

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

JOINT OFFICE: Via delle Terme di Caracalla 00100 ROME Tel.: 57971 Telex: 625852-625853 FAO I Cables: Foodagri Rome Facsimile: (6) 57973152-5782610

ALINORM 93/35A

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Twentieth Session

Geneva, 28 June - 7 July 1993

REPORT OF THE FOURTH SESSION OF THE
CODEX COMMITTEE ON TROPICAL FRESH FRUITS AND VEGETABLES
Mexico City, 1-5 February 1993

Note: This report incorporates Codex Circular Letter CL 1993/2-TFFV.

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CX 5/95.2

CL 1993/2-TFFV
February 1993

TO: - Codex Contact Points
- Interested International Organizations
- Participants at the Fourth Session of the Codex Committee
on Tropical Fresh Fruits and Vegetables

FROM: Chief, Joint FAO/WHO Food Standards Programme, FAO,
Via delle Terme di Caracalla, 00100 Rome, Italy

SUBJECT: Distribution of the Report of the Fourth Session of the Codex Committee
on Tropical Fresh Fruits and Vegetables (ALINORM 93/35A)

The report of the Fourth Session of the Codex Committee on Tropical Fresh Fruits and Vegetables (CCTFFV) is attached. It will be considered by the Twentieth Session of the Codex Alimentarius Commission to be held in Geneva from 28 June - 7 July 1993.

**PART A: MATTERS FOR ADOPTION BY THE COMMISSION ARISING FROM THE FOURTH SESSION
OF THE CODEX COMMITTEE ON TROPICAL FRESH FRUITS AND VEGETABLES**

The following matters will be brought to the attention of the 20th Session of the Codex Alimentarius Commission for adoption:

1. Revisions to the draft worldwide Codex Standard for Mango at Step 8; paras. 12-15, ALINORM 93/35A and Appendix IV, ALINORM 93/35.

Governments wishing to propose amendments or to comment on the above revisions to the draft worldwide Codex Standard for Mango should do so in writing in conformity with the Guide to Consideration of Codex Standards at Step 8 (see Codex Alimentarius Procedural Manual, Seventh Edition) to the Chief, Joint FAO/WHO Food Standards Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy, not later than 31 May 1993.

2. Proposed draft worldwide Codex Standard for Litchi at Steps 5/8; paras. 25-36 and Appendix II, ALINORM 93/35A.
3. Proposed draft worldwide Codex Standard for Baby Corn at Steps 5/8; paras. 39-49 and Appendix III, ALINORM 93/35A.
4. Proposed draft worldwide Codex Standard for Banana at Step 5; paras. 50-67 and Appendix IV, ALINORM 93/35A.
5. Proposed draft worldwide Codex Standard for Avocado at Step 5; paras. 68-81 and Appendix V, ALINORM 93/35A.
6. Proposed Draft Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables at Step 5; paras. 82-101 and Appendix VI, ALINORM 93/35A.

Governments wishing to propose amendments or to submit comments regarding the implications which the above proposed draft worldwide Codex standards or the proposed draft Code of Practice or any provisions thereof may have for their economic interests should do so in writing in conformity with the Procedure for the Elaboration of Worldwide Codex Standards (at Steps 5 and/or 8) (see Codex Alimentarius Procedural Manual, Seventh Edition) to the Chief, Joint FAO/WHO Food Standards Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy, not later than 31 May 1993.

PART B: REQUEST FOR COMMENTS AND INFORMATION

1. Proposed Draft Code of Practice for the Control and Inspection of Tropical Fresh Fruits and Vegetables; (paras. 102-105 and Appendix VII, ALINORM 93/35A).

The Committee agreed to circulate the proposed draft Code of Practice for government comments at Step 3.

2. Proposed Draft Glossary of Terms and Definitions for Fresh Fruits and Vegetables; (paras. 106-111 and Appendix VIII, ALINORM 93/35A).

The Committee agreed to return the proposed draft Glossary to Step 3 for additional government comments, especially as related to the proposed terms for "fruit" and "vegetable", other proposed definitions and the proposed list of terms without definitions.

3. Proposals for Amendments to the Priority List of Tropical Fresh Fruits and Vegetables; (paras. 112-120 and Appendix IX, ALINORM 93/35A)

The Committee agreed that proposals for amendments to the Priority List would be solicited on an ongoing basis.

Governments and international organizations to submit comments and information on the above subject matter are invited to do so not later than 30 April 1994 to the Chairman of the Committee at the following address:

Lic. Luis Guillermo Ibarra Ponce de Leon
Director General de Normas
Secretaría de Comercio y Fomento Industrial
Av. Puente de Tecamachalco No. 6
Sección Fuentes
Naucalpan de Juárez
Edo. de México
C.P. 53950 México

In addition, please forward a copy of the comments to: Chief, Joint FAO/WHO Food Standards Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy.

SUMMARY AND CONCLUSIONS

The Fourth Session of the Codex Committee on Tropical Fresh Fruits and Vegetables reached the following conclusions during its deliberations:

MATTERS FOR CONSIDERATION BY THE COMMISSION:

- Agreed on several revisions to the draft **Codex Standard for Mangos** as recommended by the UNECE for consideration by the Commission when adopting the Codex Mango Standard at Step 8 (para. 12);
- Agreed to advance the proposed draft **Codex Standards for Litchis and Baby Corn** for adoption by the Commission at Step 8, with a recommendation to omit Steps 6 and 7 under accelerated elaboration procedures (paras. 36 and 49);
- Agreed to advance the proposed draft **Codex Standards for Banana and Avocado** for adoption by the Commission at Step 5 (paras. 67 and 81);
- Agreed to advance the proposed draft **Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables** for adoption by the Commission at Step 5 (para. 101);
- Agreed to the elaboration of proposed draft **Codex Standards for Asparagus, Mangosteen, Oranges, Persian Lime and Pummelo** for circulation and government comment at Step 3, pending approval by the Executive Committee and the Commission (para. 119);
- Agreed to request clarification from the Commission as to the **respective responsibilities of Codex and the UNECE**, especially in view of the recent UNECE initiative to change the scope of its standards (para. 21); and,
- Agreed to forward revised **Terms of Reference** to the Executive Committee and Commission for advice and a decision concerning their expansion (para. 123).

OTHER MATTERS OF INTEREST TO THE COMMISSION:

- Decided to re-affirm to the UNECE that comments were always adequately reviewed by the Committee when undertaking the work, and strongly urged the **participation of the UNECE Secretariat at Codex meetings** (paras. 17 and 18);
- Agreed to circulate the proposed draft **Codex Code of Practice for the Control and Inspection of Tropical Fresh Fruits and Vegetables** for government comments at Step 3 (para. 105);
- Agreed to return the proposed draft **Codex Glossary of Terms and Definitions for Fresh Fruits and Vegetables** for government comments at Step 3 (para. 111); and,
- Agreed on the revised **Priority List of Tropical Fresh Fruits and Vegetables** requiring standardization (para. 120).

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OPENING OF THE SESSION (Agenda Item 1)

1. The Fourth Session of the Codex Committee on Tropical Fresh Fruits and Vegetables was held in Mexico City, Mexico, from 1 to 5 February 1993, at the kind invitation of the Government of Mexico. The Session was attended by delegates from Argentina, Australia, Costa Rica, Cuba, Dominican Republic, Egypt, Malaysia, Mexico, Philippines, Thailand and the United States of America. The list of participants and members of the Secretariat is attached to this report as Appendix I.

2. The Committee was chaired by Lic. Luis Guillermo Ibarra Ponce de Leon, Director General of Standards, Mexican Secretary of Commerce and Industrial Development. Several items of the agenda were also presented by Ing. Eduardo R. Méndez Rubello, past Chairman of the Codex Alimentarius Commission.

3. The meeting was formally opened by Dr. Fernando Sánchez Ugarte, Under-secretary of Industry, Ministry of Trade and Industrial Development. Dr. Sanchez welcomed the delegates attending the meeting, and stressed the importance of the Committee's work in reconciling the interests of consumers and producers while elaborating worldwide standards. Dr. Sanchez noted that this would assist in the development of Mexican standards while fostering and strengthening the establishment of export markets. He pointed out that standardization activities on a global level assisted in the healthy and steady development of countries, encouraged competition between products and served as a point of reference for trade.

4. Lic. Santiago Funes González, on behalf of the Director-General of FAO, thanked Codex member countries for their interest in the work of the Committee as their participation emphasized the main aspects of Codex, namely, the facilitation of international trade in food and the protection of consumers. Lic. Funes noted that the Commission continued to recognize the importance of and need for the establishment of standards for tropical fresh produce. He also pointed out the importance of the North American Free Trade Agreement for several countries represented at the meeting, in that similar to the GATT agreement, it was meant to provide even greater consumer confidence in agricultural products while facilitating trade.

5. Dr. Elmer Escobar, speaking on behalf of PAHO, indicated that at the present time a process of commercial integration was taking place in order to facilitate trade in agricultural products. He pointed out the problem of cholera had seriously affected the marketing of many products. Dr. Escobar noted that with the support of the FAO, WHO, PAHO and the World Bank a programme for training and strengthening of laboratory networks had been developed in order to continue to improve the existing infrastructures and to respond to the needs of consumers.

6. Ing. Eduardo R. Méndez Rubello, former Chairman of the Codex Alimentarius Commission, stressed the importance of the work of Codex, which was formed in 1962 under the Joint FAO/WHO Food Standards Programme and now includes 144 member countries. Ing. Mendez stated that the Commission's work was directly related to consumer protection and the facilitation of international trade, while eliminating technical barriers to trade through the establishment and harmonization of standards.

ADOPTION OF THE AGENDA (Agenda Item 2)

7. The Committee was informed that the Government of Thailand had indicated that the proposed draft Codex Standard for Mangosteen would not be ready for circulation until April 1993 and therefore, this item was eliminated from the Agenda (Agenda Item 5; CX/TFFV 93/5 and Add. 1). In view of time constraints, government comments were not solicited on the proposed draft Codex Code of Practice for the Control/Inspection of Tropical Fresh Fruits and Vegetables and as a consequence, the comment paper was not prepared (Agenda Item 10; CX/TFFV 93/10 - Add. 1).

8. At the suggestion of the Delegation of Mexico, the Committee agreed to discuss the Committee's terms of reference under Agenda Item 13 (Other Business and Future Work).

9. The Committee agreed to adopt the Provisional Agenda (CX/TFFV 93/1) as revised.

MATTERS OF INTEREST ARISING FROM OTHER CODEX COMMITTEES (Agenda Item 3 (a))

10. The Committee had before it document CX/TFFV 93/2 when discussing this Agenda Item, which summarized matters of interest arising from the 39th Session of the Executive Committee, the First Session of the Codex Committee of Food Import and Export Inspection and Certification Systems and the 10th Session of the Codex Committee on General Principles. As it was noted that matters requiring detailed consideration would be examined specifically under other agenda items and/or were presented for information only, discussions were held to a minimum.

MATTERS OF INTEREST ARISING FROM THE UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE) AND THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD) (Agenda Item 3 (b))

11. The Secretariat introduced working paper CX/TFFV 93/3, as provided by the UNECE and OECD Secretariats, which were matters of interest extracted from the reports of the 37th and 38th UNECE Meeting of Experts on Coordination of Standardization of Fresh Fruits and Vegetables and the 47th and 48th Sessions of the UNECE Working Party on Standardization of Perishable Produce and Quality Development. The working paper also contained extracts from the 45th and 46th Plenary Meetings of the OECD Scheme for the Application of International Standards for Fresh Fruits and Vegetables. As most of the items in the working document were presented for information only, the Committee focused its discussions on the following matters:

- Draft Worldwide Codex Standard for Mangoes

12. The Secretariat informed the Committee that the following UNECE comments would be taken into account by the 20th Session of the Commission when adopting the above standard at Step 8. However, in order to facilitate Commission discussions, the Committee agreed to provide the following recommendations to the Commission in regard to the UNECE suggestions.

13. Specifically, the Committee did not agree to adopt the UNECE suggestion concerning the addition of the phrase "practically free from pests" into Section 2.1 (Minimum Requirements) as this provision was more logically addressed by other bodies (i.e., the International Plant Protection Convention). The Committee also agreed not to adopt the UNECE suggestion to make the variety of produce (Section 6.2.2 - Nature of Produce) a mandatory requirement, as it was felt the current text adequately covered this provision as an optional provision. The Delegation of Egypt did not agree with this decision, as it was felt that the name of variety should be mandatory.

14. However, the Committee did accept the UNECE suggestion to change the percentage in regard to "scattered suberized rusty lenticels, as well as yellowing of green varieties due to direct exposure to sunlight", etc. (Section 2.2.3) from 30 percent to 40 percent. In making this decision, the Committee noted that this provision did not apply to yellow varieties of mangoes.

15. In regard to the UNECE suggestion concerning Section 4.2 (Size Tolerances), the Committee reiterated its support for the current tolerance figures as well as the accompanying UNECE text. However, in the interest of providing a more accurate interpretation of the text, the Committee agreed to add an explanatory table. The following revisions were recommended by the Committee:

4.2 Size Tolerances (in grams)

For all classes, maximum of 10% by number or weight of fruit in each package are permitted to be outside the group size range by 50% of the maximum permissible difference for the group. In the smallest size range, fruit must not be less than 180 grams and for those in the largest size range a maximum of 925 grams applies, as follows:

Size Group	Normal Size Range	Permissible Size Range ($\leq 10\%$ of fruit/package exceeding the normal size range)	Max. Permissible Difference between fruit in each package
A	200 - 350	180 - 425	112.5
B	351 - 550	251 - 650	150
C	551 - 800	426 - 925	187.5

Relationship Between Codex and the UNECE

16. The Committee was informed of discussions held at the 39th Session of the Executive Committee concerning this issue (para. 88, ALINORM 93/3), whereby it was indicated that a meeting had been held between the Secretariats of the Codex Programme and the UNECE to help prevent duplication of work in the area of standardization of fresh fruits and vegetables. It was agreed that all efforts would be made to ensure that Codex and UNECE standards would not differ technically, and that in cases of both groups working on similar commodities, both groups should reach agreement on the content of their standards before they were finalized. The Secretariat also informed the current CCTFFV meeting that a procedure for collaboration between the UNECE and Codex had been established, as contained on page 106 of the Codex Alimentarius Procedural Manual.

17. In discussing the Report of the 37th Session of the UNECE Meeting of Experts on Coordination of Standardization of Fresh Fruits and Vegetables (para. 16, AGRI/WP.1/GE.1/38), the Committee agreed to express its objections to the UNECE statement that "... other countries were of the opinion that written comments did not receive adequate consideration". The Committee noted that written, as well as oral interventions were always taken into account, as evidenced in part by the creation of a drafting group (France, Germany and Spain) at its last meeting to establish Marking and Labelling requirements based on similar UNECE provisions.

18. In reference to the UNECE statement that "the invitation and participation of the Codex Secretariat in UNECE meetings should be strongly urged" (para. 18, AGRI/WP.1/GE.1/38), the Committee noted the participation of a Codex representative at the most recent meetings of the UNECE Working Party and Meeting of Expert Sessions. Likewise, the Committee strongly urged the participation of the UNECE Secretariat at sessions of the CCTFFV.

19. In discussing the Report of the 47th Session of the UNECE Working Party on Standardization of Perishable Produce and Quality Development (Annex I, AGRI/WP.1/56), the Committee noted that the UNECE Programme of Work stated that the "Working Party prepares and revises standards, recommendations and interpretive brochures for the marketing and control of commercial quality of selected perishable produce moving in international trade". More importantly, the Committee noted that the same UNECE Session (paras. 58-61, AGRI/WP.1/56), while agreeing that the title of UNECE standards "concerning the marketing and commercial quality control of (product name) moving in trade between and to European Countries" was too restrictive, adopted a revision to the title of all UNECE standards to indicate that such standards were "concerning the marketing and commercial quality control of (name of product) moving in international trade".

20. In discussing the above UNECE initiatives, the Committee agreed that although collaboration between the UNECE and Codex was acceptable in principle as a means to eliminate confusion and duplication of work, the Codex Alimentarius Commission should remain as the lead body in the establishment of worldwide standards, while taking regional initiatives into account. While the Committee was informed that any member of the United Nations could attend UNECE meetings, it was noted that the UNECE was a Regional, as opposed to an International, body. The Committee expressed its concern that if UNECE standards were promulgated on the basis of perceived international application, this may lead to the establishment of international standards by other Regional bodies, which would prevent the facilitation of trade, create confusion and question the importance of the Commission's work.

21. In view of the above discussion, the Committee agreed to request clarification from the Commission as to the respective responsibilities of the Codex Alimentarius Commission and the UNECE. Such clarification was felt to be especially important in view of the above UNECE initiative to change the scope of its standards.

- Proposed Draft Codex Code of Practice for the Control/Inspection of Tropical Fresh Fruits and Vegetables

22. The Committee was informed of discussions held at the most recent 38th Session of the UNECE Meeting of Experts (paras. 76-77, AGRI/WP.1/GE.1/40) concerning the revision of the OECD Guide for the Implementation of Quality Control for Fresh Fruits and Vegetables.

23. In addition, the Committee noted that regulations elaborated by the European Community concerning the Quality Inspection of Fresh Fruits and Vegetables went into effect on 1 January 1993 (paras. 81-84, AGRI/WP.1/GE.1/40).

24. As the above initiatives were of interest to the Committee in regard to the elaboration of the Codex Code of Practice for the Control/Inspection of Tropical Fresh Fruits and Vegetables (CX/TFFV 93/10, Agenda Item 10), the Secretariat agreed to keep the Committee informed of future developments concerning this subject.

CONSIDERATION OF THE PROPOSED DRAFT CODEX STANDARD FOR LITCHI (Agenda Item 4)

25. The Committee had for its consideration document CX/TFFV 93/4, containing the Proposed Draft Codex Standard for Litchis, and CX/TFFV 93/4-Add. 1, presenting the comments of France at Step 3. The Delegation of Thailand also informed the Committee of its comments on the proposed draft.

26. The Committee reviewed the proposed draft standard point by point and agreed to the following revisions:

Section 2.1 - Minimum Requirements

27. The Committee was of the opinion that the presence of parasites was a phytosanitary issue outside the scope of the standard, as decided at its last session, and agreed to delete "practically free from parasites" (also see para. 13).

28. In addition, the Committee agreed that external moisture resulting from condensation following removal from cold storage should be allowed, and revised this section accordingly. The Committee also agreed to add the term "practically" before the requirement regarding freedom from brown marking.

29. The Committee further agreed to add the following requirement as to development and maturity: "The Brix to acid ratio should be no less than 35".

Section 2.2.1 - Extra Class

30. The Committee agreed that there should be no reference to green patches on litchis, as the typical colour of some varieties was green.

Section 3 - Provisions Concerning Sizing

31. The Committee agreed that the minimum size for all classes should be 20 mm, and confirmed that the maximum size range between fruit in each package should be 10 mm in all classes.

Section 4.2 - Size Tolerances

32. The Committee agreed that a tolerance of 10% of litchis not conforming to the minimum size could be allowed in all classes, provided that the diameter was not less than 15 mm.

Sections 5.2 and 5.2.1 - Packaging and Description of Containers

33. The Committee agreed to include the general provisions applying to other draft standards previously elaborated by the Committee.

Section 5.3 - Presentation

5.3.1 - Individually

34. The Committee agreed that the peduncle should be cut at the first knot and that the maximum length of the stalk should be 5 mm.

5.3.2 - In bunches

35. The Committee agreed on a definition of the bunch as including "more than one" litchi.

Status of the Proposed Draft Codex Standard for Litchis

36. The Committee agreed to advance the proposed draft Codex Standard for Litchi to Step 5 of the Procedure, and to recommend to the 20th Session of the Commission to adopt the text at Step 8 by omitting Steps 6 and 7. The text of the proposed draft Standard for Litchi is attached to the present report as Appendix II.

CONSIDERATION OF THE PROPOSED DRAFT CODEX STANDARD FOR MANGOSTEEN (Agenda Item 5)

37. As previously discussed by the Committee (see para. 7), the Delegation of Thailand indicated that the above proposed draft standard would not be ready for circulation until April 1993.

Status of the Proposed Draft Codex Standard for Mangosteen

38. The Committee agreed that the Proposed Draft Standard for Mangosteen should be prepared by Thailand at the earliest opportunity for circulation and government comment at Step 3. In making this decision, the Committee noted that the standard would be reviewed at its Fifth Session at Step 4.

CONSIDERATION OF THE PROPOSED DRAFT CODEX STANDARD FOR BABY CORN (Agenda Item 6)

39. The Committee had for its consideration document CX/TFFV 93/6, containing the Proposed Draft Standard for Baby Corn, as prepared by the Delegation of Thailand, as well as document CX/TFFV 93/6-Add.1 presenting the comments of Egypt, France and Mexico.

Section 1 - Definition of Produce

40. The Committee agreed to clarify that the standard applied to "the cobs of baby corn, without the silks and the anthers". It was further agreed that throughout the standard, reference should be made to the "the cobs of baby corn".

Section 2.1 - Minimum Requirements

41. The Committee agreed to add that the cobs should be "whole", as this provision applied to the other standards previously drafted.

42. The Committee agreed that the presence of pests was a phytosanitary issue outside the scope of the standard, as decided by the last session of the Committee, and agreed to delete "free from pests".

43. The original text of the second paragraph of this Section was revised by deleting the phrase "If there is a defect, ... and the eating quality" and adding that the cut at the base of the cob should be clean.

Section 2.2.1 - Extra Class

44. The Committee agreed to add to the definition that the cobs should be free of silk (as well as husk and stalk).

Section 3 - Provisions Concerning Sizing

45. The Committee agreed to replace the reference letters S, M and L by A, B and C, for consistency with the references used in other draft standards.

Section 4.2 - Size Tolerances

46. The Committee agreed to apply a tolerance of 5% to the Extra Class, and 10% to the other classes.

Sections 5.2 and 5.2.1 - Packaging and Description of Containers

47. The Committee agreed to include the general provisions applying to other draft standards previously elaborated by the Committee.

Section 6.2.4 - Commercial Description

48. The Committee agreed to add a reference to size, as defined by the reference letter.

Status of the Proposed Draft Standard for Baby Corn

49. The Committee agreed to advance the proposed draft Codex Standard for Baby Corn to Step 5 and to recommend to the 20th Session of the Commission to adopt the text at Step 8 by omitting Steps 6 and 7. The proposed draft Worldwide Codex Standard for Baby Corn is attached to this report as Appendix III.

CONSIDERATION OF THE PROPOSED DRAFT CODEX STANDARD FOR BANANA (Agenda Item 7)

50. The Committee had before it document CX/TFFV 93/7, containing the proposed draft Standard for Banana as prepared by Mexico, as well as document CX/TFFV 93/7 - Add.1 presenting the comments of Ecuador, Egypt, France, Jamaica, the United Kingdom, the United States and the Union of Banana Exporting Countries (UPEB). The Delegations of Thailand and Cuba also informed the Committee of their comments on the text.

51. Several delegations pointed out that the elaboration of a Codex standard for bananas would be of great importance towards the facilitation of international

trade, as this commodity was widely traded in different regions of the world. In this context, it was stated that the proposed provisions should be carefully examined so as to take account of all relevant aspects of production and marketing. It was stressed that governments, as well as international organizations interested in the elaboration of a standard for bananas, should be consulted with a view towards receiving the widest input possible.

52. Some delegations were of the opinion that in view of the extensive comments on the proposed draft standard and the complexity of the issues involved, it might be useful to establish a working group to consider the technical aspects in detail. It was also suggested that producing and importing countries might form a technical group to exchange their information and experience on this matter between sessions of the Committee.

53. The Secretariat pointed out that such a group would be the responsibility of the countries or organizations involved, and would act independently from the Committee. However, it was noted that individual countries or groups of countries could receive input from any interested party (e.g., consumers, producers, international organizations, etc.) through such a technical group or otherwise (e.g., National Codex Contact Points), with a view towards submitting comprehensive comments to the Committee.

54. In view of the above discussions, the Committee agreed to consider the comments received at Step 4 in accordance with Codex procedures. The Committee discussed the standard point by point, and agreed to the following changes:

Section 1 - Definition of Produce

55. The Committee agreed that the definition should refer only to genus and not to specific species, varieties or groups, so as not to restrict the scope of the standard.

Section 2.1 - Minimum Requirements

56. The Committee agreed that as a rule, the wording of this section and the standard should be consistent with the wording used in previous standards. This applied especially to the provisions for "firm" and "sound", and the standard was amended accordingly.

57. The Committee also agreed to refer to "maturity" instead of "ripeness" and to apply this terminology to other standards. It was noted that many terms used in the standards could be defined in the Glossary of Terms and Definitions.

58. The Section was further revised to allow external moisture for fruit packed under modified atmosphere conditions. The Committee also agreed to add the term "practically" before the requirement concerning freedom from bruising.

Section 2.2.1 - Extra Class

59. This original text of this Section was revised by deleting the phrase "In addition to...established for the class", as these requirements were already covered in other sections. The Committee agreed to apply this revision to the other classes as well.

60. The Committee further agreed to refer to "the fingers" to make it clear that the requirements applied to the individual fruit.

Section 3 - Provisions Concerning Sizing

61. The Committee agreed to add a definition of the length of the fruit, and to reverse the order of the reference letters to make this section consistent with other standards.

62. After an extensive discussion on the need for and definition of the diameter of the fruit, the Committee agreed to retain the present presentation of this section and to request comments from governments on this matter.

63. In order to include smaller varieties of banana, the Committee agreed to add a size class with a diameter below 3.1 cm and a length below 15.2 cm to the sizing scale.

Section 5.2 - Packaging

64. The Committee agreed to include the general provisions on packaging applying to other standards elaborated by the Committee, including the Description of Containers (new Section 5.2.1).

Section 6.1.1 - Nature of the Produce

65. The Committee agreed that wording of this Section should be consistent with the terminology used in other standards.

Section 6.2.4 - Commercial Identification

66. The Committee agreed that reference should be also made to the size, with the use of the reference letter.

Status of the Proposed Draft Codex Standard for Banana

67. The Committee agreed to advance the Proposed Draft Standard for Banana for adoption by the 20th Session of the Commission at Step 5 with the understanding that government comments would be solicited on those items identified above at Step 6 after such consideration. The proposed Draft Standard for Banana is attached to the present report as Appendix IV.

CONSIDERATION OF THE UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE) STANDARD FOR AVOCADO (Agenda Item 8)

68. The Committee had for its consideration document CX/TFFV 93/8, which contained the UNECE Standard for Avocado (FFV-42), as well as document CX/TFFV 93/8-Add.1, containing government comments submitted by France. The Committee also noted that comments had been submitted to the Secretariat from the Delegation of Cuba.

69. The Committee noted the request of the 39th Session of the Executive Committee to examine the UNECE Standard for Avocado to determine whether or not it could be adopted as a Codex Standard. The CCEXEC also stated that if necessary, the Committee could propose amendments to the UNECE Standard to ensure that the Standard is suitable for international use and subsequent adoption as a Codex standard (paras. 79-80, ALINORM 93/3).

70. In view of the above request, the Committee proceeded to discuss the UNECE Standard with a view towards its amendment and adoption as a Codex standard. The Committee agreed to the following changes, with the understanding that the sections would be renumbered as per other Codex Standards, and as revised below:

Section 1 - Definition of Produce

71. As agreed in the elaboration of other Codex standards, the Committee included a footnote to this section in regard to the application of the Standard at both the export and import control stage.

Section 2 - Provisions Concerning Quality

72. In view of previous conclusions concerning the application of Codex standards at both export and import, the Committee agreed to remove the first paragraph of this section as it only applied to produce at the export control stage.

Section 2.1 - Minimum Requirements

73. The Committee agreed to change the term "intact" to "whole" as had been decided for previous Codex Standards. Likewise, the Committee added an exception for condensation following removal from cold storage. The Committee also slightly amended the requirement concerning the stalk for clarification.

74. The Committee agreed to remove the footnote in the original UNECE Standard, which referred to remaining foreign smell on the fruit due to the use of preserving agents, as this was felt to be more adequately addressed by other Codex bodies. The Committee also decided to remove the original UNECE text concerning "Maturity" (i.e., Section II.B), as this provision was felt to be adequately covered in the second paragraph of the revised "Minimum Requirements" section 2.1.

Section 3 - Provisions Concerning Sizing

75. The Committee decided to amend the introductory phrase of this section by indicating that size is determined by "packing" weight. In addition, the Committee added a provision for avocados greater than 1220 grams, with a corresponding Code Size "2" in the Size Scale.

76. In regard to the "Code Size" applied in the UNECE Standard, the Committee agreed to seek government comments concerning the application of reference letters as opposed to numbers, as had been applied to other Codex Standards. At the suggestion of the Delegation of Cuba, the Committee also decided to solicit government comments on the following "condensed" version of the UNECE size scale, as the current scale was felt to be too restrictive, especially in the smaller size ranges:

<u>Weight in Grams</u>	<u>Reference Number</u>
>1220	2
781-1220	4
576-780	6
461-575	8
366-460	10
306-365	12
266-305	14
211-265	16
171-210	18
146-170	20
125-145	22

Section 5.2 - Packaging

77. The Committee agreed to remove the reference to foreign matter, as this provision was already covered in the revised Section 5.2.1 (see below). The Committee also inserted a reference to the Codex Code of Practice for Packaging and

Transport of Tropical Fresh Fruits and Vegetables as amended in other standards elaborated by the Committee.

Section 5.2.1 - Description of Containers

78. As previously decided by the Committee, the revised version of this Section was inserted into the Standard.

Section 6 - Marking or labelling

79. This Section was amended as decided by the Committee at its previous Session, and as had been accomplished for other Codex standards.

Sections 7 and 8 - Contaminants and Hygiene

80. These new sections were added to the Standard, as previously decided by the Committee.

Status of the Proposed Draft Codex Standard for Avocado

81. The Committee agreed to advance the Proposed Draft Worldwide Codex Standard for Avocado to Step 5 for adoption by the 20th Session of the Commission, with the understanding that government comments would be solicited on those items identified above at Step 6 after such consideration. The Proposed Draft Worldwide Codex Standard for Avocados is attached to this report as Appendix V.

CONSIDERATION OF THE REVISED PROPOSED DRAFT CODE OF PRACTICE FOR THE PACKAGING AND TRANSPORT OF TROPICAL FRESH FRUIT AND VEGETABLES (Agenda Item 9)

82. The Committee had before it document CX/TFFV 93/9 presenting the subject Code, which had been revised after the 3rd Session of the Committee by the United States and Australia. The comments submitted on the revised text at Step 3 were presented in document CX/TFFV 93/3-Add.1 (Costa Rica, Denmark, Egypt, France, Mexico), and Conference Room Document No.1 (Malaysia). In addition, the Delegations of Cuba and Thailand informed the Committee of their comments.

83. The Committee agreed that the term "produce", instead of "product", should be used throughout the Code for consistency with the standards.

Section 2.5

84. This Section was revised to add a reference to the use of insulated thermal blankets as an option.

Section 2.6

85. The Committee agreed to indicate that an adequate system should be provided to monitor temperature and relative humidity in integral containers.

Section 2.7.1

86. This Section was revised to add at the end of the 4th indent: "when used in regions where weather conditions so demand due to the nature of the produce".

87. The Committee agreed to add a new indent at the end of the section regarding: "modern containers in which cold air leaves the front part of the container, but the air flow circulates from below (close to the floor) toward the back, then rising to the upper part of the container".

Section 2.13

88. The Committee agreed to add that products should be precooled "if necessary" as this requirement might not apply in all cases.

89. This Section was revised so that the last sentence would read: "It is advisable that the loading area should be enclosed and refrigerated, and if available, the loading dock doorway area should be equipped with doorway air seals".

Section 2.14

90. At the suggestion of the Delegation of Cuba, the Committee agreed to request information from governments on mixed loads, with a view to including specific provisions into the Code if necessary.

Section 2.16

91. The Committee agreed to include at the end of the first paragraph an explanation on the necessity for adequate space above the upper cartons with respect to air circulation.

92. It was further agreed to refer to "accumulation" of ethylene, instead of concentration.

Section 2.18

93. The Committee agreed to revise the first paragraph to read: "Loads should be secured with one or more of the following materials to prevent the effects of vibration and impact damage in transport and handling".

Section 2.19

94. The Committee agreed to delete the last sentence (reference to frozen foods).

Section 2.21

95. The Committee agreed to delete "non-food" in referring to cargoes that provide any risk of contamination, to make the section more general in scope.

Section 3.3

96. This Section was revised to add an indent referring to a "two-piece, die-cut style box with full telescoping cover".

Section 3.5

97. The Committee agreed to add a reference to plastic crates in the first indent and to add "when possible" with respect to precooling.

Section 3.6.1

98. The Committee agreed that the second indent should be revised to read "provide unit loads and stable mixed pallet loads".

Section 3.8.1

99. The Committee agreed to a slight modification of the last sentence to make it clear that the circulation of air was addressed.

Section 3.10

100. The Committee agreed that the whole section, dealing with Precooling should be made into a new Section 4. - Precooling Practices, and revised the numbering accordingly.

Status of the Proposed Draft Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables

101. The Committee agreed to advance the Proposed Draft Code of Practice for the Transport and Packaging of Tropical Fresh Fruits and Vegetables to Step 5 for adoption by the Commission at its 20th Session, with the understanding that government comments would be solicited on those items identified above at Step 6 after such consideration. The Proposed Draft Code is attached to the present report as Appendix VI.

CONSIDERATION OF THE REVISED PROPOSED DRAFT CODE OF PRACTICE FOR THE CONTROL AND INSPECTION OF TROPICAL FRESH FRUITS AND VEGETABLES (Agenda Item 10)

102. The Committee had for its consideration document CX/TFFV 93/10, presenting the Revised Proposed Draft Code. The Secretariat recalled that the Committee had agreed at its Third Session that the Delegations of Spain and Australia would revise the proposed draft Code, taking into account the comments made during the session.

103. However, in view of time and transmission constraints, it was not possible to complete the comprehensive revision of the Code agreed upon by the last Session of the Committee and document CX/TFFV 93/10, based on the OECD Guide concerning quality control and incorporating comments by Malaysia and the United States, was not circulated for government comments at Step 3 before the present session.

104. The Delegation of Australia informed the Committee of their proposals for the revision of the text. However, the Committee agreed that in view of the complexity of this subject, and since the document was not circulated until immediately prior to the Session, such a revision could not be carried out at this stage. It further agreed that the proposed draft Code, as presented in the working document, should be circulated for government comments at Step 3, with a view to its consideration at Step 4 by the next session.

Status of the Proposed Draft Code of Practice for the Control and Inspection of Tropical Fruits and Vegetables

105. The Committee agreed to circulate the Proposed Draft Code of Practice for the Control and Inspection of Tropical Fruits and Vegetables for comments at Step 3. The Proposed Draft Code is attached to the present report as Appendix VII.

GOVERNMENT COMMENTS ON THE PROPOSED DRAFT GLOSSARY OF TERMS AND DEFINITIONS FOR FRESH FRUITS AND VEGETABLES (Agenda Item 11)

106. The Committee had for its consideration the proposed draft Glossary, as previously elaborated and contained in Appendix IX, ALINORM 93/35. Government comments at Step 3 were presented in document CX/TFFV 93/11 (Poland, Thailand, Mexico) and Conference Room Document 1 (Malaysia). The Delegation of Cuba also provided its comments to the Secretariat.

107. The Committee agreed to add the term "perennial" (plant) in the definition of "tree".

108. The Committee had an exchange of views on the various definitions of "fruit" proposed by different countries. It was pointed out that besides botanical definitions, the common use of the produce by the consumer should be taken into account, especially in the case of "fruit" and "vegetable". However, the Committee

came to no conclusion on this point, and it was agreed that the four definitions proposed at the current Session, as well as the previous definition, would be circulated for government comments. Likewise, the Committee agreed that both the previous and current proposed definitions for "vegetables" would be treated in the same manner.

109. Some delegations indicated that the Committee should make use of internationally accepted definitions when they existed. Several delegations were of the opinion that the glossary should be expanded in order to cover not only botanical terminology, but the terms used in the standards to define quality requirements, including the terms used in international commerce.

110. With a view to facilitate future work on this matter, and in consideration of the technical character of the questions involved, the Committee agreed to request government comments on the need for and definitions of those terms proposed at its current and previous sessions, so as to determine at the next session which additional definitions should be included in the Glossary.

Status of the Proposed Draft Glossary of Terms and Definitions for Fresh Fruits and Vegetables

111. The Committee agreed to return the Proposed Draft Glossary of Terms and Definitions to Step 3 for additional comments. The Proposed Draft Glossary, including the proposed definitions for "fruit", "vegetables" and other terms and a proposed list of terms without definitions, is attached to this report as Appendix VIII.

PROPOSALS FOR ADDITIONS TO THE PRIORITY LIST OF TROPICAL FRESH FRUITS AND VEGETABLES (Agenda Item 12)

112. The Committee had for its consideration working paper CX/TFFV 93/12, which summarized proposals received from Mexico in regard to the priority list finalized at the Committee's previous Session (Appendix X, ALINORM 93/35). The Committee also noted comments from Thailand (Conference Room Document 1), which provided information as to the specific species of Tropical Asparagus and Pummelo to be considered, as requested by the Committee previously (paras. 133 and 135, ALINORM 93/35).

113. The Committee recalled its discussions concerning the activities of the UNECE, whereby the 48th Session of the UNECE Working Party requested the Committee to use botanical names when prioritizing tropical products so as to prevent confusion and to avoid duplication of efforts. It was noted that this was a useful recommendation, but that in view of the difficulty in defining botanical names, the Committee's proposals were not meant to restrict the scope of the standard.

114. The Delegation of Mexico provided information requested by the previous Session of the Committee (para. 134, ALINORM 93/35) and modified its initial proposal on [Mexican Lemon], in order to clarify that was in fact Persian Lime. In view of this clarification, [Mexican Lemon] was removed from the priority list.

115. At the suggestion of the Delegation of Mexico, the Committee agreed that Strawberries would be added to the priority list in square brackets, with the understanding that information would be provided as to the specific species to be considered. This documentation and justification was felt to be especially important in view of the existence of a UNECE Standard for Strawberries (FFV-35), and in consideration of the fact that strawberries are grown in temperate, as well as tropical areas with similar climatic conditions.

116. In view of the information provided by Thailand, the Committee decided that Thailand would be responsible for the elaboration of a proposed draft Codex Standard for Pummelo (*Citrus grandis* Osbeck sin *C. maxima* Merr.), as the species

identified differed from that defined in the UNECE Citrus Standard (FFV-14; *Citrus paradisi* Macfarlane).

117. In addition, while the information provided by Thailand indicated that the species of Tropical Asparagus proposed for standardization was the same as that covered by the UNECE standard (FFV-04; *Asparagus officinalis* L.), it was indicated that asparagus grown in tropical zones differed from those grown in temperate zones in diameter, taste and texture. In view of this justification, the Committee agreed that Thailand would be responsible for the elaboration of a proposed draft Codex Standard for Asparagus, which took account of quality characteristics of asparagus grown in tropical areas (see following paragraph).

118. The Committee also agreed that Mexico would be responsible for the development of proposed draft Codex Standards for Oranges (*Citrus sinensis* Osbeck) and Persian Limes (*Citrus latifolia* Tanaka var. *persa.*). This decision was made with the understanding that the UNECE Standard for Citrus Fruits would provide the principal basis regarding quality provisions for the Codex Standard for Oranges, while the UNECE Standard for Asparagus would provide a similar basis for the Codex Standard for Asparagus (see preceding paragraph). It was also agreed that the Committee would closely collaborate with the UNECE in establishing these standards, as had been accomplished when elaborating the proposed draft Codex Standard for Avocados, and as decided by the Executive Committee (see para. 69).

119. The Committee concluded that Mexico would be responsible for the development of proposed draft standards for Oranges and Persian Limes, while Thailand would elaborate proposed draft standards for Asparagus, Pummelo and Mangosteen (see para. 38) for circulation and government comment at Step 3 prior to the Committee's next session. This decision was made subject to approval by the Executive Committee and the Commission.

120. The revised priority list, as agreed to by the Committee, is attached to this report as Appendix IX. The Committee agreed that proposals for amendments to the priority list would be solicited on an ongoing basis.

OTHER BUSINESS AND FUTURE WORK (Agenda Item 13)

121. The Committee, while recalling its previous discussions concerning the relationship between Codex and the UNECE (paras. 16-21), discussed a proposal from the Delegation of Mexico, as supported by the Delegation of Egypt, to revise and expand the Committee's terms of reference with a view towards creating a Codex body which could establish international standards for all fresh fruits and vegetables. Such a proposal was based on the need to have an appropriate international infrastructure to satisfy the growing demand for international standards, as evidenced by the globalization of economic initiatives.

122. In view of the significance and implications of such a recommendation not previously discussed by the Committee, the Delegations of Australia and the United States indicated that they could not support or reject such a proposal at the current meeting, as further consultation within these countries was required.

123. The Committee agreed on this proposal, and decided to forward the following revised terms of reference to the Executive Committee and the Commission for advice and a decision concerning their expansion:

"To elaborate worldwide standards and codes of practice as may be appropriate for fresh fruits and vegetables".

DATE AND PLACE OF NEXT SESSION (Agenda Item 14)

124. The Committee was informed that the Fifth Session of the Codex Committee on Tropical Fresh Fruits and Vegetables was tentatively scheduled to be held from 5-9 September 1994 in Mexico City, subject to approval by the Commission.

CODEX COMMITTEE ON TROPICAL FRESH FRUITS AND VEGETABLES

Summary Status of Work

Code/Standard	Step	For Action by:	Document Reference
Draft Codex Standard for Pineapple	8	20th CAC	ALINORM 93/35, Appendix II
Draft Codex Standard for Papaya	8	20th CAC	ALINORM 93/35, Appendix III
Draft Codex Standard for Mango	8	20th CAC	ALINORM 93/35, Appendix IV
Proposed Draft Codex Standard for Nopal	5/8	20th CAC	ALINORM 93/35, Appendix V
Proposed Draft Codex Standard for Prickly Pear	5/8	20th CAC	ALINORM 93/35, Appendix VI
Proposed Draft Codex Standard for Carambola	5/8	20th CAC	ALINORM 93/35, Appendix VII
Proposed Draft Codex Standard for Litchis	5/8	20th CAC	ALINORM 93/35A, Appendix II
Proposed Draft Codex Standard for Baby Corn	5/8	20th CAC	ALINORM 93/35A, Appendix III
Proposed Draft Codex Standard for Banana	5	20th CAC	ALINORM 93/35A, Appendix IV
Proposed Draft Codex Standard for Avocado	5	20th CAC	ALINORM 93/35A, Appendix V
Proposed Draft Code of Practice for Packaging and Transport of Tropical Fresh Fruits and Vegetables	5	20th CAC	ALINORM 93/35A, Appendix VI
Proposed Draft Glossary of Scientific and Common Names	5	20th CAC	ALINORM 93/35, Appendix VIII
Proposed Draft Glossary of Terms and Definitions	3	Governments 5th CCTFFV	ALINORM 93/35A, Appendix VIII

Summary Status of Work (Cont.d)

Code/Standard	Step	For Action by:	Document Reference
Proposed Draft Code of Practice for Control and Inspection of Tropical Fresh Fruits and Vegetables	3	Governments 5th CCTFFV	ALINORM 93/35A, Appendix VII
Proposed Draft Codex Standards for Oranges and Persian Lime	1, 2 and 3	40th EXEC Mexico Governments 5th CCTFFV	ALINORM 93/35A, para. 119
Proposed Draft Codex Standards for Asparagus, Mangosteen and Pummelo	1, 2 and 3	40th EXEC Thailand Governments 5th CCTFFV	ALINORM 93/35A, para. 119
Priority List of Tropical Fresh Fruits and Vegetables	--	Governments 5th CCTFFV	ALINORM 93/35A, Appendix IX

ALINORM 93/35A
APPENDIX I

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ALINORM 93/35A
APPENDIX II

PROPOSED DRAFT CODEX STANDARD FOR LITCHI
(At Steps 5/8)

1. **DEFINITION OF PRODUCE**

This standard applies to commercial litchi varieties (cultivars) grown from *Litchi chinensis* Sonn., to be supplied fresh to the consumer after preparation and packaging. Litchis for industrial processing are excluded.¹

2. **PROVISIONS CONCERNING QUALITY**

2.1 **Minimum Requirements**

In all classes, subject to the special provisions for each class and to the tolerances allowed, the litchis must be:

- whole;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free from visible foreign matter;
- free from pest damage;
- free from damage and abrasion;
- practically free from brown markings;
- free from abnormal external moisture, except for condensation following removal from cold storage;
- free of foreign smell and/or taste².

The litchis must have been carefully picked and must be sufficiently developed and mature. The Brix to acid ratio should be no less than 35. The development and state of the litchis must be such that they can withstand transportation and handling and arrive at their destination in satisfactory condition.

2.2 **Classification**

Litchis are classified into three classes:

2.2.1 **Extra Class**

Litchis in this class must be of superior quality. They must have the shape, development and colouring that are typical of the variety. The colouring must be uniform, from pink to red in the case of untreated litchis; from pale yellow to pink for litchis that have been fumigated with sulphur dioxide.

¹ Governments, when indicating the acceptance of the Codex Standard for Litchi, should notify the Commission which provisions of the Standard would be accepted for application at the point of import, and which provisions would be accepted for application at the point of export.

² This provision allows for smell caused by a conservation agent used in compliance with corresponding regulations.

They must be free of defects, with the exception of very slight superficial defects, provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

2.2.2 Class I

Litchis in this class must be of good quality and characteristic of the variety. However, the following slight defects are admissible provided they do not affect the general appearance of the produce, its quality, the keeping quality or presentation in the package:

- slight misshaping;
- a slight colour defect;
- slight skin defects provided these do not exceed a total area of 25 mm².

2.2.3 Class II

This class includes litchis which do not qualify for the higher classes but satisfy the minimum requirements listed below.

The following defects are admissible provided the litchis retain their essential characteristics as regards quality, conservation and presentation:

- defects in shape;
- defects in colour;
- skin blemishes on condition that their total area does not exceed 0.5 cm².

3. PROVISIONS CONCERNING SIZING

Size is determined by the maximum equatorial diameter.

The minimum size for all classes is 20 mm.

A maximum size range of 10 mm between fruit in each package is permitted.

4. PROVISIONS CONCERNING TOLERANCES

Quality and size tolerances are allowed in each package for produce not satisfying the requirements of the class indicated.

4.1 Quality Tolerances

4.1.1 Extra Class

Five percent by number or weight of litchis not satisfying the requirements of this class, but meeting those of Class I or exceptionally, coming within the tolerances of that class.

4.1.2 Class I

Ten percent by number or weight of litchis not satisfying the requirements of this class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

4.1.3 Class II

Ten percent by number or weight of litchis satisfying neither the requirements of this class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

4.2 Size Tolerances

In all classes: 10% by number or weight of litchis not conforming to the minimum size, provided, however, that the diameter is not less than 15 mm in all classes.

In the Extra Class, 5% by number or weight of litchis in a given package with a size difference exceeding 10 mm.

5. PROVISIONS CONCERNING PRESENTATION

5.1 Uniformity

The contents of each package must be uniform and only contain litchis of the same origin, variety, quality, size and, for the Extra Class, colour.

The visible part of the package contents must be representative of the entire contents.

5.2 Packaging

Litchis must be packed in such a way as to protect the produce properly.

The material used inside the packages must be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed provided the printing or labelling has been done with non-toxic ink or glue.

Litchis shall be packed in each container in compliance with the Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables. However, the presence of a limited number of fresh leaves is permitted where litchis are presented in bunches.

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the litchi. Packages (or lot if the produce is presented in bulk) must be free of all foreign matter and smell.

5.3 Presentation

The litchis must be presented under one of the following forms:

5.3.1 Individually

In this case the peduncle must be cut at the first knot and the maximum length of the stalk must be 5 mm.

Extra Class litchis must be presented individually.

5.3.2 In bunches

In this case, the bunch must include more than one attached and well-formed litchis. The branch must not exceed 15 cm in length.

6. MARKING AND LABELLING

6.1 Containers destined for the final consumer

In addition to the requirements of the Codex General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985), the following specific provisions apply.

6.1.1 Nature of the produce

If the produce is not visible, each package must bear a label with the name of the produce and, optionally, that of the variety.

6.2 Non-Retail Containers

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside or on accompanying documents.³

For products transported in bulk these particulars must appear on a document accompanying the goods.

6.2.1 Identification

Exporter, packer and/or dispatcher.

6.2.2 Nature of the Produce

Name of produce if the contents are not visible from the outside; name of variety or commercial type (if applicable) "Bunch" specification, when applicable.

6.2.3 Origin of Produce

Country of origin and optionally, district where grown or national, regional or local place name.

6.2.4 Commercial Identification

- Class;
- Net weight (optional).

6.2.5 Official Inspection Mark (optional)

7. CONTAMINANTS

7.1 Heavy Metals

Litchi shall be free from heavy metals in amounts which may represent a hazard to human health.

7.2 Pesticide Residues

Litchi shall comply with those maximum residue limits established by the Codex Committee on Pesticide Residues for this Commodity.

³

When accepting this Codex Standard, governments should notify the Commission which of these provisions applies.

8. HYGIENE

8.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2-1985), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product. (A list may follow).

8.2 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

8.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

ALINORM 93/35A
APPENDIX III

PROPOSED DRAFT CODEX STANDARD FOR BABY CORN
(At Steps 5/8)

1. DEFINITION OF PRODUCE

This standard applies to the cobs, without the silk and anthers of the commercial varieties of baby corn (corn inflorescence) grown from *Zea mays* L. of the *Gramineae* family, separated from silk, husk and anthers to be supplied fresh to the consumer, after preparation and packaging. Baby corn for industrial processing is excluded.¹

2. PROVISIONS CONCERNING QUALITY

2.1 Minimum Requirements

In all classes, subject to the special provisions for each class and the tolerance allowed, the cobs of the baby corn must be:

- whole
- fresh in appearance;
- healthy and free from rotting or deterioration such as to make them unfit for consumption;
- clean and practically free from any visible foreign matter;
- free from abnormal external moisture;
- free from any foreign smell and/or taste;
- free from damage caused by pests;
- practically free from silk.

The cut that is made on the base of the cobs should be clean and well defined.

A slight discolouration of the cut surface due to storage is acceptable.

The development and condition of the baby corn must be such as to enable them to withstand transport and handling and to arrive in satisfactory condition at the place of destination.

2.2 Classification

Baby corn is classified into three classes as defined below:

2.2.1 Extra Class

The cobs of baby corn in this class must be well trimmed, free of husk, stalk and silk, intact and of superior quality. They must be characteristic of the variety and/or commercial type.

They must be free from defects, with the exception of very slight superficial defects, provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

¹ Governments, when indicating the acceptance of the Codex Standard for Baby Corn, should notify the Commission which provisions of the Standard would be accepted for application at the point of import, and which provisions would be accepted for application at the point of export.

2.2.2 Class I

The cobs of baby corn in this class must be well trimmed, free of husk and stalk and of good quality. They must be characteristic of the variety and/or commercial type.

The following slight defects, however, may be allowed, provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slight defects in shape, colour and texture;
- slight defects in irregular arrangement of undeveloped kernels (ovules);
- slight defects on the surface such as bruising, scratches or other mechanical damage. The total area affected shall not exceed five percent per cob;
- silk attached to and/or broken from the cob shall be minimal without affecting the appearance.

2.2.3 Class II

This class includes the cobs of baby corn which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1.

The following defects may be allowed provided that the baby corn retains their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape, colour and texture;
- defects in irregular arrangement of undeveloped kernel;
- defects in surface due to bruising, scratches or other mechanical damage. The total area affected shall not exceed ten percent per cob;
- silk attached to and/or broken from the cob shall be minimal without affecting the appearance.

3. PROVISIONS CONCERNING SIZING

Size is determined by the length of the cobs of baby corn, in accordance with the following table:

<u>Reference Letter</u>	<u>Length (cm)</u>
A	5.0 - 7.0
B	> 7.0 - 9.0
C	> 9.0 - 12.0

For all sizes, the minimum width should not be less than 1.0 cm and the maximum width not be more than 2.0 cm.

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

4.1 Quality Tolerances

4.1.1 "Extra" Class

Five percent by number or weight of cobs of baby corn not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerance of the class.

4.1.2 Class I

Ten percent by number or weight of cobs of baby corn not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerance of that class.

In the case of cobs of baby corn with incompletely removed husk and stalk, only 5 percent by number or weight of 0.5 cm long of the husk and stalk is allowed.

4.1.3 Class II

Ten percent by number or weight of cobs of baby corn satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

In the case of cobs of baby corn with incompletely removed husk and stalk, only 5 percent by number or weight of 0.5 cm long of the husk and stalk is allowed.

4.2 Size Tolerances

For Extra class, 5 percent; and for the other classes 10%; by number or weight of cobs of baby corn not satisfying the requirements as regards sizing, but falling within the class immediately below or above those indicated in Section 3.

5. PROVISIONS CONCERNING PRESENTATION

5.1 Uniformity

The contents of each package must be uniform and contain only baby corn of the same origin, quality and size.

The visible part of the contents of the package must be representative of the entire contents.

5.2 Packaging

The cobs of baby corn must be packed in such a way as to protect the produce properly.

The material used inside the packages must be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps, bearing trade specifications is allowed provided that the printing or labelling has been done with a non-toxic ink or glue.

Baby corn shall be packed in each container in compliance with the Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables.

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the cobs of baby corn. Packages must be free of all foreign matter and smell.

6. MARKING AND LABELLING

6.1 Containers destined for the final consumer

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN. 1-1985), the following specific provisions apply:

6.1.1 Nature of the Produce

If the product is not visible to the consumer, the contents of each package (or lot presented in bulk) should be labelled as to the name of the food and may be labelled as to the name of the variety.

6.2 Non-Retail Containers

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside or in the accompanying documents.²

For products transported in bulk these particulars must appear on a document accompanying the goods.

6.2.1 Identification

Exporter, packer and/or dispatcher.

6.2.2 Nature of Produce

Name of produce if the contents are not visible from the outside; name of variety or commercial type (if applicable).

6.2.3 Origin of Produce

Country of origin and optionally, district where grown or national, regional or local place name.

6.2.4 Commercial Description

- Class;
- Net weight (optional);
- Size (reference letter).

6.2.5 Official Inspection Mark (optional)

7. CONTAMINANTS

7.1 Heavy Metals

Baby Corn shall be free from heavy metals in amounts which may represent a hazard to human health.

² When accepting this Codex Standard, governments should notify the Commission which of these provisions applies.

7.2 Pesticide Residues

Baby Corn shall comply with those maximum residue limits established by the Codex Committee on Pesticide Residues for this Commodity.

8. HYGIENE

8.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2-1985), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product. (A list may follow).

8.2 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

8.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

PROPOSED DRAFT CODEX STANDARD FOR BANANA
(At Step 5)

1. **DEFINITION OF PRODUCE**

This standard applies to commercial varieties of banana grown from the genus *Musa* spp. of the *Musaceae* family, to be supplied fresh to the consumer, after preparation and packaging. Bananas for industrial processing are excluded.¹

2. **PROVISIONS CONCERNING QUALITY**

2.1 **Minimum Requirements**

In all classes, subject to the special provisions for each class and the tolerances allowed, the bananas must be:

- Whole;
- Firm;
- Sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- Clean, practically free from any visible foreign matter;
- Practically free from bruises;
- Practically free from damage caused by pests;
- Free from damage caused by low temperatures;
- Free from abnormal external moisture, except for condensation following removal from cold storage, and bananas packed under modified atmosphere conditions;
- Free from any strange smell or taste;
- Of a shape, taste and smell characteristic of the variety;
- Sufficiently developed and at a satisfactory stage of maturity;
- Free from major imperfections.

2.1.1 The development and condition of the bananas must be such as to enable them to reach the appropriate stage of maturity corresponding to the particular characteristics of the variety; to withstand transport and handling and to arrive in a satisfactory condition at the place of destination.

2.1.2 With regard to the maturing process, the colour may vary according to the variety.

2.2 **Classification**

Bananas are classified into three classes defined below:

2.2.1 **"Extra" Class**

Bananas of this class must be of superior quality and must be representative of the variety and/or commercial type.

¹ Governments, when indicating the acceptance of the Codex Standard for Banana, should notify the Commission which provisions of the Standard would be accepted for application at the point of import, and which provisions would be accepted for application at the point of export.

The fingers must be free from defects with the exception of very slight superficial defects, provided that these do not affect the general appearance of the produce, the quality, the keeping quality, and presentation in the package.

2.2.2 Class I

Bananas in this class must be of good quality and have the characteristics of the variety.

The following slight defects of the fingers however may be allowed provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- Slight defects of shape or colour;
- Slight defects on the skin due to rubbing and other superficial defects not exceeding 1 cm² of the total surface area;
- In no case may the defects affect the flesh of the fruit.

2.2.3 Class II

This class includes bananas which do not qualify for inclusion in the higher class, but satisfy the minimum requirements specified in Section 2.1 above.

The following defects may be allowed provided that the bananas retain their essential characteristics as regards the quality, the keeping quality, and presentation:

- Defects of shape or colour, provided that the product retains the normal characteristics of bananas;
- Defects of the skin due to scraping, scabs, rubbing, blemishes or other causes not exceeding 2 cm² of the total surface area;
- In no case may the defects affect the flesh of the fruit.

3. PROVISIONS CONCERNING SIZING

Size is determined by the diameter of the fruit's middle part and the length of its convex part. The length of a finger is measured along the outside curve from the blossom end to the base of the peduncle (where the edible pulp ends). Bananas are sized according to the following size groups:

<u>Reference Letter</u>	<u>Diameter</u>	<u>Minimum Length</u>
D	3.8 cm (48/32")	20.3 cm (8.0")
C	3.6 cm (46/32")	19.0 cm (7.5")
B	3.1 cm (39/32")	15.2 cm (6.0")
A	< 3.1 cm	< 15.2 cm

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall allowed for products not satisfying the requirements of the class indicated.

4.1 Quality Tolerances

4.1.1 Extra Class

Five percent by number or weight of bananas not satisfying the requirements of the class but meeting those of Class I, or exceptionally, coming within the tolerances of that class.

4.1.2 Class I

Ten percent by number or weight of bananas not satisfying the requirements of the class but meeting those of Class II, or exceptionally, coming within the tolerances of that class.

4.1.3 Class II

Ten percent by number or weight of bananas satisfying neither the requirements of the class nor the minimum requirements, with the exception of fruit affected by rotting, major imperfections, or any other deterioration rendering them unfit for consumption.

4.2 Size Tolerances

Five percent in all classes by number or by weight of bananas not satisfying the requirements as regards sizing, but falling within the size immediately below or above those indicated in Section 3.

5. PROVISIONS CONCERNING PRESENTATION

5.1 Uniformity

The contents of each package must be uniform and contain only bananas of the same origin, variety, quality and size. The visible part of the contents of the package must be representative of the entire contents.

5.2 Packaging

Bananas must be packed in such a way as to protect the product properly.

The material used inside the packages must be new, clean, and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed provided the printing or labelling has been done with a non-toxic ink or glue.

Bananas shall be packed in each container in compliance with the Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables.

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the banana. Packages must be free of all foreign material and smell.

6. MARKING OR LABELLING

6.1 Containers destined for the final consumer

In addition to the requirements of the Codex General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985), the following specific provisions apply.

6.1.1 Nature of the produce

If the produce is not visible, each package shall be labelled as to the name of the produce and, optionally, that of the variety.

6.2 Non-Retail Containers

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside or on accompanying documents.²

For products transported in bulk these particulars must appear on a document accompanying the goods.

6.2.1 Identification

Exporter, packer and/or dispatcher.

6.2.2 Nature of the Produce

Name of produce if the contents are not visible from the outside; name of variety or commercial type (if applicable).

6.2.3 Origin of Produce

Country of origin and optionally, district where grown or national, regional or local place name.

6.2.4 Commercial Identification

- Class;
- Net weight (optional);
- Size (reference letter).

6.2.5 Official Inspection Mark (optional)

7. CONTAMINANTS

7.1 Heavy Metals

Bananas shall be free from heavy metals in amounts which may represent a hazard to human health.

7.2 Pesticide Residues

Bananas shall comply with those maximum residue limits established by the Codex Committee on Pesticide Residues for this Commodity.

8. HYGIENE

8.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2-1985), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product. (A list may follow).

² When accepting this Codex Standard, governments should notify the Commission which of these provisions applies.

8.2 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

8.3 When tested by appropriate methods of sampling and examination, the product:

- all be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

ALINORM 93/35A
APPENDIX V

PROPOSED DRAFT WORLDWIDE CODEX STANDARD FOR AVOCADOS
(At Step 5)

1. **DEFINITION OF PRODUCE**

This standard applies to avocados of varieties (cultivars) grown from *Persea americana* Mill., to be supplied fresh to the consumer, parthenocarpic fruit and avocados for industrial processing being excluded.¹

2. **PROVISIONS CONCERNING QUALITY**

2.1 **Minimum requirements**

In all classes, subject to the special provisions for each class and the tolerances allowed, the avocados must be:

- whole;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- free of damage caused by low temperature;
- having a stalk not more than 10 mm in length which must be cut off cleanly. However, its absence is not considered a defect providing that the place of the stalk attachment is dry and whole;
- free of abnormal external moisture, except for condensation following removal from cold storage;
- free of any foreign smell and/or taste.

Avocados must be carefully picked. Their development should have reached a physiological stage which will ensure a continuation of the maturation process to completion. The mature fruit should be free from bitterness.

The development and condition of the avocados must be such as to enable them to withstand transport and handling, and to arrive in satisfactory condition at the place of destination.

2.2 **Classification**

Avocados are classified into three classes defined below:

2.2.1 **"Extra" Class**

Avocados in this class must be of superior quality. In shape and colouring they must be characteristic of the variety.

They must be free from defects, with the exception of very slight superficial defects of the skin provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package. If present, the stalk must be intact.

¹ Governments, when indicating the acceptance of the Codex standard for avocado, should notify the Commission which provisions of the standard would be accepted for application at the point of import, and which provisions would be accepted for application at the point of export.

2.2.2 Class I

Avocados in this class must be of good quality and show the typical colour and shape of the variety. The following slight defects, however, may be allowed provided that these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

- slight defects of shape and colour;
- slight skin defects (corkiness, healed lenticels) and sunburn; the maximum total area should not exceed 4 cm².

In no case may the defects affect the fruit flesh.

The stalk, if present, may be slightly damaged.

2.2.3 Class II

This class includes avocados which do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above.

The following defects may be allowed provided that the avocados retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape and colouring;
- skin defects (corkiness, healed lenticels) and sunburn; maximum total area should not exceed 6 cm².

In no case may the defects affect the fruit flesh.

The stalk, if present, may be damaged.

3. PROVISIONS CONCERNING SIZING

Size is determined by the packing weight of the fruit; the size scale is as follows²:

<u>Weight scale</u> (grammes)	<u>Code size</u>
>1220	2
781 to 1 220	4
576 to 780	6
461 to 575	8
366 to 460	10
306 to 365	12
266 to 305	14
236 to 265	16
211 to 235	18
191 to 210	20
171 to 190	22
156 to 170	24
146 to 155	26
136 to 145	28
125 to 135	30

The minimum weight of avocados must not be less than 125 g.

² Nevertheless, no account should be taken for a given fruit of a deviation of more or less than 2 per cent with regard to the code number indicated.

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements for the class indicated.

4.1 Quality tolerances

4.1.1 "Extra" Class

5 per cent by number or weight of avocados not satisfying the requirements of the class but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

4.1.2 Class I

10 per cent by number or weight of avocados not satisfying the requirements of the class but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

4.1.3 Class II

10 per cent by number or weight of avocados not meeting the requirements of the class nor the minimum requirements, with the exception of fruit affected by rotting, marked bruising or any other deterioration rendering it unfit for consumption.

4.2 Size tolerances

For all classes: 10 per cent, by number or weight, of avocados conforming to the size range immediately below and/or above that mentioned in the marking.

5. PROVISIONS CONCERNING PRESENTATION

5.1 Uniformity

The contents of each package must be uniform and contain only avocados of the same origin, variety, quality and size. The visible part of the contents of the package must be representative of the entire contents.

5.2 Packaging

Avocados must be packed in such a way so as to protect the produce properly.

The materials used inside the package must be new, clean and of a quality such as to avoid causing any external or internal damage to the fruit. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed provided that the printing or labelling has been done with a non-toxic ink or glue.

Avocados shall be packed in each container in compliance with the Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables.

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the avocado. Packages must be free of all foreign matter and smell.

6. MARKING OR LABELLING

6.1 Containers destined for the final consumer

In addition to the requirements of the Codex General Standard for the Labelling of Prepacked Foods (CODEX STAN 1-1985) the following specific provisions apply:

6.1.1 Nature of the Produce

If the product is not visible, each package shall be labelled as to the name of the food and may be labelled as to the name of the variety.

6.2 Non Retail Containers

Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside, or in the documents accompanying the shipment.³

6.2.1 Identification

Exporter, Packer and/or dispatcher.

6.2.2 Nature of the produce

Name of produce if the contents are not visible from the outside. Name of variety or commercial type (if applicable).

6.2.3 Origin of produce

Country of origin and, optionally, district where grown, or national, regional or local place name.

6.2.4 Commercial Identification

- Class;
- Size expressed in minimum and maximum weight;
- Code number of the size scale and number of fruits when it is different from reference number;
- Net weight (optional).

6.2.5 Official Inspection Mark (optional)

7. CONTAMINANTS

7.1 Heavy Metals

Avocado shall be free from heavy metals in amounts which may represent a hazard to human health.

7.2 Pesticide Residues

Avocado shall comply with those maximum residue limits established by the Codex Committee on Pesticide Residues for this Commodity.

³ Governments, when indicating their acceptance of this Codex Standard, should notify the Commission as to which provisions of this section apply.

8. HYGIENE

8.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2-1985), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product. (A list may follow).

8.2 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

8.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

ALINORM 93/35A
APPENDIX VI

RECOMMENDED CODE OF PRACTICE FOR THE PACKAGING AND TRANSPORT
OF TROPICAL FRESH FRUIT AND VEGETABLES

SECTION I

Scope

1.1 This code recommends proper packaging and transport of tropical fresh fruit and vegetables in order to maintain produce quality during transportation and marketing.

SECTION II

Design, Condition and Loading Method of Transport Equipment

2.1 Mode of transportation and type of equipment

2.1.1 *Factors include:*

- destination;
- value of the produce;
- degree of produce perishability;
- amount of produce to be transported;
- recommended storage temperature and relative humidity;
- outside temperature conditions at origin and destination points;
- time in transit to reach destination by air, land, or ocean transport;
- freight rates negotiated with the carriers;
- quality of transportation service.

2.2 Reliability and quality of transportation service provided by different carriers must be carefully considered along with the rates charged. Services and schedules are established or modified weekly. Sometimes service is abruptly withdrawn. Shippers should contact air and ocean port authorities at their origin and destination locations to receive the most current information on available services. Local trade publications also are excellent sources of information, as many carriers and their agents advertise their schedules and destinations.

2.3 When available refrigerated trailers and van containers are recommended for most high volume produces with transit and storage lives of a week or more. After transit, there must be enough remaining produce life for marketing. Carriers utilizing trailers and containers can offer a door-to-door service. This reduces handling, exposure, damage, and theft of the produces.

2.4 Air cargo containers also can be used to provide a door-to-door service. Produces transported by air are generally high-value and highly perishable. Freight costs are higher by air. Transit times, however, are in terms of hours instead of days.

2.5 Many produces are shipped in unrefrigerated air containers or on air cargo pallets. This requires close coordination at the origin and destination airports to protect the produces when flights are delayed. Cold storage facilities at airports are needed to ensure produce quality. Refrigerated air containers are available and should be used when possible. Use of insulated thermal blankets is an option.

2.6 Produces which can be shipped in refrigerated trailers and van containers are sometimes shipped by air to take advantage of brief market opportunities, such

as the beginning of a season when prices are high and supply is limited. A robust and accurate system for monitoring or displaying temperature and relative humidity during transport in integral containers needs to be considered.

2.7 Long distance transportation through tropical and frigid climates requires rugged well-designed equipment to withstand the transit environment and protect the produces. Desirable features in refrigerated trailers up to 14.6 m (48 ft) long and van containers up to 12 m (40 ft) long include:

2.7.1 41,843 kJ/h (40,000 BTU/h) refrigeration capacity at 38°C (100°F) ambient, 2°C (36°F) return air temperature.

a continuously operating high capacity evaporator blower for more even produce temperatures and higher relative humidities;

a solid return air bulkhead at the front of the trailer to ensure air circulation throughout the load;

vertical ribs on the rear door to assist in air circulation;

adequate insulation and provisions for heating, when used in regions where weather conditions so demand due to the nature of the produce;

deep floor grooves or channels, from 51 to 76 mm (2 to 3 in) in depth to provide an adequate cross-sectional area for air circulation under loads placed directly on the floor;

supply-air temperature sensing of the operation of the refrigeration unit to reduce produce chilling and freezing injury;

provisions for ventilation to prevent ethylene or carbon dioxide buildup;

air-ride suspension to reduce the amount of shock and vibration transferred to the shipping containers and the produces inside.

modern containers in which cold air leaves the front part of the container, but the air flow circulates from below (close to the floor) toward the back, then rising to the upper part of the container.

2.8 Most carriers check their transport equipment before presenting it to the shipper for loading. The condition of the equipment is critical to maintaining the quality of the produces. Therefore, the shipper also should check the equipment to ensure it is in good working order and meets the needs of the produce. Carriers provide guidance on checking and operating the refrigeration systems.

2.9 All transportation equipment should be checked for:

- 2.9.1
- cleanliness--the load compartment should be regularly steam cleaned;
 - damage to walls, floors, doors, ceilings should be in good condition;
 - temperature control--refrigerated units should be recently calibrated and supply continuous air circulation for uniform produce temperatures.

2.10 Shippers should insist on clean equipment. A load of produces can be ruined by:

- 2.10.1
- smell from previous deliveries or incompatible loads;
 - toxic chemical residues;

- insects nesting in the equipment;
- decaying remains of agricultural produces;
- debris blocking drain openings or air circulation channels along the floor.

2.11 Shippers should insist on well maintained equipment and check for the following:

- 2.11.1
- damage to walls, ceilings, or floors which can let in the outside heat, cold, moisture, dirt, and insects;
 - operation and condition of doors, ventilation openings, and seals;
 - provisions for load locking and bracing.

2.12 For refrigerated trailers and van containers, the following additional checks are important:

- 2.12.1
- with the doors closed, have someone inside the cargo area check for light--door gaskets must seal. A smoke generator also can be used to detect leaks;
 - the refrigeration unit should cycle from high to low speed when the desired temperature is reached and then back to high speed;
 - determine the location of the sensing element which controls the discharge air temperature. If it measures return air temperature, the thermostat may have to be set- higher to avoid chilling injury or freezing injury of the produces;
 - a solid return air bulkhead should be installed at the front of the trailer;
 - a heating device should be available for transportation in areas with extreme cold weather;
 - equipment with a top air delivery system should have a fabric air chute or metal ceiling duct in good condition.

2.13 Produce requiring refrigeration should be thoroughly precooled, if necessary, prior to loading into transportation equipment. Produce temperatures should be taken with a electronic probe thermometer and recorded on the bill of lading for future reference. The load compartment in the equipment also should be precooled to the recommended transport or storage temperature for the produce. It is advisable that the loading area should be enclosed and if available, the loading dock doorway area should be equipped with doorway air seals.

2.14 Proper loading practices are critical to maintaining temperature and relative humidity, protecting the produces from impact and vibration forces in transit, and preventing insects from entering the load. Special care must be taken when shipping mixed loads. The produces must be compatible.

2.15 Basic loading methods include:

- 2.15.1
- bulk loading, by machine or hand, of unpackaged commodities;
 - hand loading individual shipping containers, with or without pallets;
 - unit loading of palletized or slipsheet loads of containers with pallet jacks or forklifts.

2.16 Inadequate provisions for air circulation will ruin a load, even in well designed transportation equipment. When possible, shipping containers should be kept off shallow floors and away from flat sidewalls by using pallets, racks, and dunnage. Adequate head space between the upper row of cartons and the top of the container should be allowed; upper cartons should be taped to prevent blocking head space. Room for air circulation must be provided under, around and through the load to protect the produce from:

- heat gain from the outside air during hot weather;
- heat generated by the produce through respiration;
- accumulation of ethylene from ripening of the produces;
- heat loss to the outside air during extreme cold weather;
- chilling injury or freezing injury during operation of the refrigeration unit.

2.17 Shippers using refrigerated transport equipment should follow the carrier's recommendations on loading of the equipment's load compartment to avoid chilling injury or freezing injury to the produces. Discharge air may be colder than the set-point temperature if the refrigeration system operates on return air temperature sensing.

2.18 Loads should be secured with one or more of the following materials to prevent the effects of vibrations and impact damage in transport and handling:

- aluminum or wood load locks;
- fibreboard honeycomb fillers;
- wood blocking and nailing strips;
- inflatable kraft paper air bags;
- cargo nets and straps;
- wood load gates constructed of 25 mm x 102 mm (1 x 4 in) material.

2.19 If available all loads should have a small air temperature recorder placed between packages in the area where the warmest temperatures occur. Recorder companies recommend placement on top of the load, near a side wall, one-third of the way in from the rear doors, away from any direct discharge of refrigerated air. Railcars should have two or three recorders. In loads with top-ice or humidity above 95 percent, the recorders should be waterproof or enclosed in a plastic bag.

2.19.1 Shippers and receivers must follow the temperature recorder companies instructions on documenting the load, starting the recorder, reading the results, and returning it for calibration and certification if necessary. These steps are essential for settling claims over temperature management during transportation.

2.20 Similar sized shipping containers should be loaded together in mixed loads for increased stability. Heavier shipping containers of produces should be loaded first, distributed evenly across the floor of the trailer or container. Lighter shipping containers can then be placed against or on top of the heavier produces. Load lock and secure stacks of different sized shipping containers. To facilitate inspection of mixed loads at ports of entry, a representative sample of each commodity should be available near the door. This can minimize the unloading of cargo for examination.

2.21 Never load fruit, vegetables, or other food produces with cargoes that provide any risk of contamination through transfer of odour or toxic chemical residues. The longer the transit time, the higher the risks in transporting mixed loads of agricultural produces. Therefore it is essential that guidelines be followed as much as possible to maintain quality in distant markets.

2.22 Modified atmospheres of reduced oxygen and elevated carbon dioxide and nitrogen are provided to trailers and containers after loading is completed. The trailers and containers must be equipped with channels at the doorway for a plastic film curtain and gas ports for the application of the treatment.

2.23 The refrigeration unit, walls, ceiling, floor, and doors must adequately seal the inside of the cargo area from outside air. Otherwise the modified atmosphere will quickly dissipate. Warning labels must be applied to the equipment to warn that the atmosphere is not life supporting and that the cargo area must be properly ventilated before personnel enter to unload the cargo.

SECTION III

Packaging to Maintain Produce Quality During Transportation and Marketing

3.1 Packaging must withstand:

- rough handling during loading and unloading;
- compression from the overhead weight of other containers;
- impact and vibration during transportation;
- high humidity during precooling, transit, and storage.

3.2 Packaging materials are chosen on the basis of needs of the produce, packing method, precooling method, strength, cost, availability, buyer specifications, and freight rates. Importers, buyers, and packaging manufacturers provide valuable recommendations. Materials used include:

- fibreboard bins, boxes (glued, stapled, interlocking), lugs, trays, flats, dividers or partitions, and slipsheets;
- wood bins, crates (wirebound, nailed), baskets, trays, lugs, pallets;
- paper bags, sleeves, wraps, liners, pads, excelsior, and labels;
- plastic bins, boxes, trays, bags (mesh, solid), containers, sleeves, film wraps, liners, dividers, and slipsheets;
- foam boxes, trays, lugs, sleeves, liners, dividers, and pads.

3.3 Bins, boxes, crates, trays, lugs, baskets, and bags are considered shipping containers. Baskets, however, are difficult to handle in mixed loads of rectangular boxes. Bags provide limited produce protection. The fibreboard type box is a widely used container. Styles include:

- one-piece slotted box with glued, stapled, or self-locking flaps;
- two-piece half slotted box with a cover;
- two-piece half slotted box with a full telescoping cover, providing strong walls and corners;
- three-piece Bliss-style box featuring stapled or glued ends providing strong corners;
- one-piece box with full telescoping cover;
- two-piece, die-cut style box with full telescoping cover;
- one-piece box with wire or fibreboard tabs or hardboard end inserts and plastic end caps, providing stacking strength and alignment.

3.3.1 Fibreboard boxes for produces which are packed wet or with ice must be wax-impregnated or coated with water resistant material. The compression strength of untreated fibreboard can be reduced more than one half in conditions of 90 percent relative humidity. In addition to maintaining box strength, wax helps to

reduce the loss of moisture from the produce to the fibreboard. All glued boxes should be made with a water resistant adhesive.

3.3.2 The majority of fibreboard boxes and wood crates are designed to be stacked top to bottom. Compression strength and produce protection are sacrificed when boxes or crates are stacked on their ends or sides. Misaligned boxes can lose up to 50 percent of their top to bottom compression strength.

3.4 Various materials are added to shipping containers to provide additional strength and produce protection. Dividers or partitions and double or triple thickness sides and ends in fibreboard boxes provide additional compression strength and reduce produce damage.

3.4.1 Pads, wraps, and sleeves and excelsior also reduce bruising. Pads also are used to provide moisture as with asparagus; provide chemical treatment to reduce decay as with sulphur dioxide pads for grapes; and absorb ethylene as with potassium permanganate pads in boxes of bananas and flowers.

3.4.2 Plastic film liners or bags are used to retain moisture. Perforated plastic is used for most produces to allow exchange of gases and avoid excessive humidity. Solid plastic is used to seal the produces and provide for modified atmosphere by reducing the amount of oxygen available for respiration and ripening. This is done for bananas, strawberries, tomatoes and citrus fruits.

3.5 Packing methods include:

- field packing - produce is placed in fibreboard boxes, plastic crates or wood crates during harvesting. Some produces are wrapped. The filled containers are then taken to a precooling facility to have the field heat removed where possible;
- shed packing - produce is processed or packed indoors or under cover at a central location. The produce is brought from the field to the packing shed in bulk in field crates, bins, or trucks. If available, the produces should be precooled either before or after they are placed in shipping containers;
- repacking - produce is taken out of one container, regraded, and placed in another. This is often done to make smaller containers for the retailer or consumer packages.

3.5.1 Types of packs include:

- volume fill - produce is placed by hand or machine into the container until the desired capacity, weight, or count is reached;
- tray or cell pack - produce is placed in moulded trays or cells which provide separation and reduced bruising;
- place pack - produce is wrapped and carefully placed in the container. This provides reduced bruising and a pleasing appearance;
- consumer pack or prepack - relatively small amounts of produce are packaged, weighted, and labelled for retail sale;
- film or shrink wrap - each fruit or vegetable is individually wrapped and sealed in film to reduce moisture loss and decay. The film may be treated with fungicides or other chemicals;
- modified atmosphere - individual consumer packs, shipping containers, or pallet loads of containers are sealed with plastic

film or bags. The oxygen level is reduced and the carbon dioxide level is increased. This reduces produce respiration and slows the ripening process.

3.6 Shipping containers must be sized and filled correctly. Containers which are very wide and weight more than 23 kg (50 lb) encourage rougher handling, produce damage, and container failure. Overfilling causes produce bruising and excessive bulging of the sides of the container, which leads to decreased compression strength and container failure. Underfilling also causes produce damage. The produce is bruised as it moves around inside the shipping container during transport and handling.

3.6.1 Due to large number of different container sizes in use, box standards are desirable.

Standardized containers:

- utilize, with other containers, 90 to 100 percent of the surface of the widely used 1219 x 1016 mm (48 x 40 in) standard pallet, with no overhang and little underhang;
- provide unit loads and stable mixed pallet loads;
- reduce transportation and marketing costs.

3.7 A large number of shippers have switched from handling individual shipping containers to unit loads on pallets. Most distribution centres are set up to store palletized loads in three tier racks.

3.7.1 Unit loads provide for:

- reduced handling of individual shipping containers;
- less damage to the containers and the produces inside;
- faster loading and unloading of transportation equipment;
- more efficient distribution centre operations.

3.7.2 Unit loads may include some of the following features:

- standard wood pallets or slipsheets, 1200 x 1000 mm (48 x 40in), 800 x 1000 mm, 800 x 1200 mm, 1000 x 1200 mm;
- fibreboard, plastic or wire vertical interlocking tabs between boxes;
- boxes with holes for air circulation, which align when the boxes are stacked squarely on top of one another, corner to corner;
- glue between boxes to resist horizontal slipping;
- plastic netting around the pallet load of boxes;
- fibreboard, plastic, or metal cornerboards;
- plastic or metal strapping around the cornerboards and boxes.

3.8 Wood pallets must be strong enough to allow storage under load in three tier racks. Provisions for forklift and pallet jack handling are necessary. The design of the bottom of the pallet should not block air circulation.

3.8.1 Pallets must have an adequate number of top deck boards to support fibreboard boxes. Otherwise the boxes may collapse between deck boards from the overhead weight of the other containers, crush the produces, and cause the entire

load to lean or fall off the pallet. A sheet of fibreboard with holes for air circulation can be used to distribute air across the pallet.

3.8.2 Boxes must not overhang the edges of the pallets. Overhang can reduce the strength of fibreboard boxes by one-third. This condition also can lead to collapse of the entire load, crushing of the produce, and make loading, unloading, and storage in racks difficult. On the other hand, boxes which utilize less than 90 percent of the pallet surface and do not align with the pallet edge can shift in transit.

3.8.3 Pallet loads of shipping containers which are not strapped or netted should have at least the top three layers of containers cross-stacked to provide stability. Some shippers use film wrap, tape, or glue on the top layers in addition to cross-stacking. The containers must be strong enough to be cross-stacked without collapsing. Film wrap should not be used on shipping containers of produces that need ventilation.

3.9 Slipsheets are used by some shippers because they cost less than pallets. They also eliminate the cost of transporting and returning pallets. A special forklift is needed to transfer slipsheet loads to and from the pallets at the shipper's and receiver's distribution centre. If a receiver does not have the proper handling equipment, the packages are unloaded by hand onto pallets for placement in storage. Shipping containers on slipsheets are cross-stacked, film wrapped, or otherwise unitized with cornerboards and strapping.

3.9.1 Slipsheets made of fibreboard or plastic must be strong enough to be clamped and pulled onto the forklift tines or plate for lifting while fully loaded. Fibreboard slipsheets should be wax impregnated when used in wet conditions. Slipsheets used in transportation equipment should have holes for air circulation under the load. The use of slipsheets in refrigerated transportation equipment with shallow floor channels is not recommended due to the need for adequate air circulation under the load.

SECTION IV

Precooling Practices

4.1 If available, the removal of field heat by the process of precooling to a recommended storage temperature and relative humidity is suggested to maintain the quality of fruits, and vegetables. The quality of most produces will rapidly deteriorate if field heat is not removed before loading into transportation equipment.

4.2 Refrigerated transportation equipment is designed to maintain temperature and should not be used to remove field heat from produces packed in shipping containers. The refrigeration units also are not capable of raising or controlling the relative humidity.

4.3 Precooling extends produce life by reducing:

- field heat;
- the rate of respiration and heat generated by the produce;
- the rate of ripening;
- the loss of moisture (shrivelling and wilting);
- the production of ethylene (ripening gas generated by the produce);
- the spread of decay.

4.4 The success of precooling is dependent on:

- time between harvest and precooling;
- type of shipping container if produce is packed beforehand;
- initial produce temperature;

- velocity or amount of cold air, water, or ice provided;
- final produce temperature;
- sanitation of the precooling air or water to reduce decay organisms.
- maintenance of the recommended temperature after precooling.

4.5 Preecooling should occur as soon as possible after harvest. Harvesting should be done in early morning hours to minimize field heat and the refrigeration load on precooling equipment. Harvested produces should be protected from the sun with covering until they are placed in the precooling facility.

4.6 Many produces are field or shed packed and then precooled. Wirebound wood or nailed crates or wax impregnated fibreboard boxes are used for packed produces that are precooled with water or ice after packing. Preecooling of produces packed in shipping containers and stacked in unitized pallet loads is especially important as air circulation around and through the packaging may be limited during transportation and storage.

4.7 The choice of precooling method depends on the nature, value, and quality of the produce as well as the cost of labour, equipment, and materials. Preecooling methods include:

- room cooling--stacking containers of produces in a refrigerated room. Some produces are misted or sprayed with water during room cooling;
- forced air cooling or wet pressure cooling--drawing air through stacks of containers of produces in a refrigerated room. For some produces, water is added to the air;
- hydrocooling--flushing produce in bulk tanks, bins, or shipping containers with a large quantity of ice water;
- vacuum cooling--removing heat from produces packed in shipping containers by drawing a vacuum in a chamber;
- hydrovacuum cooling--adding moisture to produces packed in shipping containers before or during the vacuum process, to speed the removal of heat;
- package-icing--injecting slush or crushed ice into each shipping container of produce. Some operations use bulk containers.

4.8 Since most tropical produces are sensitive to chilling injury, care must be taken not to precool or store the produces below the recommended temperature. Often the visible effects of chilling injury are delayed until the produce is offered for retail sale. These effects include failure to ripen properly, pitting, decay, watery breakdown, and discoloration in fruits and vegetables.

4.9 All produces are sensitive to decay. Preecooling equipment and water should be sanitized continuously with a hypochlorite solution to eliminate decay producing organisms. Care also must be taken not to allow produces to warm up after precooling. Condensation on cool produce surfaces at higher air temperatures also spreads decay.

4.10 The method of transportation, condition of the transport equipment, loading method, and transit and storage practices affect the success of precooling. If the recommended temperature and relative humidity are not maintained after precooling, produce quality will deteriorate.

ALINORM 93/35A
APPENDIX VII

**PROPOSED DRAFT CODE OF PRACTICE FOR THE CONTROL AND INSPECTION
OF TROPICAL FRESH FRUITS AND VEGETABLES**
(At Step 3)

1. **GENERAL RULES**

1.1 **Designation**

The national services for the inspection and control of export/import produce are responsible for ensuring any quality certificates issued by them are reliable and accurately reflect the requirements of the Codex standard for that produce, whose quality standard has been accepted by the Government in question, in line with the acceptance procedure of the Codex Procedural Manual. The Government may partially or temporarily delegate this authority.

1.2 **Produce Affected**

Without prejudice to subsequent extensions or restrictions, the inspection will apply to CCTFFV standardized produce exported from, or imported into, the country in question whose quality standard has been accepted by its Government.

1.3 **Quality Standards for External Trade**

The standards applicable for export and import inspection and certification shall be those presently or subsequently drawn up by the CCTFFV and accepted by the Government in question, together with those determined and approved by other international standardization bodies which have been expressly accepted and adopted by the Codex Commission.

The inspection and certification of export and import quality shall not take place until the produce has a Codex standard which has been accepted and, where appropriate, officially promulgated by the country in question.

1.4 **Control and Implementation of Inspection**

For exports or imports, the inspection and certification of the quality and condition of the product may be conducted:

1.4.1 At the point of origin of the product. This may be the packinghouse or other location as long as a suitable facility is available to conduct the inspection; or,

1.4.2 At the destination or receiving point. The inspections may be conducted at terminals, airports, railway stations, ports, or other locations as long as proper facilities are available to conduct the inspection. If such facilities are not available, the product must be taken to a place where the inspection can be made without interference.

1.5 **Inspection Request**

The exporter shall be obliged, on his own behalf or through his representatives, to request the Service to inspect the produce by completing a copy of the customs document. This should include as much data as is needed to facilitate identification of the produce. In addition, the exporter should contact the Inspection Service of the importing country at least 48 hours prior to the arrival of the product so that arrangements can be made for import inspection.

1.6 Certification and Acknowledgement of Notification

The Service shall issue an official quality certificate declaring that the produce is fit for export only when the produce has been physically inspected according to the provisions laid down in the following paragraphs of this Code.

Otherwise, and whatever the reasons for which the Service fails to issue certification, it will issue an Acknowledgement of Notification.

The format of both documents will be that officially authorized by Codex for international use.

Customs clearance shall not be effected without the prior submission of one or other document duly processed by the national service.

In the case of imports, the Certificate of Control or the Acknowledgement of Notification issued by the Service in the exporting country should be presented so that its operational status may be recognized by the Service of the importing country.

1.7 Sampling

The inspection will be based on random samples representing the whole consignment, in the form and within the limits established to this effect by the Guide for the Quality Control of Fresh Fruit and Vegetables adopted by Codex.

1.8 Laboratory Analysis

In cases where the quality control of the produce involves a laboratory analysis requiring a certain period of time, the produce should be submitted for inspection sufficiently in advance to avoid possible delays in clearance.

1.9 Dual Inspection

If the produce is considered unfit, the interested party or his representative may request an appeal inspection in writing which will be effected within the following 24 hours and, wherever possible, before the departure of the means of transport.

In the case of companies using quality assurance systems the company must be able to demonstrate to the national service how the product has been re-sorted, repacked or otherwise reconditioned to allow the national service to issue certification.

1.10 Refusal of Produce

Produce declared unfit for export shall remain immobilized twenty-four hours in the place of inspection, unless there is some form of guarantee that it will not be improperly cleared from customs.

In the case of companies using quality assurance systems the company must be able to demonstrate to the national service the system used by the company to isolate or reject failed product and detail how the company will assure the national service that this product will not be exported unless relabelled or reclassified in accordance with paragraph 3 of this clause.

Produce declared unfit for export shall be subject, as appropriate, to declassification, relabelling or reclassification in the preparation and packaging plant to eliminate the grounds for rejection, where possible.

Results of appeal inspections shall be considered the final determination unless the produce is re-sorted, repacked or otherwise re-conditioned. In such a

case, the applicant may ask for another inspection, which will not be considered an appeal inspection.

1.11 Clearance of the Produce

The inspection shall not be considered complete until final clearance. The applicant will have 24 hours to recondition the product for final clearance. If the product continues to fail to make final clearance after three inspections or 24 hours the product will no longer be considered for inspection. However, until such time the national services for the inspection of external trade shall be entitled to conduct as many tests as they see fit.

1.12 Sanctions

The Government shall develop a sanction procedure for cases where such proceedings need to be initiated by its inspection service against a trader or his legal representative.

2. INSPECTION PROCEDURE

2.1 Inspection in Production, Preservation and Distribution Centres

The technical staff of the inspection service may conduct inspections or audits in the production, preservation and distribution centres to advise, as appropriate, the exporters or importers on the operations and conditions of these centres.

2.2 Inspection in Stations of Origin and Transit

The inspection and/or mandatory control of the produce shall take place in the stations of origin and transit within the national territory, both for the complete consignments and during the loading and unloading operations.

In the case of exportation of wagons, containers, trucks or other means of transport, once authorized, these shall be sealed.

A further inspection may be conducted when the Service considers that the lapse of time between inspection and departure of the means of transport is such that the quality or condition of the produce may have deteriorated.

2.3 Inspection at Ports, Airports and Borders

Produce arriving without having been controlled will be subject to the treatment described in the previous paragraph.

Produce accompanied by a control certificate and therefore sealed, shall only be subject to further inspection in one of the following circumstances:

- 1 - Breakage of the seal
- 2 - Transshipment. The consignment shall be identified and sealed in the relaying means of transport.
- 3 - Exceptional circumstances suggesting modifications to the initial characteristics of the produce.

2.4 Inspection of the Means of Transport

It is the responsibility of the Inspection Service to enforce the various provisions of the Code of Practice for the Packaging and Transport of Tropical Fresh Fruits and Vegetables, and to control the loading, unloading, stowing and unstowing operations.

2.5 Inspection in the Country of Destination or Origin

This inspection shall be conducted by the technical staff of the Inspection Service in the country.

ANNEX I

CODEX COMMITTEE ON TROPICAL FRESH FRUITS AND VEGETABLES

GUIDE FOR THE QUALITY CONTROL OF TROPICAL FRESH FRUITS AND VEGETABLES

1. DEFINITIONS

1.1 Quality control of fresh fruits and vegetables:

Inspection carried out by national quality control services to check the conformity of fresh fruit and vegetables with the quality standards.

1.2 Quality inspector:

Authorized person of an official or officially authorized quality control service who has appropriate and regular training enabling him/her to undertake quality inspection.

1.3 Consignment:

Quantity of produce from one dispatcher found at the time of inspection and defined by a document. The consignment may consist of one or several types of produce; it may contain one or several lots of fresh fruits and vegetables.

1.4 Lot:

Quantity of produce which, at the time of inspection at one place, has similar characteristics with regard to:

- packer and/or dispatcher
- country of origin
- nature of produce
- class of produce
- size (if the produce is graded according to size)
- variety or commercial type (according to the relevant provisions of the standard)
- type of packaging and presentation.

However, if during the inspection of consignments (see 1.3) it is not possible to distinguish between the different lots and/or the presentation individual lots is not possible, all lots of a specific consignment may be treated as one lot if they are similar in regard to type of produce, dispatcher, country of origin, quality class and, variety or commercial type, if this is provided for in the standard.

1.5 Sampling:

Collective sample taken temporarily from a lot during quality control.

1.6 Primary sample:

Package taken from the lot or, in the case of bulk produce, a quantity taken from a point in the lot.

1.7 Bulk sample:

Several representative individual samples taken from the lot whose quantity is sufficient to allow the assessment of the lot with regard to all criteria.

1.8 Reduced sample:

Representative quantity of produce taken from the bulk sample whose size is sufficient to allow the assessment of certain individual criteria. Several reduced samples may be taken from a bulk sample.

2. IMPLEMENTATION OF QUALITY CONTROL

2.1 General remarks:

Quality control shall take place by assessing bulk samples taken at random from the lots to be inspected. It is based on the principle of presumption that the quality of the conforms to the quality of the bulk sample.

2.2 Place of control:

Quality control may be carried out at the point of dispatch or during transport.

2.3 Presentation of produce:

The exporter or his representative shall inform the Quality Control Service whenever a consignment is to be exported.

The quality inspector decides which lots are to be inspected. The presentation shall be made by the person authorized to do so or his representative. The procedure shall include a presentation of the bulk sample (see 2.5.3) as well as the supply of all information necessary for the identification of the consignment or lots.

If reduced samples are required, these are identified by the quality inspector himself from the bulk sample.

2.4 Identification of lots and/or getting a general impression of the consignment.

The identification of lots shall be carried out on the basis of their marking or other criteria. In the case of consignments which are made up of several lots, it is necessary for the quality inspector to get a general impression of the consignment with the aid of accompanying documents or declarations concerning the consignments. He then determines how far the lots presented comply with the information in these documents.

If the produce is to be or has been loaded onto a means of transport, the registration number of the latter shall be used for identification of the consignment.

2.5 Verification of the lot

2.5.1 Assessment of packaging and presentation on the basis of primary samples:

The packaging, including the material used within the package shall be tested for suitability and cleanliness according to the provisions of the quality standards. If only certain types of packaging are permitted, the quality inspector checks whether these are being used. If the individual standard includes provisions concerning presentation, their conformity is also checked.

2.5.2 Verification of marking on the basis of primary samples:

First, it is ascertained whether the produce is marked according to the quality standards. During inspection a check is made on the accuracy of the marking and/or the extent of amendment required.

2.5.3 Sampling:¹

The quality inspector shall determine the size of the bulk sample in such a way as to be able to assess the lots. He shall at random select the packages to be inspected or, in the case of bulk produce, the points of the lot from which individual samples shall be taken.

The bulk sample shall comprise of the following minimum quantities whenever a consignment is to be declared unsatisfactory:²

Packaged produce

Number of packages in the lot	Number of packages to be taken (primary samples)
Up to 100	5
101 - 300	7
301 - 50	9
501 - 1,000	10
over 1,000	15 (minimum)

Produce in bulk

Quantity of lot in kg or number of bundles in the lot	Quantity of primary samples to be taken in kg. or number of bundles ³
Up to 200	10
201 - 500	20
501 - 1,000	30
1,001 - 5,000	60
over 5,000	100 (minimum)

If the quality inspector discovers after an inspection that a decision cannot be reached, he may carry out another inspection and express the overall results as an average of the two checks.

Certain criteria, such as the presence or absence of internal defects, may be checked on the basis of reduced samples; this applies in particular to control which destroys the trade value of the produce. The size of the reduced samples shall be restricted to the minimum quantity absolutely necessary for the assessment of the lot; if, however, defects are ascertained or suspected the size of the reduced sample shall not exceed 10 percent of the size of the bulk sample initially taken for the inspection.

¹ Damaged packages will not be used as part of the bulk sample. They should be set-aside, and examined and reported separately if necessary.

² However, a participating country may experiment with another sampling method than that provided for in paragraph 2.5.3 if it has previously notified its intention to the Inspectorate concerned.

³ In the case of bulky fresh fruits and vegetables (over 2 kg per unit) the primary samples should be made up of at least five units.

2.6 Control of produce:

The produce has to be removed entirely from its packaging for the control; the quality inspector may only dispense with this if the type of packaging and form of presentation allow an inspection of the contents without unpacking the produce. The inspection of uniformity, minimum requirements, quality classes and size shall be carried out on the basis of the bulk sample. In the case when defects are detected, the quality inspector shall ascertain the respective percentage of the produce not in conformity with the standard by number or weight. The results of each single sample examined shall be recorded on an official notesheet that will be attached to a copy of the inspection certificate and kept on file at an office of the officially authorized quality control body.

2.7 Report of control results:

According to the respective legal provisions of the individual countries and depending on the results of control, a report on the findings may be made in the form of a statement, a control certificate, a complaint, etc... For the report on the results of control, in cases of nonconformity, several lots may be taken together if these are uniform in regard to type of produce, sender, country of origin, quality class and variety or commercial type, if this is provided for in the standard.

If defects are found, the authorized person or his representative must be informed about the reasons of complaint. This information shall be made according to the legal provisions of the individual countries. If the compliance of produce with the standard is possible by a change in marking, the person authorized to sell it or his representative must be informed about it.

If defects are found in a product, the percentage found not to be in conformity with the standard may be indicated. This is not necessary if it is possible to achieve compliance with the standard by a change in the marking of the product.

The control services should develop and maintain a system of recording their inspection results as an official certificate should be completed for each inspection performed.

2.8 Non-conforming produce:

The authorized person, or his representative should ensure that there is no shipment of the non-conforming produce.

2.9 Decline in value by quality control:

After the control, the bulk sample is put at the disposal of the authorized person or his representative.

Unless legal provisions so specify, the Control Service is not bound to hand back the elements of the bulk sample destroyed during the control.

When quality control has been limited to the minimum required, no compensation (unless legal provisions so specify) can be claimed from the Control Service concerned if the commercial value of the produce has suffered a loss.

ANNEX II

INSPECTION SITE REQUISITES

(To be prepared)

ANNEX III

DRAFT CERTIFICATE OF QUALITY FOR TROPICAL FRESH FRUITS AND VEGETABLES

1. Dispatcher	QUALITY CONTROL CERTIFICATE No. This certificate is for the exclusive use of the inspection service		
2. Packer indicated on the package (if other than dispatcher)		3. Inspection service	
		4. Country of origin ¹	5. Country of destination
6. Identification of means of transport		7. Space for national provisions ²	
8. Number (and type of packages	9. Nature of produce (variety, if required in the standard)	10. Quality class	11. Total gross/net ³ weight in kg

12. The above-mentioned inspection service certifies, on the basis of a sample control, that this produce complies, at the time of inspection, with the Codex quality standards.

Outgoing customs point Date and place of dispatch

Validity period ⁴ (days)

.....
Inspector (name and surname in print)

Signature: Inspection service stamp

13. Remarks

¹ For re-exported produce, indicate its origin after the nature of the produce.

² Optional.

³ Delete as appropriate.

⁴ Valid up to the point of departure from the country (including the day of inspection).

ANNEX IV

DRAFT CERTIFICATE OF ACKNOWLEDGEMENT OF NOTIFICATION FOR TROPICAL
FRESH FRUITS AND VEGETABLES

CERTIFICATE OF ACKNOWLEDGEMENT OF NOTIFICATION

Country

Inspection Service/Office

.....

.....

Certificate No.

The above inspection office certifies that (name and address of company)

.....

.....

has notified it of the following consignment, prior to dispatch:

Nature of produce and, where appropriate, variety	Quality class	No. of packages	Total gross/net ¹ weight in kg
.....

Destination

Means of transport

Expected date of dispatch

Date

Inspector
(name and surname in print)

Signature

Stamp of inspection service

¹ Delete as appropriate.

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APPENDIX VIII

PROPOSED DRAFT GLOSSARY OF TERMS AND DEFINITIONS
FOR FRESH FRUIT AND VEGETABLES

Part I : Proposed Revised Glossary

- Pod:** a) Tender husk of some seeds
b) Expansion of the petiole or enveloping leaf of stalk
c) Dry and dehiscent fruit, vegetable. Example: Green bean
- Legume:** a) Fruit formed by a pod with two sides which enclose a file of seeds, or one seed only, in its interior
b) What comes from legumes
- Bush:** Perennial plant with woody stalks and branches from the base, such as the lilac, the rockrose, etc.
- Tree:** Perennial plant which has a woody and high trunk which branches out at a certain distance from the ground, forming a crown.
- Vegetable:** a) Greens and edible plants which are cultivated in vegetable gardens
b) Small plant which is eaten in whole or in part when it is still tender, raw or cooked
- Vegetable:** a) Edible plant parts which are consumed when the texture is still tender, either in the raw form or cooked.
- Fruit:** Product of the development of the ovary after fertilization has taken place, in which the seeds are contained and in whose formation the calyx and other parts of the flower frequently take part.
- Fruit:** The edible part of a plant or tree, constituting of the seed (generally) and its flesh, especially the latter when juicy and pulpy. They are either naturally sweet or normally sweetened before eating.
- Fruit:** Product of the development of the ovary after pollinization and/or fertilization have taken place, in which the seeds are normally contained and in the formation of which the calyx and other parts of the flower frequently take part.
- Fruit:** Edible vegetable product derived from the development of the carpels, with or without accessory structures and/or seeds, whose flavour is generally aromatic and sweet, or that can be sweetened, and therefore is frequently eaten as dessert.
- Fruit:** Product of the development of the ovary through pollinization or parthenocarpy in which the seeds may be present or not, and in the formation of which the calix or other parts of the flower may take part.

Part II

List of Proposed Terms for Inclusion in the Glossary

1. mature
2. maturity stage

4. overripe
5. senescence
6. postharvest handling
7. physical treatments
8. chemical treatments
9. physiological weight loss
10. total weight loss
11. mechanical injury
12. physiological disorder
13. chilling injury
14. precooling
15. blemish
16. control atmosphere storage
17. modified atmosphere storage
18. curing
19. immature
20. discolouration

Part III

Proposed Definitions for Inclusion in the Glossary

Fresh fruit Fruit which keeps the colour, turgescence, freshness characteristic of the variety and the stage of maturity after harvest.

Intact fruit Without any superficial damage caused by pests, diseases, climate conditions, damage during harvest or picking, sorting, storage, packaging and transport

Whole fruit Fruit in which all morphological parts of a given species destined to be consumed are present, and which does not show any superficial deterioration

Sound fruit Fruit which does not show evidence of external or internal alterations affecting its quality

Clean fruit Fruit which is practically free from superficial foreign matters

Completely developed fruit

Fruit which has reached the size typical of the variety, in a stage of maturity for consumption

Stage of maturity of the fruit

Physiological stage of the fruit where it complies with the requisite criteria for harvesting, according to its destination

Technical maturity

Stage of maturity in which the fruits are completely developed and are able to continue the ripening process after harvest and reach the appropriate ripeness for consumption

Ripeness for consumption

Stage of maturity in which the fruit reaches the highest quality as regards its external appearance, firmness and taste of the flesh

Botanical maturity

Stage of the botanical fruit in which it shows the colour typical of the species or variety concerned and the seed is fit for planting

Overripe fruit Fruit which has reached its ripeness for consumption and has initiated its decomposition

(Climacteric) Fruit

Fruit which cannot acquire after harvest, including in optimal conditions, the external aspect, firmness and taste of the flesh typical of the variety in a state of maturity for consumption

Longitudinal axis of the fruit

The axis determined by the carpellar column or by the extremities of the botanical fruit.

Diameter of the equatorial section

Cross-section of the fruit perpendicular to the longitudinal axis

Transportability of the fruit

Capacity of the fruit to keep its characteristics throughout transport, so as to enable it to arrive at the place of destination fresh and in satisfactory condition for its intended use

Bruising Mark or wound affecting the flesh made by rubbing resulting from the working equipment used or received during handling

Rotting Damage caused by microorganisms and entailing any degree of decomposition, disintegration or fermentation of the tissues

Damage Any external or internal alteration affecting the aspect or quality of the fruit

Mechanical damage

Deterioration (cut, crack) or bruising resulting from a shock to the fruit by a solid body

Slight mechanical damage

Any internal or external alteration of the fruit resulting from pressure, shock or rubbing, which does not prevent its use or significantly affect its keeping quality or shelf-life

Serious mechanical damage

Any internal or external alteration of the fruit, resulting from pressure, shock or rubbing preventing its use as a fresh fruit

Damage caused by pests

Alteration caused by insects, mites, rodents or other species likely to cause wounds to the fruit and offer means of ingress and development for diseases occasioning rot

Damage caused by diseases

Alteration caused by fungi, bacteria and virus occasioning rotting, misshapings and other anomalies

Internal defect Defects affecting the flesh of the fruit and which can be ascertained only by cutting or tasting the fruit

External defect Superficial defect caused by a healed mechanical damage, climatic conditions or chemicals

Fruit containing insects

Fruit showing internal or external presence of insect bodies, which are defined as pests

Deteriorated fruit

Fruit the external aspect, firmness and taste of which are deteriorating, through high temperatures, humidity or inadequate ventilation during transport and storage

Defect in shape Modification of the shape of the fruit which do not affect the quality of the flesh

Slight defect in shape

Slight modification of the shape of the fruit which do not significantly affect the morphological characteristics typical of the variety

Cracks Tearing of the skin next to the peduncle during picking

Healed wound Dry scar left on the skin of the fruit, due to external wounds already healed

Unhealed wound Incision, tearing or other mechanical damage ripping the skin and affecting the flesh

Softness Lack of firmness of the fruit due to loss of water
Degreening loss of the green colour of the skin through destruction of chlorophyll by an accelerated process

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APPENDIX IX

PRIORITY LIST OF TROPICAL FRESH FRUITS AND VEGETABLES
(IN ORDER OF PRIORITY)

Fruits

Passion Fruit
Coconut
Guava
[Strawberries]

Vegetables

Chili Pepper
Yam
Cassava
Ginger