Inspector" means a properly trained officer appointed, by the controlling authority of a country for the purpose of meat inspection and control of hygiene. The supervision of meat hygiene, including the inspection of meat, should be the responsibility of a veterinarian.

12. "Potable water" means water that is pure and wholesome at the point of usage in accordance with WHO requirements contained in the "International Standards for Drinking Water".

13. "Residues" means any foreign substance, including metabolites, therapeutic or prophylactic agents, which are objectionable or a hazard to human health, remaining in slaughter animals prior to slaughter or in any of the tissues after slaughter, either as a result of treatment or accidental exposure. Examples of such substances are antibiotics, anthelmintics, growth promoters, hormones, hormone-like substances, and pesticides, tranquillizers and radioactive residues.

14. "Slaughter animal" means any mammal brought into an abattoir for slaughter.

SECTION III - GENERAL REQUIREMENTS

15. Every slaughter animal should:

(a) be appropriately identified 'or accompanied by an appropriate document which would ensure that the place of origin from which the animal has come can be traced;

(b) be adequately rested prior to slaughter in clean, well ventilated lairages and yards having drinking troughs supplied with potable water;

(c) undergo an ante- and post-mortem inspection unless delay in carrying out ante-mortem inspection would cause undue suffering to animals requiring emergency slaughter.

SECTION IV - ANTE-MORTEM INSPECTION Purpose of ante-mortem inspection

16. The purpose of ante-mortem inspection is:

(a) to select animals which are adequately rested and which will provide meat which is fit for human consumption;

(b) to select for isolation and detailed clinical examination, diseased, suspected diseased or suspected abnormal animals;

(c) to prevent contamination of the dressing areas by animals in an excessively dirty condition;

(d) to prevent contamination of premises, equipment and personnel by animals suffering from a disease which is communicable;

(e) to obtain information which may be necessary for the post-mortem inspection, diagnosis, and judgement of carcase and offals.

Prerequisites for ante-mortem inspection

17. (a) No animal should proceed for slaughter until the inspector has carried out an ante-mortem inspection and has passed the animal for slaughter. Exceptions may be made in cases of emergency slaughter.

(b) All animals should be inspected within 24 hours of delivery to the abattoir. If the animal is kept for more than 24 hours after the initial ante-mortem inspection

(c) at the abattoir the ante-mortem examination should be repeated on the day of slaughter.

(d) The method of identification of inspected animals should be approved by the controlling authority.

(e) It is the duty of the management of the abattoir to present the animals in such a way that an adequate ante-mortem inspection can be carried out.

Ante-mortem inspection procedure

18. (a) Animals should be inspected in a standing position and in motion, and while they are not excited.

(b) The following should be observed:

(i) abnormalities and signs of disease;

(ii) species and behaviour of animals; in sick or suspected diseased animals, notice should be taken of age, colour and specific markings;

(iii) cleanliness of slaughter animals.

(c) Particular attention should be paid to the following details:

(i) manner of standing and movement;

(ii) state of nutrition;

(iii) reaction to environment;

(iv) condition of hide, skin, hair and wool;

(v) digestive system (salivation, rumination, consistency and colour of faeces);

(vi) appearance of the urinogenital system, including vulva, mammary glands, prepuce and scrotum;

(vii) respiratory system (nostrils, including mucous membranes, nasal discharge, blood tinged froth, quality of respiration);

(viii) injuries, swelling or oedema;

(ix) body temperature (in suspected or obviously diseased animals);

(x) blood smear (in cases in which a disease is suspected which could be diagnosed by examining the blood);

(xi) as certain diseases or disease symptoms have sites of predilection in different species, it is essential that attention should be paid to these sites.

Disposition of animal after ante-mortem inspection

19. The post-mortem inspector should be notified of the result of the ante-mortem inspection. The method of carrying out this notification is left to the controlling authority.
20. An animal is released for slaughter without any restriction when the ante-mortem inspection has revealed no evidence of any abnormal condition or disease.
21. If during the ante-mortem inspection any disease or condition has been noted which does not prevent the animal from being slaughtered for human consumption, the animal should be identified, released for slaughter and post-mortem veterinary inspection.
22. Where disease signs are doubtful, the animal should be withdrawn from slaughter and placed in an isolation pen set aside for this purpose for detailed examination, observation or treatment, or slaughtered under special conditions to preclude contamination of the premises, equipment and personnel.
23. Where signs indicate a systemic involvement, a communicable disease, or toxicity from chemical or biological agents which do or may render the meat unsound, the animal so affected should be withheld from slaughter and condemned forthwith as unfit for human consumption or, where appropriate, set aside and remain under veterinary control until a further decision regarding disposition is taken.
24. Animals' exhibiting normal behaviour but known to have been treated or given drugs and to be carrying consequent residues or which are carrying residues from other sources, should be either condemned or withheld from slaughter until the residues are excreted or metabolized by the body to harmless end products. In case of doubt the animal should be identified and slaughtered and the carcass and viscera should be subjected to all necessary laboratory examinations.
25. Any animal which as a result of ante-mortem inspection is not passed for slaughter should be examined for a final decision on its disposition by the veterinary inspector.
26. Animals which have died, and those which have been rejected at ante-mortem inspection and slaughtered, should be removed, immediately and rendered into inedible products.

SECTION V - POST-MORTEM INSPECTION – GENERAL

Purpose of post-mortem inspection

27. The purpose of post-mortem inspection is to ensure the detection of abnormalities and pass for human food only meat which is fit for human consumption.

Methods of slaughter

28. The inspector should carry out routine checks on the manner and methods of handling animals, stunning, shackling and bleeding.

Prerequisites for post-mortem inspection

29. Before the post-mortem inspection of slaughter animals is commenced it is the duty of the inspector to satisfy himself that the condition of the premises, equipment and facilities are conducive to the efficient and hygienic performance of this examination. It is

the duty of the management of the abattoir to present the carcasses and viscera in a hygienic manner and in such a way that an adequate inspection can be carried out.

30. So as to prevent the contamination of carcasses, heads and viscera it is essential that the basic requirements of hygiene, such as laid down by the Code of Hygienic Practice for Fresh Meat, are strictly enforced and that the labour force slaughtering and dressing carcasses is fully aware of its important role in maintaining a satisfactory level of meat hygiene.

31. In operating an abattoir the following points should be observed:

(a) Separation - Carcasses should be separated from each other to avoid contact and contamination once the removal of the hide, skin or pelt has commenced. Separation of carcasses, heads and viscera should be maintained until they have been examined and passed by the inspector. Meat should come in contact only with surfaces or equipment essential to handling, dressing and inspection. (FM 37(h))

(b) Evisceration - Evisceration should be effected without delay. (FM 37(l))

(c) Identification of carcasses and their parts - Prior to the final examination, all parts required for inspection of the⁷ slaughtered animal should remain identifiable with the carcass. (FM 37(v)(ii))

(d) Washing of hands - Every person engaged in an abattoir should wash his hands frequently and thoroughly with soap or detergents under running warm potable water while on duty. Hands should be washed before commencing work, immediately after using the lavatory, after handling contaminated material, and whenever else necessary. After handling diseased or suspect material hands must be washed and disinfected immediately. Notices requiring hand-washing should be displayed. (FM 36(£))

(e) Cleaning and disinfection of tools and equipment - All equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws and containers should be cleaned at frequent intervals during the day, and immediately and thoroughly cleaned and disinfected whenever they come in contact with diseased material, infective material or become contaminated. They shall also be cleaned and disinfected at the conclusion of each working day. (FM 33(b))

(f) Washing of carcasses - Skinned carcasses should not be washed in a manner which will allow water to enter either the abdominal or thoracic cavities prior to evisceration. (FM 37(k)(ii))

Post-mortem inspection procedure

32. Routine post-mortem inspection should include viewing, palpation and, where necessary, incision. This inspection should be carried out in a hygienic and systematic manner.

33. Where a lymph node, organ or any carcass tissue is being incised by the inspector, the cut surface should be cleanly sliced in order to present a picture which is not distorted. Where an incision is required to be made, the inspector should as far as possible prevent any risk of contamination.

34. The head, organs, viscera and any other part of a carcass required for post-mortem inspection should be identifiable with the carcass from which they were removed until inspection has been completed. Blood of slaughtered animals intended for human

consumption should, until inspection has been completed, be so retained as to permit identification with the carcase or carcasses from which the blood was derived.

35. Except with the permission of the inspector no person should, prior to the inspection of any carcase being completed:

- (i) remove any serous membrane or any other part from the carcase; or
- (ii) remove, modify, or obliterate any evidence of disease in the carcase or organ by washing, scraping, trimming, stripping or otherwise treating the carcase or organ;
- (iii) remove any mark or identification from the carcase, head or viscera until the inspector has completed his inspection and given his decision.

36. No person should remove from the inspection area of an abattoir any part of any carcase, organ, or any viscera, until the inspector has completed his examination and a decision has been given.

37. Viscera should be examined:

- (i) as they are removed from the carcase; and/or
- (ii) after their removal from the carcase, in which case they should be clearly identifiable with the carcase until inspection has been completed.

Retention of carcasses and viscera

38. Any carcase or viscera found to be diseased, suspected of disease or any abnormality which requires a more detailed examination, should be suitably branded and retained under the supervision of the inspector and kept separate from carcasses, viscera and heads which have been inspected. The relevant parts of that animal should be assembled for veterinary examination. The veterinarian may perform or require any further examination and any laboratory test he deems necessary for reaching a final decision.

39. The method of identification which denotes that a carcase and viscera have been retained for further inspection should be laid down by the controlling authority.

40. Where in the opinion of the inspector

- (i) a more detailed post-mortem examination; or
- (ii) a microbiological, parasitological, chemical or histopathological examination; or
- (iii) any other examination necessary to render a judgement on a carcase or viscera, is required, he should take all the necessary specimens from such carcase or viscera.

41. The final responsibility as to the decision on fitness for human consumption rests with the veterinary inspector.

SECTION VI - POST-MORTEM INSPECTION BY SPECIES

A. Adult Bovines and Bovine Calves over Six Weeks of Age

Inspection of heads

42. (a) A head which has been skinned and washed clean is ready for inspection after the base of the tongue has been detached so as to give access to the masticatory

muscles and lymph nodes. Where head loops are used the lymph nodes may be incised and examined before the tongue is dropped.

(b) The head including the oral and nasal cavities should be viewed. The sub-maxillary (lymphonodi mandibulares), parotid (lymphonodi parotidei) and retropharyngeal lymph nodes (lymphonodi retropharyngei) should then be examined by viewing and multiple incisions. The tonsils should be removed after inspection. The muscles of mastication should be viewed and incised. One or more linear incisions should be made parallel to the lower jaw into the external and internal muscles of mastication. The tongue should be viewed and palpated and, if necessary, an incision should be made into the root of the tongue without mutilation of the blade. The lips and gums should be viewed.

Inspection of viscera

43. The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomachs and intestines and if necessary palpation. Viewing and if necessary palpation and incision *) of the mesenteric lymph nodes (lymphonodi mesenterici), provided they are not obviously diseased. The oesophagus should be separated from its attachment to the trachea and viewed.

(b) Spleen: viewing of organ, palpation, and if necessary,, incision. Whenever required a smear of the spleen pulp should be taken.

(c) Liver: Viewing and palpation of entire organ. The portal lymph nodes (lymphonodi hepatici (portales)) should be incised provided they are not obviously diseased. The large bile duct should be opened up by an incision of at least 3 cm in length. Where necessary for reaching a 'diagnosis one or more incisions should be made deep enough to open up bile ducts and liver substance. The gall bladder should be viewed and, if necessary, palpated.

(d) Lungs: viewing and palpation of the entire organ, viewing and incision of bronchial and mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales), provided they are not obviously diseased. If necessary an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi,

(e) Heart: viewing of the heart after the pericardium has been opened. One or more incisions should be made from base to apex or alternatively the heart may be everted and shallow incisions made so that the cardiac valves and muscle tissue can be inspected.

(f) Uterus: viewing, palpation and, if necessary, incision. *)

(g) Udder: viewing of the udder, palpation and, if necessary, incision. *)
When the udder has been or is in lactating state, incision) of the supra-mammary lymph nodes (lymphonodi inguinales superficiales) should be a routine procedure. If the udder is destined for human consumption, incision *) of the organ itself should be a routine procedure.

(h) Kidneys: enucleation, viewing and, if necessary, palpation and incision.

(i) Testicles (where they are saved for human consumption): viewing and palpation.

- *) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

Inspection of carcasses

44. (a) The carcass should be examined to ascertain:
- (i) condition;
 - (ii) efficiency of bleeding;
 - (iii) colour;
 - (iv) condition of serous membranes (pleura and peritoneum);
 - (v) abnormalities;
 - (vi) cleanliness;
 - (vii) odours.
- (b) The skeletal muscles, including the attached fat and connective tissues, the bones, especially those which have been cut and exposed during the splitting of the carcass, the joints, the tendon sheaths, the diaphragm and the pleura and the peritoneum, should be viewed and, if necessary, palpated and incised. If necessary the triceps brachii muscle may be incised.
- (c) The following lymph nodes should be viewed, palpated and, if necessary, incised:
- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
 - (ii) external and internal iliac (lymphonodi iliaci);
 - (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
 - (iv) renal (lymphonodi renales).
- (d) In all animals reacting to the tuberculin test and in those carcasses and viscera in which tubercular lesions are found, the main carcass lymph nodes should be examined. A similar procedure should be carried out in all cases in which a systemic or generalized disease is suspected to exist.

B. Calves up to Six Weeks of Age

Inspection of heads of calves up to six weeks of age

45. (a) For inspection heads should be skinned, or scalded and dehaired, and then washed clean.
- (b) The head, and particularly oral and nasal cavities, lips and gums, sub-maxillary (lymphonodi mandibulares), parotid (lymphonodi parotidei) and retropharyngeal (lymphonodi retropharyngei) lymph nodes should be examined. If necessary, lymph nodes and masseter muscles should be incised and the tonsils examined and then removed.

Inspection of viscera of calves up to six weeks of age

46. The following viscera should be examined:
- (a) Gastro-intestinal tract: viewing of stomachs and intestines, and if necessary palpation^ Viewing and, if necessary, palpation and incision *) of the mesenteric lymph nodes (lymphonodi mesenterici), provided they are not obviously diseased.

(b) Spleen: viewing of organ, palpation and if necessary incision. Whenever required a smear of the spleen pulp should be taken.

(c) Liver: viewing, palpation and, if necessary, incision of organ and portal lymph nodes (lymphonodi hepatici (portales)). The gall bladder should be viewed and if necessary palpated.

(d) Lungs: viewing and palpation of the entire organ. Viewing, palpation and, if necessary, incision of bronchial and mediastinal lymph nodes (lymphonodi tracheo-bronchiales et mediastinales) provided they are not obviously diseased. If necessary, an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing and palpation of the heart after the pericardium has been opened., Where cysticercosis bovis is endemic, the heart should be opened.

(f) Kidneys: enucleation, viewing and if necessary palpation and incision.

*) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

Inspection of carcasses of calves up to six weeks of age

47. (a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, the fat, particularly the kidney capsule, the bones which have been exposed or split, the joints, the tendon sheaths, the diaphragm, the pleura, the peritoneum and the umbilical region should be viewed, and if necessary, incised.

(c) The following lymph nodes should be viewed,, palpated and if necessary incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) In all animals reacting to the tuberculin test and in those carcasses and viscera in which tubercular lesions are found, the main carcass lymph nodes should be examined. A similar procedure should be carried out in all cases in which a systemic or generalized disease is suspected to exist.

48. In the inspection of young calves particular attention should be paid to:

- (a) intestines;
- (b) serous membranes;
- (c) texture and development of muscles;
- (d) colour of carcass;
- (e) appearance and consistency of renal fat;

- (f) navel region;
- (g) joints.

C. Equines

Inspection of heads of equines

49. (a) A head which has been skinned and washed clean is ready for inspection. If necessary the base of the tongue should be detached so as to give access to the lymph nodes.

(b) The head should, if necessary, be split lengthwise in the medial line and the nasal septum should then be removed for careful viewing.

(c) The head, including the oral and nasal cavities, should be viewed. The sub-maxillary (lymphonodi mandibulares), parotid (lymphonodi parotidei), and retropharyngeal lymph nodes (lymphonodi retropharyngei) should then be examined, by viewing and multiple incisions. The tonsils should be removed after inspection. The tongue should be viewed and palpated. The lips and gums should be viewed.

Inspection of viscera of equines

50. The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomach and intestines, and if necessary, palpation! Viewing and, if necessary, palpation and incision *) of the mesenteric lymph nodes (lymphonodi mesenterici), provided they are not obviously diseased.

(b) Spleen: viewing of organ, palpation and, if necessary, incision. Whenever required a smear of the spleen pulp should be taken.

(c) Liver: viewing and palpation of entire organ and the portal lymph nodes (lymphonodi hepatici (portales)), and if necessary incision of organ and lymph nodes.

(d) Lungs: viewing, palpation of the entire organ. Viewing and incision of bronchial and mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales) provided they are not obviously diseased. The larynx, trachea and bronchi should be incised. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing of the heart after the pericardium has been opened, and incision if necessary.

(f) Uterus: In adults - viewing, palpation and if necessary incision. *)

(g) Udder: viewing, palpation and if necessary incision. *)

(h) Kidneys: enucleation, viewing and if necessary, palpation and incision.

(i) Testicles: (where they are saved for human consumption) viewing and palpation.

*) If incisions are made, every precaution should be taken to prevent any contamination of the premises, equipment and personnel.

Inspection of carcasses of equines

51. (a) The carcass should be examined to ascertain

- (i) condition;
- (ii) efficiency of bleeding;

- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum)
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissues, the bones, especially those which have been cut and exposed during the splitting of the car case, the joints, the tendon sheaths, the pleura, and the peritoneum, should be viewed, and if necessary palpated and incised.

(c) The following lymph nodes should be viewed, palpated and, if necessary, incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) In all animals reacting to the mallein test and in those carcasses and viscera in which lesions of tuberculosis are found, the main carcass lymph nodes should be examined. A similar procedure should be carried out in all cases in which a systemic or generalized disease is suspected to exist.

Inspection for melanosis in equines

52. All greyish or white horses should be examined as regards the muscles and lymph nodes (lymphonodi sub-rhomboides) of the shoulders beneath the scapular cartilage by loosening the attachment of one shoulder. The kidneys should be exposed and inspected by incision through the entire kidney.

D. Ovines and Caprines

Inspection of heads of ovines and caprines

53. (a) A head which has been skinned and washed clean is ready for inspection. If necessary, the base of the tongue should be detached so as to give access to the masticatory muscles and the regional lymph nodes.

(b) The surfaces of the head as well as the nasal and oral cavities should be viewed. If necessary, the tongue should be viewed, palpated and incised. Lymph nodes should be incised only when required.

Inspection of viscera of ovines and caprines

54. The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomach and intestines, and if necessary, palpation, viewing, and if necessary, palpation and incision *) of associated lymph nodes.

(b) Spleen: viewing, and if necessary, palpation and incision.

(c) Liver: viewing and palpation of organ and hepatic lymph nodes (lymphonodi hepatici (portales)), and if necessary, incision of organ and lymph nodes. Viewing of gall bladder and if necessary, palpation.

(d) Lungs: viewing and palpation and if necessary incision of lungs, bronchial and mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales). If necessary, an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing after removal of pericardium and incision if necessary.

(f) Uterus: in adult animals, viewing and if necessary palpation.

(g) Udder: in adult animals, viewing and if necessary palpation.

(h) Kidneys: enucleation, viewing and if necessary palpation and incision.

(i) Testicles: (where they are saved for human consumption) viewing and palpation.

*) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

Inspection of carcasses of ovines and caprines

55. (a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissues, the bones, the joints, the tendon sheaths, the diaphragm and the pleura and the peritoneum, should be viewed and if necessary palpated and incised.

(c) The following lymph nodes should be viewed, palpated, and if necessary incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) When a systemic or generalized disease is suspected to exist, the main car case lymph nodes should be examined.

E. Porcines

Inspection of heads of porcines

56. (a) The surface of the head as well as the oral and nasal cavities should be viewed.

(b) The sub-maxillary lymph nodes (lymphonodi mandibulares) should be incised and the cut surfaces examined. The parotid (lymphonodi parotidei), and retropharyngeal lymph nodes (lymphonodi retropharyngei), should be incised if necessary.

(c) Where *C. cellulosa* is prevalent, the outer muscle of mastication and the root of the tongue should be incised, and the blade of the tongue viewed and palpated.

- (d) The tonsils should be removed if necessary.
- (e) The head should be split lengthwise if necessary.

Inspection of viscera of porcines

57. The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomach and intestines and if necessary palpation. Viewing, palpation and "if necessary incision *) of associated lymph nodes. These lymph nodes should be incised *) if any lesions have been observed in the sub-maxillary lymph nodes.

(b) Spleen: viewing, and if necessary, palpation and incision.

(c) Liver and lymph nodes: viewing and palpation and if necessary incision.

(d) Lungs: viewing and palpation of entire organ. Viewing and incision of bronchial mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales), provided they are not obviously diseased. If necessary, an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing of the heart after the pericardium has been opened, and incision to expose the cardiac valves if necessary. Where C. cellulosa is prevalent, the opening up of the heart and a deep incision into the septum should be an inspection procedure.

(f) Uterus: viewing and, particularly where sows are concerned, palpation and if necessary incision. *)

(g) Kidneys: enucleation, viewing, and if necessary, palpation and incision.

*) If incisions are made, every precaution should be taken to prevent any contamination of the premises, equipment and personnel.

Inspection of carcasses of porcines

58. (a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness, where applicable proper scalding and dehairing;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissue, the bones, especially those which have been cut and exposed during the splitting of the carcass, the joints, the tendon sheaths, the diaphragm and the pleura and the peritoneum, should be viewed and if necessary palpated and incised.

(c) The site of castration should be palpated and if necessary incised.

(d) The following lymph nodes should be viewed, palpated and if necessary incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) iliac (lymphonodi iliaci);

(iii) renal (lymphonodi renales).

(e) When a systemic or generalized disease is suspected to exist, the main car case lymph nodes should be examined.

(f) Countries should have measures in force in their meat inspection system to protect the public adequately from trichinosis.

SECTION VII - DISPOSITION AND BRANDING

59. (a) Carcasses, heads, organs and viscera which as a result of ante- and post-mortem inspection are passed as fit for human consumption without further restrictions should be appropriately branded.

(b) Any meat, heads, organs and viscera which require treatment by heat or by freezing to render them fit for human consumption should be suitably branded and kept under supervision of an inspector until the necessary treatment has been concluded and the car case can be passed as fit for human consumption.

(c) All carcasses, parts of carcasses, organs and viscera which as a result of ante- and post-mortem inspection are found to be unfit for human consumption, and foetuses, should be held securely to the satisfaction of the inspector until they are branded, stained, rendered, denatured or otherwise destroyed, so excluding them from human food purposes.

(d) The size, shape, and wording of any brand, as well as the colour and composition of marking ink used for the branding of carcasses and organs, should be laid down by the controlling authority and should be uniform throughout the country.

SECTION VIII - LABORATORY EXAMINATION

60. (a) Laboratory facilities should be readily available to provide the veterinary inspector with the information necessary to judge whether the meat is fit for human consumption.

(b) Samples should be properly identified and accompanied by fully explanatory information.

(c) Care should be taken to ensure that samples arrive at the laboratory in good condition.

(d) Laboratory methods to be used should be such procedures as are scientifically recognized.