

# codex alimentarius commission

FOOD AND AGRICULTURE  
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## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX ALIMENTARIUS COMMISSION

#### Seventeenth Session

Rome, 29 June - 10 July 1987

### REPORT OF THE EIGHTEENTH SESSION OF THE CODEX COMMITTEE ON PESTICIDE RESIDUES

The Hague  
21 - 28 April 1986

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REPORT OF THE EIGHTEENTH SESSION  
OF THE CODEX COMMITTEE ON PESTICIDE RESIDUES

THE HAGUE, 21 - 28 APRIL 1986

INTRODUCTION

1. The Codex Committee on Pesticide Residues held its eighteenth Session in The Hague, The Netherlands, from 21-28 April 1986. Mr. A.J. Pieters, Public Health Officer of the Ministry of Welfare, Health and Cultural Affairs, Foodstuffs Division, acted as Chairman. The Session was attended by Government delegates, experts, observers and advisers from the following 41 countries:

Argentina	Gabon	New Zealand
Australia	German Democratic	Norway
Austria	Rep. (observer)	Panama
Belgium	Germany, Fed.Rep.of	Portugal
Brazil	Greece	Spain
Cameroon	Hungary	Sweden
Canada	Indonesia	Switzerland
Chile	Iran	Tanzania
China, People's Rep. of	Ireland	Thailand
Costa Rica	Israel	United Kingdom
Cuba	Italy	United States of
Czechoslovakia	Japan	America
Denmark	Kuwait	Yugoslavia
Finland	Mexico	
France	Netherlands	

The following International Organizations were also represented:

Association of Official Analytical Chemists (AOAC)  
Commonwealth Agricultural Bureaux International (CABI)  
Confédération Européenne du Commerce de Détail (CECD)  
Council of Europe (CE)  
European Economic Community (EEC)  
International Dairy Federation (IDF)  
International Federation of National Associations of Pesticide  
Manufacturers (GIFAP)  
International Organization for Standardization (ISO)  
International Union of Pure and Applied Chemistry (IUPAC)

The list of participants, including officers from FAO and WHO is attached as APPENDIX I to this Report.

OPENING OF THE SESSION BY THE SECRETARY-GENERAL

2. The Eighteenth Session was opened by Dr. J. van Londen, Director-General of the Ministry of Welfare, Health and Cultural Affairs of The Netherlands. The opening speech is attached as APPENDIX II.

In his word of thanks for this introduction and commenting on its contents the Chairman drew attention to an IARC publication in which the net benefits of DDT to humanity were assumed to be positive, but in which connection further long term toxicity studies were considered useful.

The Chairman congratulated the FAO and WHO secretariats with the timely availability of the Reports and Evaluations of the JMPR, which is essential for the work of the Committee.

### ADOPTION OF THE AGENDA

3. The agenda and the time schedule for the plenary session and for working groups as announced in CX/PR 86/1 were adopted.

### APPOINTMENT OF RAPPORTEURS

4. Ms. J.K. Taylor (Canada) was appointed to act as rapporteur to the Committee.

### MATTERS OF INTEREST TO THE COMMITTEE

#### (a) Matters arising from the 16th Session of the Codex Alimentarius Commission and from Sessions of Codex Committees

5. The Committee had before it documents CX/PR 86/2 and Addendum 1 containing matters of interest to the Committee arising from the 16th Session of the Commission and from other bodies.

6. It was noted that the Commission had taken action on the various maximum residue limits submitted to it at Steps 5 and 8 of the Procedure and had adopted the non-substantial changes to Codex MRLs and the glossary of terms recommended by the Committee.

7. As regards the Recommended National Regulatory Practices to Facilitate Acceptance and Use of Codex Maximum Limits for Pesticide Residues in Foods and the Resolutions on Acceptance of Codex MRLs adopted by the Committee at its last session, it was noted that these had been endorsed by the Commission and incorporated into Part 9 of the Guide to Codex Recommendations concerning Pesticide Residues. Part 9 of the Guide has been brought to the attention of Governments.

8. The Committee also noted that the Resolution concerning PCBs adopted at the last session of the Committee had been endorsed by the Commission and distributed to Governments and interested International Organizations for action.

9. The Committee agreed to deal with questions relating to (a) pesticide residue limits for rabbit meat, (b) maximum permitted levels and "Guideline Levels" for environmental contaminants such as Hg, Pb and Cd being elaborated by the CCFA and (c) the recommendations of the Working Group on Pesticide Residue Problems in Developing Countries. All 3 items were referred for discussion under the appropriate agenda items.

#### Labelling of Bulk Containers for Export/Import in Relation to use of Pesticides

10. The Committee considered document CX/PR 86/2 containing the proposal of India that pesticides likely to be present in food commodities should be mentioned on the label or in the documents accompanying the food consignments meant for export. Such information would be useful in facilitating residue analysis and therefore in promoting consumer protection and ensuring fair trade practices.

11. The delegations of Cuba and Cameroon supported the proposal of India. Several delegations expressed the opinion that there would be difficulties in complying with the proposal of India, especially where a food product had been derived from several producers. There would be instances, however, where it would be possible to provide information on the treatment history or analysis of the food. The delegation of Belgium suggested that this would be so with bulk shipments of cereals for example.

A number of delegations agreed with Belgium that information on cereals, especially regarding pesticides used post-harvest, might be provided to the importing countries. The point was made by the delegation of Ireland that analysis using simple methods which were under investigation by the Working Group on Methods of Analysis would be more useful for consumer protection than labelling. The suggestion was also made that the Canadian document on GAP <sup>1/</sup> in the various countries, if up-dated, would be useful in identifying the pesticide residues to be determined by importing countries. The Canadian delegation agreed to look into the matter.

12. The point was also made that the list of registered uses in exporting countries would be helpful in identifying the pesticide residues to look for. This found support from some delegations. The delegation of the United Kingdom indicated that quite apart from the difficulties inherent in the Indian proposal, there was also the principle that pesticide residues should not be declared on the label since they are in a rather different situation from that of the deliberate addition of such substances as food additives.

13. The Secretariat drew the Committee's attention to the statement made by the delegation of India at the last session of the Coordinating Committee for Asia that the Code of Ethics for the International Trade in Foods recommended that countries should ensure that exported food should be in compliance with Codex standards and MRLs. Acceptance of Codex MRLs by countries implied enforcement and, therefore, the meaning of acceptance of Codex MRLs would be reduced unless the accepting country was in a position to verify compliance with MRLs. It was in this spirit that India had made the above proposal. The Secretariat also expressed the opinion that contracts might stipulate that the exporting country should provide details of the results of residue analysis in shipping documents. The Committee also noted the remarks of participants at the second session of the Group of Developing Countries in Asia concerning Pesticide Residue Problems (Room Document 7) that the Indian proposal would meet with practical difficulties, but that, where available, information on residue history or analytical results should be given on request in the shipping documents.

14. The Committee agreed that declaration of pesticides on the label or in the shipping documents would meet with practical difficulties. However, it might be possible to give some information on post-harvest pesticide residues in staple foods such as cereals. A requirement for the sort of information sought by India could be made a part of contracts between trading partners, and the Canadian document on GAP, if up-dated, would be useful in guiding importing countries in the analysis of pesticide residues.

15. The Committee agreed that the matter should be raised at the next meeting of the Commission and may lead to a recommendation for an addition to the Code of Conduct to meet the requirements of India.

(b) Matters arising from International Organizations

16. The Committee expressed the view that the request from the Organization for Economic Cooperation and Development (OECD) (ALINORM 85/11) for the establishment of Codex Maximum Limits for certain chemical substances, regarded as pesticides for post-harvest use on various fruits and vegetables, could be accommodated in the ongoing programme of the Committee.

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<sup>1/</sup> Ref. CX/PR 81/8 and CX/PR 82/17

The Committee referred the pesticides from the OECD list to the Working Group on Priorities (see para 293) for its consideration.

17. The representative of the Commonwealth Agricultural Bureaux International (CABI) informed the Committee of the intention of that organization to expand its activity in the provision of information on pesticides with special emphasis on the needs of developing countries.

18. The representative of the Association of Official Analytical Chemists (AOAC) informed the Committee that his organization would be pleased to assist the Working Group on Methods of Analysis for Pesticides in its task of recommending methods for the determination of pesticide residues.

19. The delegation of Sweden informed the Committee of the availability of an updated version of the book "Control of Pesticide Applications and Residues in Food, A Guide and Directory" from Swedish Science Press. The book contained the new International Code of Conduct on the Distribution and Use of Pesticides and information on the various aspects of the use of agrochemicals.

20. The observer from the EEC informed the Committee of the recent publication and availability of the Second Series of Reports of the Scientific Committee for Pesticides (SCP). The Reports contain certain MRLs for pesticides on fruits and vegetables and reviews of scientific and technical aspects of ethoxyquin, nitrofen, methyl bromide, dithiocarbamates, maleic hydrazide and the carbendazim group of fungicides. They are published in English, French, Italian and German and can be obtained from the Office of Official Publications of the European Communities, Luxembourg.

21. The representative of the Council of Europe informed the Committee that three resolutions on pesticides were adopted in 1985:

- i) Resolution AP(85)5 on the aerial application of pesticides
- ii) Resolution AP(85)4 on Guidelines to reduce the risks of contamination of animal products for human consumption from residues which may result from the use of pesticides on livestock and livestock premises
- iii) Resolution AP(85)3 on wood protection products.

A working party which met recently in order to draw up Guidelines for the evaluation of wood protection products also considered the non-agricultural uses of pesticides. Priority was given to:

- a) Professional use of insecticides in private homes
- b) Rodenticides, and
- c) Disinfectants.

22. The representative of GIFAP informed the Committee that in view of the large number of formulation and packing plants around the world, GIFAP had commissioned a group of specialists, experienced in formulation, packing and quality control, to prepare a Guideline on Quality Control, since attention to this aspect of production during formulation and packing is essential to ensure that performance in the field is effective, predictable and consistent. The Guidelines would be of help to pesticide formulators, national authorities and international bodies. They covered not only laboratory operations but also quality-control-related activities in the plant areas.



The booklet contained a simple but comprehensive check-list to help managers and others to audit control aspects of formulation and packing plants. If these guidelines are widely consulted and implemented, the standards of pesticide quality will be improved world wide. This should help to ensure that the end-user receives products which consistently meet his expectations. Copies of the Guidelines are available from the GIFAP Secretariat.

(d) FAO code of conduct on the distribution and use of pesticides

23. The representative of FAO informed the Committee that the FAO Conference at its 23rd Session had unanimously adopted the Code of Conduct on the Distribution and Use of Pesticides and a resolution recommending its use to all FAO Member Countries and requesting Governments to monitor the observance of the Code. The Code together with the Resolution pertaining to it was at the printing stage and would be distributed shortly together with guidelines on various aspects relevant to the safe handling and registration of pesticides. Six of these guidelines are currently available. The publication of Codex guidelines on residues trials in the Codex Guide concerning maximum residues was also under consideration.

24. As one of the follow-up activities FAO had engaged in a number of training courses. Ten will have been held by the end of 1986. The strengthening of the regulatory infrastructure of developing countries will also be followed up by FAO.

25. The delegation of the Federal Republic of Germany informed the Committee that a paragraph had been included in the new Plant Protection law that the Code of Conduct should be taken into account when exporting pesticides from that country.

26. The representative of FAO informed the Committee that at a meeting of the Codex Committee for Asia, delegations were unanimous in support of the Code and that the delegate of the International Organization of Consumers' Unions indicated that that Organization would try to monitor the use of the Code.

CONSIDERATION OF THE REPORTS OF THE 1984 AND 1985 JOINT FAO/WHO MEETINGS ON PESTICIDE RESIDUES (JMPR)

27. The Committee had before it the Reports of the 1984 and 1985 JMPRs. No further comments were made on the Report of the 1984 JMPR.

28. In considering the Report of the 1985 JMPR the Committee noted that some information, included in the 1985 Evaluations, was missing or misprinted in the Report. For chlormequat (p. 14) and vamidothion (p. 52) items of "Further work or information desirable" had been omitted. They were however included in the "Evaluations" (p. 42 and 358).  
On page 9, line 2, "1983 JMPR" should read "1982 JMPR".  
In the Annex to the Report, page 61, in the section dealing with dithiocarbamate fungicides, the asterisk before "lettuce, head" should be deleted as 5 mg/kg was not a new recommendation. It replaced the previous recommendation of 1 mg/kg.

29. The delegation of Canada noted some differences in the types of information contained in the different summaries in the Report and suggested that a standard format should be used. This suggestion will be considered by the Secretariat.

30. The delegation of the United Kingdom noted that although the 1985 JMPR recommended that the use of chlordimeform should be only on cotton, CXLs existed for other commodities. It was explained that as a consequence of the use of treated cotton plants and products therefrom as animal feed, residues could occur in animal products. The existing CXLs however do not permit residues in animal products above the limit of detection.

31. The Committee was informed by the representative of FAO that the lay-out of the 1984 and 1985 Evaluations had been changed, the residue data being in one part and the toxicology data in another. The 1984 Evaluations had been published as one volume, but the 1985 Evaluations would be published as two separate volumes. Volume I, on residues, is already available; Volume II is expected to appear by the end of July. It was the Secretariat's intention to publish the 1986 Report and Evaluations before the end of this year.

32. The representative of GIFAP made a statement in connection with its working relationship with the JMPR, especially in relation to the recommendations of a special meeting in Ottawa (April 1985). The representative of GIFAP stressed that rapid implementation of these recommendations was essential for continued effective co-operation with industry. The full statement by the representative of GIFAP is given in Appendix IX to this Report.

#### REPORT ON ACCEPTANCES BY GOVERNMENTS OF CODEX MAXIMUM RESIDUE LIMITS

33. The Committee had before it a working paper summarizing responses received from Governments to Codex MRLs adopted by the Commission up to and including the 15th Session between the end of 1983 and 1985 (CX/PR 86/3). The Committee also noted that acceptances received up to the end of 1983 were indicated in tabular form in document CAC/ACCEPTANCES Part II, Rev.2.

34. The Secretariat informed the Committee that Vol. XIII of the Codex Alimentarius which at present included all MRLs adopted up to the 15th Session of the Commission would be up-dated during 1986 and that MRLs adopted by the 16th Session of the Commission as well as amendments to previous MRLs would be submitted to Governments for acceptance. The Chairman urged that this be done without delay.

35. The Secretariat explained that there was a tendency for Governments not to send in their responses to the recommended MRLs. Even so a total of around 20,000 individual reactions to Codex MRLs were received. As the Codex Alimentarius consisted of the Codex MRLs, associated documents and government acceptance notifications it was essential that as many communications be received as possible in order to complete the Codex Alimentarius. In addition to the work of the CCPR in recommending MRLs on the basis of a thorough international evaluation process and its efforts directed to harmonization of pesticide residue regulations, the notifications of acceptances by Governments, whether negative or positive, constituted useful information for traders in food.

36. As regards the acceptance notifications received so far, replies were on the whole positive, although it was not always possible for governments to give "full acceptance". The Secretariat expressed the view that any form of commitment to implement Codex MRLs would serve the purposes of the Commission. The Codex Committee on General Principles might be able to recommend ways to enhance the process of implementing Codex MRLs.

37. In order to cope with the potentially enormous number of acceptances of individual Codex MRLs (ca.200,000) and to enable this information to be processed, the Secretariat was in the process of developing a suitable computer programme which would handle the existing Codex MRLs, food classification system and Government acceptances in English, French and Spanish.

38. The representative of the EEC indicated that computerization of the EEC directives and the various positions in the Member Countries of the Community was also becoming necessary. He informed the Committee that a new survey of the position of the EEC and of its Member Countries regarding Volume XIII of the Codex Alimentarius would be undertaken and communicated to the Codex Secretariat, in order to bring up to date the information contained in APPENDIX I, CX/PR 86/3.

39. The delegation of the United States of America indicated that it hoped to initiate action on Volume XIII of the Codex Alimentarius. Although the United States tolerance-setting procedure was quite complex, it was possible to give full consideration to Codex MRLs. Taking into account all the various ways in which a Codex MRL could be accepted, the United States of America had been able to implement some 75% of Codex MRLs for which the United States had tolerances. It was hoped to improve on this in the future.

40. The delegation of Finland indicated that it had difficulties in accepting some Codex MRLs which indicated too high an intake in relation to the ADI. Finnish pesticide residue regulations had been recently revised and several Codex MRLs had been accepted.

41. In reply to a question from the delegation of The Netherlands, the Secretariat expressed the opinion that the reasons that acceptances were not as numerous as might have been expected were the following.

- (a) Some Governments did not have the infrastructures and personnel to consider Codex MRLs.
- (b) The approx. 2000 Codex MRLs represented a significant task involving consultations with interested parties and study of the various Codex and JMPR documents.
- (c) There were legal or constitutional constraints in giving formal acceptance (i.e. full or limited acceptance); for example many countries would not accept a Codex MRL unless the pesticide was registered and authorized for use in agriculture.
- (d) Some countries found it difficult to reconcile their national approach to enforcing GAP with the international approach to GAP.
- (e) A number of Codex MRLs were considered to be too high. This might be due to the fact that Codex MRLs are based on residues at the "farm gate", allow for variations due to sampling and analysis, take into consideration variations in GAP and are rounded off on the basis of the recognized system of using only the numerical values 0.1, 0.2, 0.5, 1, 2, 5, 10, etc.

#### INTAKE OF PESTICIDE RESIDUES AND CERTAIN ENVIRONMENTAL CONTAMINANTS

- (a) Report on pesticide residue and PCB intake studies through the Joint UNEP/FAO/WHO Food Contamination Monitoring Programme (JFCMP)

42. Dietary intake data collected under the Joint FAO/WHO/UNEP Food Contamination Monitoring Programme (JFCMP) have been presented to previous Sessions of this Committee. The data covered the period 1971 to 1983 and included information on the intakes of a series of organochlorine and organophosphorus pesticides and PCBs. Data

collected so far are limited in scope since only 11 of 22 countries participating in JFCMP submitted intake data and, with one exception, all data were from developed countries where the use of many pesticides and of PCBs has been curtailed or prohibited. In some countries the exposure to aldrin and dieldrin constitutes a significant portion of the ADI (20 to 50%) and occasionally exceeds it. Dietary intakes of residues of organophosphorus pesticides are very low in all cases. A slight increase may be noticeable in some countries, perhaps reflecting a trend towards replacing organochlorine with organophosphorus pesticides.

43. In most cases dietary intake data collected related to an "average" individual. Data submitted by Australia and Hungary indicated that exposure to organochlorine pesticides in the diet increased sharply with decreasing body weight (infants and children). As an additional example, the data submitted by the USA to this Committee indicated that on a body-weight basis, the intake of a 2-years-old child could be ten times that of a 14-16-year-old. If exposure of an average individual constituted for example 20% of the ADI, there should therefore be some concern since some population groups might exceed the ADI under these circumstances.

44. There were no new dietary intake data collected by JFCMP to be presented to this Session of the Committee. JFCMP operates on a two-year data collection cycle and in the next few months, 1984-85 data will be collected and will be available to the next session of CCPR. A new data form developed by the Technical Advisory Committee of JFCMP will be used for the collection of data and may also be used for the collection of dietary intake data for PCBs and pesticides of interest to this Committee from Codex Contact Points. JFCMP was prepared to include additional pesticides in their programme if requested by the Committee.

(b) Report on Pesticide Residue Intake Studies in various countries

45. In response to a Circular Letter requesting dietary intake data, Finland, the Federal Republic of Germany and Portugal had replied. Portugal had indicated that they had no data available. In addition, during this Session, Cuba, New Zealand, Switzerland, The Netherlands and the USA had submitted dietary intake data in writing.

46. Argentina was monitoring pesticide residues in the diet and would follow up with appropriate legal measures.

47. The Netherlands referred to the 1985 Report of the JMPR on hexachlorobenzene and expressed interest in seeing additional monitoring data on HCB in food and in the diet so that Guideline Levels could be reviewed and perhaps extraneous residue limits established on a sound basis. The JFCMP had substantial data on HCB, mostly in foods of animal origin such as milk and milk products, fish and meat. These data would be made available to the CCPR. HCB would be included in the next data-collection cycle.

48. In 1982, the United States of America initiated a new approach for its dietary intake studies: 234 food items instead of the previous 120 are now collected and analysed individually after kitchen preparation, raw or cooked as appropriate.

Such an approach eliminates the dilution effects of analyzing food group composites and allows the study of the intakes of various population groups of different ages and sexes. Results indicate that, in all cases, dietary intakes of pesticide residues are well below ADIs established by the JMPR. For total diet studies, the best available analytical techniques are used, with limits of determination considerably lower than those used for regulatory purposes.

49. Cuba had conducted dietary intake studies on pre-school children from birth to 5 years and on school children. In all cases, the dietary intakes of pesticide residues were below the ADIs.

50. Pesticides and other chemical residues had been determined in Swiss diet samples of prepared daily meals. Dithiocarbamates contributed most significantly to the dietary exposure to pesticide residues of the average Swiss consumer (up to 20% of the ADI in the worst case). During 1982/83 the average intake of PCBs amounted to 7 µg/day with a limit of determination of 0.5-7 µg/kg of food.

51. The Netherlands had conducted duplicate diet studies, the results of which would be available very shortly (see para 307). The delegation of the Netherlands noted that levels of PCBs in human milk in the United States of America were similar to those in several European countries (1-2 mg/kg on a fat basis), while the PCB intake from food reported in the USA was only about 1% of the intake in those European countries. In order to be able to compare results from various laboratories and countries, it was considered important to include in the reports the limits of determination and the way these were used in the estimation of total dietary intake. It was explained by the delegation of the United States of America that the low levels of PCBs in the US diet were due to steps taken over a number of years in that country to reduce sources of food contamination by PCBs. Such a decrease in levels of PCBs in the diet is expected to be reflected in future data on the PCB content of human milk.

#### CONSIDERATION OF CODEX CLASSIFICATION OF FOODS AND ANIMAL FEEDSTUFFS IN THE LIGHT OF COMMENTS

52. The item was introduced by Mr. Besemer, who expressed his appreciation of the comments he had received from many sources. Some of these were unfortunately too late to be reflected in the summary of comments (CX/PR 86/6). Most of the countries from which comments had been received had supported the proposed Classification in principle, while drawing attention to certain difficulties that were thought likely to arise in its detailed application.

Mr. Besemer reminded the meeting that one of the main reasons for developing the new Classification was to facilitate the computerization of Parts II and III of the Guide, for which purpose the previous Classification was not suitable. The expansion of the Classification to include processed commodities and animal feedstuffs had also become necessary.

53. In reply to a question from the Chairman, the Secretariat indicated that the development of a Classification which lent itself to computerization was a matter of urgency, as programming of the FAO computer to handle the relevant parts of the Guide had already begun.

54. The delegation of the United States of America, referring to its comments in document CX/PR 86/5, explained that it regarded the Classification as having several advantages in principle. Its comments were intended to draw attention to difficulties which were likely to arise in changing from the earlier Classification. The delegation expressed the opinion that the change should not be made prematurely, and that the new Classification should not be elaborated through the Step procedure with subsequent acceptance by Governments. The Chairman pointed out that the Codex acceptance procedure would be inappropriate because it would not allow the flexibility which was a feature of the system and which was needed to allow for future developments. It was however intended that the Classification should be incorporated into the Guide and become the basis of the commodity descriptions used by the JMPR and the CCPR.

In response to the criticism that a change to the new Classification would create difficulties in defining the exact scope of some existing group MRLs, it was pointed out that many of the uncertainties in question had always existed but had not been recognised.

55. In the course of further discussion, strong support for the adoption of the Classification was expressed by the delegation of New Zealand and the representative of the AOAC.

56. At the suggestion of the Chairman, the following course of action was agreed.

- (1) The Classification should be amended in the light of the comments made.
- (2) The Guide should then be revised on the basis of the amended Classification.
- (3) Specific problems in the expression of individual commodity descriptions should be identified, and where necessary brought before the next meeting of the JMPR.
- (4) The nature of these problems, and of their resolution, should be reported to the next Session of the CCPR.

It was noted that this procedure would involve the adoption in principle of the new Classification by the CCPR, but would allow the Committee to examine the effects of its application before endorsing the consequent changes in detail. The delegation of the United States of America agreed and provided additional detailed comments.

#### CONSIDERATION OF MAXIMUM RESIDUE LIMITS

57. The Committee had before it the following documents:

- CX/PR 86/6 and 86/7 containing MRLs and proposed amendments to Codex MRLs at Step 3, 6 and 7;
- CX/PR 86/9, as far as compounds are concerned that appear in Part II of the Guide
- CX/PR 86/8 and 86/10 containing government comments;
- The comments of the Federal Republic of Germany (not included in CX/PR 86/8 and 86/10)
- CAC/PR 1986-2 (English version only) containing Part 2 of the "Guide to Codex Recommendations concerning Pesticide Residues" in which maximum limits for pesticide residues are listed.

58. New proposals originating from the 1985 JMPR were not discussed at this meeting and were retained at Step 3 unless otherwise stated.

59. The Committee agreed with the proposal of the Chairman to handle the compounds in the order of Part 2 of the Guide (numerical), taking all relevant steps together.

60. The Committee accepted a proposal of the Chairman to subdivide Step 7 into 7A, 7B and 7C.

- 7A will be used for compounds with a temporary ADI. As soon as the JMPR has established a full ADI the Secretariat will submit the proposed MRLs to the Codex Alimentarius Commission at Step 8.
- 7B will be used for compounds that cannot be dealt with until the JMPR has taken action on them. They will be returned to Step 6 by the Secretariat for government comments immediately after action by the JMPR.
- 7C will be used for compounds or proposals on which action by the Committee is contingent upon further developments.

61. In the interest of economy the following paragraphs refer only to those MRLs and ERLs on which there was detailed discussion, where delegates expressed reservations, or where relevant information had to be recorded. The Step in the Codex Procedure to which the Committee advanced or returned individual MRLs or ERLs or at which limits were held is indicated for each pesticide. Where the Committee decided to recommend to the Commission that Steps 6 and 7 be omitted this decision is given under the appropriate pesticide as "at Step 5/8".

#### BINAPACRYL (003)

62. The ADI was withdrawn by the 1982 JMPR as the toxicological data base was considered inadequate. The 1985 JMPR has produced a list of toxicological data required for establishing an ADI. It was suggested that in the absence of new toxicological data the Codex MRLs should be converted to Guideline Levels and that no new Guideline Levels should be added. The Committee was informed by GIFAP that all required toxicological data would be supplied. The Committee decided to change the Codex MRLs to Guideline Levels and to discuss during the next Session the addition of new Guideline Levels for hops and oranges, as proposed by the 1985 JMPR.

63. In the Guide two figures appear for nectarines, namely 0.2 and 0.3 mg/kg. It was decided to bring this to the attention of the JMPR, if the Secretariat cannot determine whether it is a typographical error.

#### BROMOPHOS (004)

##### Kale

64. The delegation of the Federal Republic of Germany noted that new residue trials supported the proposed MRL of 0.5 mg/kg. The data would be provided to the JMPR.

##### Lettuce

65. The Committee decided to advance the proposal to Step 5 with a recommendation to omit Steps 6 and 7.

##### Pea straw

66. The delegation of The Netherlands confirmed that the term Pea straw is appropriate to the new Classification. There had been difficulties with the description at various Joint Meetings.

##### Plums

67. The delegation of France stated that in the 1982 Evaluations only one trial leading to residues higher than 1 mg/kg had been reported and that this trial did not reflect GAP. In addition, trials performed in France did not give residues higher than 1 mg/kg. Therefore 1 mg/kg was considered sufficient by the French delegation.

Status of MRLs

At Step 5 : plums  
At Step 5/8: lettuce  
At Step 8 : kale, pea straw

CAPTAFOL (006)

68. The 1985 JMPR withdrew the TADI and recommended that the compound should not be used where its use could result in residues in food.

Many delegations commented on the opinion expressed by the JMPR.

69. The representative of the European Economic Community informed the Committee of actions under way in the Community. MRLs for captafol, folpet and captan were included in directive 76/895. The Scientific Committee of the EEC was reviewing these three compounds. Following the completion of this review, the Community would decide on action to be taken with regard to the EEC residue limits.

70. The delegation of the Federal Republic of Germany informed the Committee that captafol, folpet and captan were no longer registered in that country since March 1st, 1986. The Netherlands had withdrawn the registration for captafol in the week prior to this Session. Action with regard to national MRLs would depend on EEC developments. Because of concerns over the toxicological profiles of captafol, captan and folpet, the Australian authorities will withdraw all MRLs for these compounds by June 30th 1986.

71. The delegation of the United States of America informed the Committee that it was presently evaluating the continued agricultural uses of captafol as a routine examination of a pesticide which presented evidence of oncogenicity from laboratory animal studies. Long-term feeding studies submitted to it by the manufacturer were positive for oncogenicity. Details of a recent two-year mouse study performed in Japan, a summary of which was reviewed by the 1985 JMPR, had not been made available to the United States of America and could therefore not be incorporated into the USA risk assessment. A new two-year mouse study using the same strain as in the Japanese study had been initiated by the manufacturers. Use patterns in the United States of America had not been reduced nor existing tolerances revoked.

The delegation expressed its reservation concerning the 1985 JMPR decision which was based on summary data only and strongly recommended that action by the Committee should be delayed until its next session. In reply, the delegation of Australia indicated that the 1985 JMPR had reviewed two carcinogenicity studies in mice and a chronic toxicity study in rats. Only the Japanese study was not available in full detail.

72. The delegation of Austria informed the Committee that on the basis of an agreement with industry captafol, captan and folpet were not being marketed in its country until a final decision is made. Existing national MRLs were under review. The delegation of Canada informed the Committee of the on-going re-evaluation of captafol in its country and recommended that the existing CXLs be converted into GLs.



73. The delegation of France informed the Committee that captafol, captan and folpet were under review but had not been prohibited. France was reviewing further toxicological data received from industry and would await the EEC decision on these compounds. It would however be very difficult to find alternatives to them at short notice, especially in some formulations containing several active ingredients.

The delegation of Spain informed the Committee that there was very extensive use of the three compounds in its country, especially captan and folpet. Before taking any steps, Spain also would await the EEC decision.

74. The manufacturer's representative expressed disappointment at the decision of the 1985 JMPR, for not taking into account the long history of safe use of the compound. On the basis of its own assessments the manufacturer found no risk to consumers or users. A major research programme had been initiated by the manufacturer to resolve the questions still remaining, including a new mouse study. Dr. Ito's group was to undertake an additional lifetime rat study. The Committee was requested not to take immediate action. The delegation of Australia quoted from the 1985 JMPR report to the effect that the TADI had been withdrawn because of the significance of the observed effects in the studies in both rats and mice and because a no-effect level had not been demonstrated.

75. The representative of WHO stated in reply to the various comments and especially the statement by the manufacturer's representative that:

- the original data base was supported by studies which were not up to present standards, and in addition there were IBT studies. Detailed replacement studies had been received and evaluated. The results of the two studies provided by the manufacturer and the published Japanese study were mutually supportive (see para 71). Tumours occurred in several organs in two animal species. The experts agreed that there was sufficient evidence of the carcinogenicity of the compound in rodents.
- the data on carcinogenic properties overruled all other data available and there were no basic questions remaining on which discussion with company representatives was necessary.

The 1985 JMPR had used strong words to express its opinion, as could be found in the Report. Although such a situation had arisen for the first time, it was the JMPR's opinion that the decision was well-founded and was needed to give guidance to the Committee in order that it could take urgent action.

76. It was noted that discussions were continuing in many countries with regard to the future of the compound and that agreement on urgent action by the Committee could not be reached. Many delegations would have preferred the Committee at this Session to recommend that CXLs be converted into GLs or withdrawn. Other delegations preferred to wait until the next Session. As the next Commission meeting would take place after the next Session of this Committee, action was deferred until the next Session. Any new information becoming available in the meantime, such as changes in GAP and national MRLs, could then be taken into account. CXLs would not be amended now, MRLs should in the meantime remain at Step 7C.

Status of MRLs

At Step 7C: carcass meat, milk, peanut kernels, peanuts (whole), pineapples, wheat

CAPTAN (007)

Kiwi fruit

77. It was noted that the delegations of Sweden and France did not accept the proposed MRL.

Potatoes

78. The delegation of France stated that the proposal for potatoes could not be considered GAP, as applications include post-harvest treatment with captan. It was therefore decided to return the proposal to Step 6.

Status of MRLs

At Step 5: kiwi fruit

At Step 6: cherries, potatoes

CHLORDANE (012)

79. The CCPR at its 17th Session had proposed ERLs of 0.02\* mg/kg for all fruits, vegetables and cereals listed. The Committee decided to replace the separately listed ERLs for fruits and vegetables by a group ERL of 0.02\* mg/kg. The delegation of the United States of America expressed the view that 0.1 mg/kg was a more practical limit of determination.

Carcase meat

80. The delegation of the United States of America proposed an ERL of 0.3 mg/kg, as in 1% of the carcase fat samples and up to 3% of the poultry fat samples the ERL of 0.05 mg/kg was exceeded.

Cottonseed oil; Linseed oil; Soybean oil

81. The delegation of The Netherlands proposed that ERLs for crude oils be changed to 0.02\* mg/kg, the level agreed by the 16th Session for edible oils. The amendment was not accepted. The delegation of the Federal Republic of Germany reserved its position.

Status of ERLs

At Step 8: all proposals.

CHLORDIMEFORM (013)

82. It was suggested that the residue definition might need to be reconsidered. It was decided to bring this to the attention of the Working Group on Methods of Analysis (see para 251).

CHLORFENVINPHOS (014)

Citrus fruit

83. The delegation of France reserved its position on the proposed MRL of 1 mg/kg.

Status of MRLs

At Step 5: citrus fruit

CHLORPYRIFOS (017)

Currants and raisins

84. The delegation of France reserved its position on the proposed MRL of 2 mg/kg, since they thought it too high. The delegation of the Federal Republic of Germany supported the views of the delegation of France and noted that from a toxicological point of view further MRLs were not possible as the theoretical daily intake might exceed the ADI.

Status of MRLs

At Step 5: currants and raisins

2,4-D (020)

85. It was noted that by proposing separate MRLs for barley, oats, rye and wheat the remainder of the cereals covered by the group MRL might not be supported by data. The JMPR was requested to consider the replacement of the MRL for raw cereals by a separate MRL for rice.

DIMETHOATE (027)

86. At its 12th Session, the Committee had referred dimethoate, omethoate (055) and formothion (042) to the JMPR with the aim of separating the MRLs for these compounds. The 1984 JMPR had discussed both dimethoate and omethoate and concluded that they could not be separated. It was noted however that the MRLs for dimethoate applied to the sum of dimethoate and omethoate whereas the same MRLs for omethoate applied to omethoate alone. It was indicated that in many cases, especially in the older data, no distinction had been made between the two compounds and that it was therefore not possible to recommend separate MRLs. It was recognized that because of regulatory problems, separation of the MRLs of the compounds was still needed. The delegation of Chile mentioned that its country experienced problems in trade with these compounds which related to the different MRLs in importing countries. Use of omethoate, although the more effective, was therefore discouraged in its country. Separate MRLs could only be developed however if adequate data were provided to the JMPR. Governments and manufacturers were requested to supply relevant data. Pending re-evaluation by the JMPR MRLs would be held at Step 7B.

Status of MRLs

At Step 7B: all commodities

ENDOSULFAN (032)

Meat, milk

87. The Committee noted that re-evaluation of endosulfan by the JMPR was due in 1989 and agreed to hold the TMRLs at Step 7B.

Status of MRLs

At Step 7B: meat, milk.

FENITROTHION (037)

Wheat flour (white)

88. The delegation of the Federal Republic of Germany expressed concern about the proposed MRL for wheat flour in relation to the theoretical intake and the TADI. The delegation of France also expressed concern regarding the toxicological situation. The delegation of Australia was of the opinion that the toxicity study which caused this concern had been considered a non-valid IBT study by the 1984 JMPR, but that data from other human studies had been reviewed by that meeting. It noted that, as fenitrothion was on the agenda of a forthcoming JMPR, any relevant additional data could be submitted for consideration. It was decided to return the proposal to Step 6 for discussion.

Mandarins and Oranges

89. The delegation of The Netherlands and of France requested more information on GAP.

Status of MRLs

At Step 5 : mandarins, oranges

At Step 6 : wheat flour (white)

At Step 7A: peaches, pears, peas, rice bran, rice (polished).

FENTHION (039)

90. After some discussion, it was agreed not to describe the residue as fat-soluble since the sulphoxides and sulphones were not considered to be fat-soluble.

FOLPET (041)

91. The 1984 JMPR withdrew the TADI for this compound. The representative of WHO informed the Committee that the compound was scheduled for re-evaluation in 1987. The representative of GIFAP said that new toxicological data were available for review in 1986 or 1987. Several delegations stressed the importance of re-evaluation at the earliest opportunity. The Committee therefore requested WHO to try to include the compound on the agenda of the 1986 JMPR. It was decided not to take action with regard to the existing CXLs but to reconsider the situation at the next Session in the light of all relevant information then available.

INORGANIC BROMIDE (047)

92. The delegation of the Federal Republic of Germany objected to some of the proposed MRLs because of the toxicological effects that might arise in situations of high intake. It was noted that the Committee at its 17th Session had requested a toxicological evaluation of inorganic bromide by the 1986 JMPR. As it was not included in this year's agenda, WHO was requested to evaluate it in 1987.

Cucumber; Lettuce; Tomatoes

93. The delegation of The Netherlands explained its GAP, which included soil-leaching. This special GAP was necessary because trading partners were not prepared to accept residues exceeding 30 mg/kg for most commodities and 50 mg/kg for lettuce. The delegations of Israel and France indicated that GAP in their countries necessitated an MRL of 100 mg/kg for leafy vegetables and lettuce.

Celery

94. Although the proposed MRL of 300 mg/kg was based on current UK GAP, the Committee decided to amend the proposal to 100 mg/kg as for other leafy vegetables and to invite governments to express their opinion on this figure. Countries would also be requested to indicate what limit they needed for their GAP.

Status of MRLs

At Step 3 : celery  
At Step 5 : cucumbers, tomatoes  
At Step 8 : cabbage, lettuce

OMETHOATE (055)

95. Reference was made to the discussion on dimethoate (027) (see para 86). All proposals currently at Step 7 would be held at Step 7B.

Kiwi fruit

96. Although the proposal was based on data provided by New Zealand, the use of omethoate on Kiwi fruit was not GAP in that country. No information on GAP in other countries could be identified during the Session. It was decided to keep the proposal at Step 3 and to request Governments to provide data on GAP. If these data did not become available, the Committee could then decide at its next Session to delete the proposal.

Vegetables (not otherwise listed)

97. The delegation of France requested reconsideration of the CXL for vegetables (not otherwise listed) as it was not clear to what vegetables the MRL applied and on which GAP it had been based. Delegations were requested to supply relevant information to the JMPR. Amendment of this Codex MRL would also be necessary in the light of the new Classification system.

Status of MRLs

At Step 3 : Kiwi fruit

At Step 7B: all other commodities

PARAQUAT (057)

Soya beans

98. The proposed MRL of 0.2 mg/kg for soya beans was not acceptable to the delegation of The Netherlands, since the USA and Brazil, where trials were carried out, both maintained figures lower than the proposed MRL.

The delegation of the United States of America informed the Committee that the situation of this compound was under review in the USA. It was expected that the review would result in a limit of 0.2 mg/kg. It was decided to hold the proposed MRL at Step 7C.

Status of MRLs

At Step 7C: soya beans

At Step 7A: all other commodities

CYHEXATIN (067)

99. It was noted that the 1985 JMPR had proposed a combined list of MRLs for cyhexatin and azocyclotin (no. 129). Since the proposed MRLs had not been changed, some discussion was possible. It was agreed to discuss the unchanged proposed MRLs in the present Session, and the merging of the two lists at the 19th Session.

Beans

100. The delegations of Portugal and the Federal Republic of Germany could not accept the proposed MRL. They expected that new information on GAP which they would try to send to the JMPR would justify a higher limit.

It was decided to await the new GAP information and a subsequent re-evaluation by the JMPR and to hold the proposal at Step 7B.

Kiwi fruit

101. The delegation of the Federal Republic of Germany could not accept the proposed MRL of 5 mg/kg and considered an MRL of 3 mg/kg to be adequate. The Chairman stated that MRLs of 3 mg/kg were not normally considered acceptable in the Codex system for developing MRLs. The delegation of the Federal Republic of Germany agreed to prepare a note on this question for the next Session of the Committee.

Peaches; Plums; Strawberries

102. Several delegations were of the opinion that for toxicological reasons the proposed MRL of 5 mg/kg for peaches was too high. The delegation of the United States of America stated that this proposal was based on GAP data supplied by the USA and that, while an increase from 2 mg/kg was justified, the USA could not accept a limit greater than 4 mg/kg at this time for peaches. The United States could also not accept a limit greater than 1 mg/kg for plums. It was agreed to return the MRLs to Step 6, to allow further discussion.

Status of MRLs

At step 5 : Kiwi fruit

At step 6 : peaches, plums, strawberries.

At step 7B: beans

CARBENDAZIM (072)

Almond hulls

103. The Committee noted that this item was of no importance in international trade, but decided that its use in animal feeds justified the elaboration of an MRL.

Bananas (pulp)

104. After discussion it was decided to delete this item, as only dried banana pulp is an item of international trade.

Prunes

105. The Committee noted that this item was included in the commodity description plums, which had the same recommended MRL, in the new Classification and decided to delete the recommendation.

Other commodities

106. Several delegations expressed reservations with respect to many of the proposals. The Committee noted that the proposals were based upon old data and in many cases probably did not reflect current GAP. It was decided to request the submission of data on current GAP and national MRLs for carbendazim, benomyl and thiophanate methyl to the JMPR by means of a circular letter, aiming at a concurrent reconsideration of both CXLs and MRLs for these compounds.

Status of MRLs

Deleted : bananas (pulp), prunes

At Step 5: all other commodities.

DEMETON-S-METHYL (073)

107. The ADI had been withdrawn by the 1982 JMPR. The Commission had referred the question of withdrawing the CXLs to the CCPR. The Committee noted that toxicological data requested by the JMPR would be available in 1987, but only in time for consideration by the 1988 JMPR. It was decided to propose the deletion of all Codex MRLs to the Commission, with a view to their conversion to GLs, and to convert the MRLs for other commodities to Guideline Levels at Step 4.

Status of MRLs

Deletion to be proposed to the Commission: all commodities with Codex MRLs.

Guideline Levels at Step 4: all other commodities.

PROPOXUR (075)

108. The Committee was reminded that the JMPR had been requested by the 17th Session to undertake a toxicological review of this compound as soon as possible. The delegation of the Federal Republic of Germany informed the Committee that several studies would be completed in 1987.

Cereal grains; Fodders and straws (green); Legume animal feeds (green)

109. The Committee noted that the qualification of fodders and straws as "(green)" was due to a typographical error in Annex 1 to the report of the 1983 JMPR and agreed to omit the qualification.

Status of MRLs

At Step 5(a): cereal grains, fodders and straws, legume animal feeds (green)

VAMIDOTHION (078)

110. The delegations of the Federal Republic of Germany, Sweden and Italy expressed concerns regarding the possibility of dietary intake exceeding the ADI.

Brussels sprouts

111. It was decided to delete the proposed MRL for Brussels sprouts in accordance with the decision of the 1985 JMPR.

Status of MRLs

Deleted : Brussels sprouts

At Step 3: cereal grains, peaches, pome fruits

At Step 5: grapes, sugar beets

CHINOMETHIONAT (080)

112. The representative of WHO stated that chinomethionat had been scheduled for re-evaluation by the 1987 JMPR. Only data from carcinogenicity studies had been missing and these had now been received by WHO.

It was decided that the Codex MRLs should be retained until the outcome of the JMPR re-evaluation was known.

Status of MRLs

At Step 7B: Kaki persimmons, melons, strawberries, watermelons.

CHLOROTHALONIL (081)

Bananas (pulp)

113. It was decided to delete the proposal since it evidently referred to peeled bananas and not the commodity in international trade.

Status of MRLs

Deleted : bananas (pulp)

At step 6 : grapes

At step 7A: bananas (whole), cereal grains.

SEC-BUTYLAMINE (089)

114. The delegation of the United States of America informed the Committee that the use on citrus was still considered to be GAP and supported conversion of MRLs to Guideline Levels for all those commodities still supported by GAP. It was decided to propose to the Commission the deletion of all existing Codex limits, with a view to their conversion to Guideline Levels, and to convert the Step 7 MRLs for other commodities to Guideline Levels at Step 4.

Status of MRLs

Deletion to be proposed to the Commission: all commodities with Codex MRLs.

Guideline Levels at Step 4: all other commodities.

ACEPHATE (095)

115. As the ADI is temporary, the proposed MRLs for all commodities except tree tomato were held at step 7A.

Status of MRLs

At Step 5 : tree tomato

At Step 7A: all other commodities

METHAMIDOPHOS (100)

116. A full ADI had been estimated by the 1985 JMPR (the date shown in the Guide, 1982, is incorrect).

All commodities previously at Step 7 except eggplants, for which the MRL was changed from 0.1 mg/kg to 1 mg/kg by the 1984 JMPR, had automatically been advanced to Step 8.

Eggplants

117. The delegation of France was of the opinion that an increase in the MRL was unsatisfactory because of the low ADI. It was decided to return the MRL to Step 6 for Government comments.

Tree tomato

118. The Committee advanced the proposal to Step 5 and proposed the omission of Steps 6 and 7.

Status of MRLs

At Step 5/8: tree tomato

At Step 6 : eggplants

At Step 8 : all other commodities

PIRIMICARB (101)

Oranges

119. In accordance with the 1981 JMPR recommendation it was decided to propose the amendment of the commodity description "citrus fruit" to "citrus fruit (except oranges)". The amendment was regarded as non-substantial.

Status of MRLs

At Step 8: oranges

PHOSMET (103)

Apples

120. The delegations of Sweden and Austria reserved their positions, because they considered the proposed MRL too high in relation to the ADI. The delegation of The Netherlands noted that even when applied shortly before harvest an MRL of 5 mg/kg would suffice. The delegation of the United States of America noted that the proposed MRL resulted from data supplied by the USA and supported the proposed MRL of 10 mg/kg.

Alfalfa (dry)

121. The delegation of the Federal Republic of Germany suggested that an MRL of 20 mg/kg on alfalfa might result in residues in milk higher than 0.02 mg/kg and might have an effect on the health of cattle.

It was decided to return the proposal to Step 3 and to refer the questions to the JMPR.

Forage crops (dry) (except alfalfa)

122. The delegation of the United States of America questioned whether sufficient data on GAP were available to support an MRL for forage crops except alfalfa, as most data had been provided by the USA and covered mainly alfalfa. It was also noted that there was no Codex description for forage crops (dry). All delegations were requested to supply data on separate forage crops to enable the JMPR to determine whether separate limits could be established.

Status of MRLs

At Step 3 : alfalfa (dry)

At Step 7B: forage crops (dry) (except alfalfa)

At Step 8 : apples, apricots, grapes, nectarines, peaches, pears.



#### DITHIOCARBAMATES (105)

123. The Committee noted that the 1985 JMPR had withdrawn the temporary ADIs for thiram and propineb.

The TADI for thiram had been withdrawn because requested data had not been submitted to the JMPR and because the total data base was inadequate for estimating an ADI.

The delegation of The Netherlands indicated that there was information in the open literature on thiram which should be evaluated by the JMPR. The representative of WHO agreed to look into the matter.

The TADI for propineb had been withdrawn because of the carcinogenic response in the liver of mice to PTU and because of the lack of a NOEL for the thyroid effects of propineb in a long-term study in mice and in short term studies in rats and for PTU in a long-term study in rats (see also para 247). The JMPR had also strongly recommended that propineb should no longer be used where its residues in food could arise.

As the ADIs for the remaining dithiocarbamates were not temporary, the Committee agreed that the MRLs could now proceed beyond Step 7.

The Committee noted that there was still no analytical method available, suitable for regulatory purposes, which would distinguish between the individual dithiocarbamates. Some delegations therefore had reservations about the utility of the MRLs expressed as CS<sub>2</sub>. It was pointed out that qualitative methods existed which would ascertain whether thiram or propineb had been the source of any CS<sub>2</sub> determined, and that the use of individual dithiocarbamates could also be controlled through the registration process.

The delegation of Austria indicated that MRLs higher than 2 mg/kg for fruits and vegetables would not be acceptable in that country. The delegations of Finland and Sweden, referring to toxicological considerations, also had reservations on the MRLs for a number of vegetables and on the resultant ETU residues. They also indicated that the evaluations of the JMPR were difficult to interpret. The delegation of The Netherlands recalled previous discussions of the Committee on this group of compounds, especially on ethylenebisdithiocarbamates which were ETU-precursors. The Netherlands would not be in a position to accept several of the proposed MRLs.

124. The Committee agreed to delete the MRL for celeriac roots since it was based on residue data from propineb.

In line with a previous decision (see para 104) it was also decided to delete the MRL for bananas (pulp).

#### Lettuce; Lettuce, head

125. The 1985 JMPR had proposed an MRL of .5 mg/kg for head lettuce to replace the previously recommended MRL of 1 mg/kg for lettuce. Discussion was postponed until the next Session.

#### Status of MRLs

Deleted : bananas (pulp), celeriac roots

At Step 3: lettuce, head

At Step 8: all other commodities

#### ETHIOFENCARB (107)

126. Status of MRLs  
At Step 8: beans (with pod)

#### IMAZALIL (110)

##### Potatoes

127. The delegations of Sweden and Poland could not accept an MRL of 5 mg/kg for potatoes. The delegation of France stated that imazalil was used only on seed potatoes in that country.

Status of MRLs

At Step 3: stone fruits

At Step 5: all other commodities

PHORATE (112)

128. The Committee noted that the MRLs for phorate in many commodities were at or slightly above the limit of determination. It agreed to delete 'Fat-soluble residue' from the residue definition, and the letter 'F' from the MRL for milk. Since the ADI for the pesticide is low (0.0002 mg/kg body weight), a number of countries expressed reluctance to accept MRLs higher than 0.05 mg/kg or 0.1 mg/kg.

Alfalfa (dry); Barley; Hops; Lettuce; Tomatoes

129. The MRLs of 1 mg/kg and 0.05 mg/kg for alfalfa (dry) and barley respectively were supported by information on GAP submitted to the JMPR by the USA. The delegation of the United States of America explained that, as a result of a reassessment of the product in that country, the use of phorate on alfalfa and barley was being discontinued and the United States tolerances could be revoked. The same situation existed for lettuce, tomatoes, rice and hops. The JMPR should therefore be asked to determine whether there were sufficient residue data and information on GAP from countries other than the USA to support these limits.

130. The Committee did not accept the proposal of 0.2 mg/kg for hops for the reason given in the 1984 Evaluations that the limit of determination in the trials on the crop was as high as 0.2 mg/kg. The proposal was referred to the JMPR for re-evaluation.

Other commodities

131. As all the MRLs (except that for hops) were proposed 9 years ago and several delegations objected to MRLs on a number of commodities, the Secretariat agreed to issue a Circular Letter to elicit information on the use pattern of phorate and on national MRLs. The Committee agreed to review the position on the basis of any new information received. The Committee noted that information on the use of phorate in Canada on maize and wheat was available in the 1984 Evaluations. The delegation of the United States of America mentioned that the manufacturer planned to develop new data to support continued uses on a number of commodities in that country. The new data might allow MRLs to be lowered.

132. The Committee noted that the MRLs for phorate under consideration were those submitted in 1977 and 0.05 mg/kg was considered as the limit of determination at that time. The analysis for the residue was considered difficult in view of the large number of metabolites involved.

Status of MRLs

At Step 3 : hops

At Step 7B: all other commodities

ALDICARB (117)

Citrus fruit

133. The Committee noted that the 1985 JMPR, while confirming the MRL of 0.2 mg/kg for citrus fruit, acknowledged that residues from GAP could exceed 0.2 mg/kg and that additional data at short pre-harvest intervals were not yet available. The United States of America had a tolerance level of 0.3 mg/kg. The Committee agreed to return the proposal to Step 6.

#### Maize forage

134. The Committee noted that the 1985 JMPR had estimated an MRL for maize forage of 5 mg/kg on a fresh-weight basis to replace the former proposal of 20 mg/kg on a dry-weight basis.

135. The delegation of Canada informed the Committee of its concern with all the MRLs and expressed a general reservation. It brought the attention of the Committee to an incident where about 100 Canadian citizens became ill after the consumption of cucumbers treated with aldicarb, though the intake of the pesticide was below the no-effect level observed in rats and in human studies. Use on cucumbers is not legal in Canada. The delegation expressed the view that the subject should be considered by the JMPR at its next Session. A summary paper was made available to delegates, on request, by the Canadian delegation.

#### Status of MRLs

At Step 6: citrus fruit, maize forage

At Step 8: maize, maize fodder

#### CYPERMETHRIN (118)

##### Barley

136. The delegation of The Netherlands expressed some reservation with respect to the proposed limit of 0.5 mg/kg and preferred to have the same limit of 0.2 mg/kg as wheat. The Committee however noted that residue levels are influenced by physical characteristics of the crops and could be different on different crops.

##### Lettuce

137. The delegation of The Netherlands believed a limit of 1 mg/kg was sufficient according to the data in the 1979 Evaluations. Residues above 1 mg/kg would be found only when excessive doses were applied. The delegation of the United States of America said that proposed uses in the USA would support a figure higher than 2 mg/kg if they became GAP. The Committee noted that the subject was discussed by the 1984 JMPR which reaffirmed the MRL of 2 mg/kg.

##### Meat by-products

138. The Committee noted that meat by-products had a low fat content and that the residue levels were not expressed on a fat basis.

##### Small fruits and berries

139. The delegation of the Federal Republic of Germany preferred a figure of 2 mg/kg for currants on the basis of information which had been submitted to the JMPR but not yet reviewed. The representative of GIFAP stated that the two principal European registrants had examined the data contained in the JMPR Evaluations. These supported the existing JMPR recommendation of 0.5 mg/kg. The registrants had been unable to identify the source of the data mentioned by the Federal Republic of Germany which would require a higher MRL. The registrants would be happy to co-operate in resolving the matter. If the Federal Republic of Germany could identify the source of the additional information, and if this information was generated within industry, the registrants would do their best to make the data available for review by the JMPR. The Federal Republic of Germany was invited to take this matter up with the Chairman of the GIFAP Residues Committee.

140. There was considerable discussion on whether grapes should be included in the group 'small fruits and berries'. A separate classification for grapes was proposed. The question would be considered during the change to the new Classification.

### Spinach

141. The delegation of The Netherlands informed the Committee that the data from supervised trials presented in the 1982 Evaluations showed that the residue levels in those trials in which the pesticide was used at the recommended dosage (maximum 60 g/hectare) were all below 1 mg/kg. The delegation of Spain, informed the Committee that GAP in its country supported a figure of 2 mg/kg. The delegation of Spain undertook to make the data available to the JMPR for review.

### Wheat

142. The delegation of Australia informed the Committee that because of the limited use of cypermethrin as a grain protectant that country would not be able to generate data from commercial scale trials.

#### Status of MRLs

At Step 5/8: tea.

At Step 7B : small fruits and berries, spinach

At Step 8 : barley, lettuce, meat by-products, nectarines,  
oilseeds except peanuts, peaches, poultry meat,  
wheat

### FENVALERATE (119)

#### Beans (without pod); Peas (without pod)

143. The delegation of the United States of America stated that 0.1 mg/kg was not adequate since residues in dry beans and dry peas exceeded 0.1 mg/kg. Data supplied to the JMPR would support an MRL greater than 0.1 mg/kg.

It was decided to refer the proposals back to the JMPR for reconsideration of the MRL and of the description of the commodities.

#### Brassica leafy vegetables (except cabbage (headed))

144. The delegation of the United States of America was of the opinion that data were insufficient to support a group limit. Sufficient data had been made available for broccoli, Brussels sprouts, cabbage and Chinese cabbage.

In addition the delegation of the United States of America indicated that the MRL proposed by the JMPR for cabbage (headed) was too low. The preferred MRL was 10 mg/kg. The United States would try to provide data on collards as additional support. It was decided to refer this proposal to the JMPR for consideration. In addition it was decided that the commodity description should be reviewed.

#### Carcase meat; Meat by-products; Milk

145. The delegation of the United States of America noted that the JMPR did not use worst-case estimates. These worst-case estimates involved the assumption of tolerance level residues in animal feed items which might be included in a reasonable animal diet. These were compared with animal feeding studies for estimates of maximum residues in products of animal origin.

The proposed MRLs for carcase meat, meat by-products and milk could be exceeded and were not acceptable to the USA. A discussion ensued involving animal intake and transfer studies. It was decided to refer the matter in general and this case in particular to the JMPR for discussion, noting that the JMPR had itself decided to look into this question.

146. The representative of the manufacturer informed the Committee that fenvalerate would be reconsidered by the 1987 JMPR. The reason for this was the availability of a new report from IARC. The representative of WHO would check whether this IARC information had been received.

Wheat bran; Wheat flour (white)

147. The new proposals of the 1984 JMPR were returned to Step 6.

Status of MRLs

At Step 3 : cabbage (headed), meat by-products, peas  
(without pod)

At Step 6 : wheat bran, wheat flour (white)

At Step 7B: beans (without pod), brassica leafy vegetables  
(except cabbage (headed)), carcass meat, milk

At Step 7A: all other commodities

PERMETHRIN (120)

Celery

148. The delegation of the United States of America considered an MRL for celery of 5 mg/kg to be more appropriate on the basis of residue data already provided to the JMPR.

Lettuce

149. Several delegations stated that an MRL of 1 mg/kg for lettuce was sufficient. The delegation of The Netherlands supported an MRL of 2 mg/kg also because a higher limit would be unacceptable to its trading partners. The delegation of the United States of America stated that 20 mg/kg was supported by GAP in that country and by the available data. The delegation of Canada suggested that the difference could be the result of higher residues in the inedible outer leaves of lettuce. It was noted that according to CAC/PR 6-1984, withered and obviously decomposed leaves should be removed before determining the residue.

It was decided that the proposal of 10 mg/kg could only be lowered on the basis of new information indicating a change in GAP.

Onions (spring)

150. The delegation of The Netherlands informed the Committee that new information on GAP concerning spring onions would soon be available and would be sent to the JMPR.

Sorghum fodder

151. The delegation of the United States of America stated that an MRL of 40 mg/kg was the proposed national limit in that country. The delegation of The Netherlands considered an MRL of 10 mg/kg was supported by the data.

Tomatoes

152. The delegation of Mexico would supply information on GAP to the JMPR. The Committee decided not to advance the MRL until this information had been considered by the JMPR.

Wheat bran; Wheat flour (white); Wheat flour (wholemeal)

153. The MRLs for these commodities were temporary pending the evaluation of data from commercial-scale milling practice. The delegation of Australia stated that such data would not be supplied because of the limited use of permethrin as a grain protectant. It was decided to invite governments to supply data to the JMPR and to hold the MRLs at Step 7C.

Status of MRLs

At Step 5 : sorghum fodder  
At Step 5/8: peanuts, pistachio nuts  
At Step 7B : onions (spring), tomatoes  
At Step 7C : lettuce, wheat bran, wheat flour (white), wheat flour (wholemeal)  
At Step 8 : beans (with pod), celery, milk, pig meat by-products, sheep meat by-products, soybeans, spinach

AMITRAZ (122)

Olive oil

154. The Committee noted that the 1980 JMPR had required new data by 1984 which had not been supplied. Apparently none of the countries represented at the Session had any interest in maintaining the MRL, and the Committee agreed to delete it.

Cottonseed oil

155. The Committee was informed that the question of whether the MRL applied to crude or refined oil would be considered during the conversion of the Classification.

Status of MRLs

Deleted : olive oil  
At Step 8: all other commodities

ETRIMFOS (123)

156. The Committee was informed that the 1982 evaluation, which had been omitted from the Evaluations of that year, would be published with the 1986 Evaluations. The Committee agreed that all the 1982 proposals should be returned to Step 3.

Barley; Maize; Wheat; Wheat bran; Wheat flour (white); Wheat flour (wholemeal)

157. There was widespread opposition to the proposed MRLs because of the low ADI and significant consumption of cereals. It appeared that there were no currently recommended uses of etrimfos on cereals, but the Committee was informed that the manufacturer was applying for registration in several countries. It was decided to keep the MRLs at Step 7C until data allowing reconsideration became available.

Status of MRLs

At Step 7C: barley, maize, wheat, wheat bran, wheat flour (white), wheat flour (wholemeal)  
At Step 3 : all other commodities

MECARBAM (124)

158. The Committee was informed that toxicological data required by the JMPR were about to be submitted. The compound was on the agenda of the 1986 JMPR.

Status of MRLs

At Step 5: citrus fruit.

METHACRIFOS (125)

159. It was noted that the temporary ADI would be re-evaluated by the 1986 JMPR. Action was deferred until the next Session.

Status of MRLs

At Step 6: all commodities

OXAMYL (126)

160. The delegation of Italy informed the Committee that oxamyl was permitted in Italy only on sugar beets, because it had a very high acute toxicity. The MRL was 0.05 mg/kg. In the absence of information on other uses of oxamyl, the delegation of Italy expressed a general reservation on the proposals.

Beets; Carrots; Potatoes; Sugar beets; Sweet potatoes

161. It was noted that the 1985 JMPR had proposed a group MRL of 0.1 mg/kg for root and tuber vegetables. Comments were needed on this new recommendation.

Beans, kidney; Beans, kidney (dry)

162. In reply to a question the Secretariat suggested that kidney beans were the succulent seeds with or without pod while dried kidney beans belonged to the group "pulses". It was noted that the 1985 JMPR had changed the MRL for kidney beans to 5 mg/kg and that comments on this new figure were required. The delegation of France queried the very great difference between the fresh and dried products. The Committee considered that more information on GAP was needed for these commodities.

Cottonseed

163. The Committee noted that the 1980 JMPR had based the MRL on a proposed use in the United States of America. The delegation of the United States of America agreed to make information on GAP in the use of oxamyl available to the JMPR.

Status of MRLs

At Step 5/8: coffee beans, onions, sugarcane

At Step 6 : beans (kidney), beans (Lima), beets, carrots, celery, citrus fruits, cucumbers, peanuts, peanut fodder, peppers, pineapples, potatoes, sugar beets, sweet potatoes,

At Step 7B : beans, kidney (dry), cottonseed

At Step 8 : apples, bananas, maize, melons, soybeans (dry), summer squash, tomatoes, watermelons

PHENOTHHRIN (127)

164. The Committee agreed to discuss the MRLs for wheat bran and cereal grains when data on wheat flour had been received and considered by the JMPR. The delegation of Australia and the representative of GIFAP indicated that they would try to make data on flour available to the JMPR.

Status of MRLs

At Step 7B: cereal grains, wheat bran

AZOCYCLOTIN (129)

165. The Committee decided to leave the proposed MRLs at their present Steps to allow consideration of the 1985 JMPR Evaluations.

DIFLUBENZURON (130)

Blackcurrants

166. Delegations were requested to supply information on GAP for blackcurrants. The Committee agreed to return the TMRL to Step 3.

Mushrooms

167. The delegation of the United States of America commented that the tolerance is 0.2 mg/kg in that country. It would consider an

MRL of 0.1 mg/kg, but for harmonization 0.2 mg/kg was advisable because, of the countries that had provided information, two had an MRL of 0.2 mg/kg, one had 0.5 mg/kg and one 1 mg/kg. It was decided to maintain the proposed MRL of 0.1 mg/kg.

Status of MRLs

At Step 3 : blackcurrants

At Step 5/8: tomatoes

At Step 8 : Brussels sprouts, mushrooms, plums

ISOFENPHOS (131)

168. The Committee noted that all MRLs at Step 7 should now be shown as being at Step 7A.

Citrus fruit

169. It was decided to await the review by the 1986 JMPR, and hold the proposal at Step 7B.

Pears

170. The Committee was informed that the manufacturer had withdrawn the use on pears. It was decided to delete the MRL.

Status of MRLs

Deleted : pears

At Step 7B: citrus fruit

At Step 7A: all other commodities

METHIOCARB (132)

Beans, snap (kidney); Beans (Lima)

171. The 1983 JMPR proposed TMRLs because data were limited. The delegation of the United States of America informed the Committee that there were no national tolerances for snap beans or Lima beans, but that MRLs of 1 mg/kg and 0.2 mg/kg respectively had been proposed. It agreed to request the manufacturer to provide residue data to the JMPR for its reconsideration of the MRL for these crops once the uses became GAP in the United States.

Broccoli; Brussels sprouts; Cabbage; Cauliflower; Lettuce

172. The delegation of the United Kingdom informed the Committee that there were at least 2 different methods of use for methiocarb, and that the MRLs of 0.2 mg/kg refer generally to molluscicide uses. Sprays could result in higher residues such as those required in the USA. The delegation of the United States of America indicated that JMPR proposals for certain crops, e.g. broccoli and Brussels sprouts, were based on the same data as were used in the USA. The delegation of the United States of America informed the Committee that the pre-harvest interval in that country was 1 day whereas the JMPR had based its proposals on a PHI of 7 days.

Chinese radishes

173. The delegation of France asked the Secretariat to note that in the new Classification only Japanese radishes were listed. The Secretariat was asked to clarify the difference between Chinese and Japanese radishes. The delegation of the Netherlands said that additional information on GAP was needed to enable it to judge the proposal.

Citrus Fruit

174. The delegation of the United States of America informed the Committee that it supported an MRL of 0.02\* mg/kg. The delegation of the Federal Republic of Germany said that it considered 0.1 mg/kg rather than 0.05 mg/kg to be the limit of determination.



The delegation of the United Kingdom reminded the Committee that the JMPR did not necessarily recommend the lowest attainable limit of determination, but rather the level achievable in regulatory analysis.

#### Lettuce

175. The delegation of the Federal Republic of Germany announced that residue data on this crop would be made available to the JMPR for consideration. The data showed residues up to 0.5 mg/kg. On the basis of these data the delegation considered an MRL of 1 mg/kg more appropriate than the proposed 0.2 mg/kg. The delegation of the United Kingdom suggested that the higher figure mentioned by the Federal Republic of Germany could be caused by a methiocarb granule lodging in the lettuce and would not reflect GAP. It was decided to return the proposal to Step 3.

#### Maize

176. The delegation of France indicated that a limit of determination of 0.02 mg/kg rather than 0.05 mg/kg is possible and requested a review of those MRLs shown as being at the limit of determination.

#### Plums

177. The delegations of Sweden, The Netherlands and France considered an MRL of 1 mg/kg too high in view of the ADI. The delegation of The Netherlands requested that information on GAP be provided. The delegation of the United Kingdom questioned whether this residue did not result from the use of methiocarb as a bird repellent.

#### Sweet corn

178. The delegation of the Federal Republic of Germany agreed to supply residue data to the JMPR for consideration if available.

#### Status of MRLs

At Step 3: lettuce

At Step 5: all other commodities

#### TRIADIMEFON (133)

179. The delegation of the United States of America noted that the 1985 JMPR had reaffirmed its view of the residue description, so that a discrepancy with the residue definition current in the USA still existed.

#### Apples

180. It was noted that there were MRLs for apples and for pome fruits at the same level. It was therefore proposed to delete the MRL for apples. The delegation of the Netherlands proposed separate MRLs for apples of 0.2 mg/kg and for pears of 0.5 mg/kg, based on the data presented in the evaluation. The delegation of the United States of America mentioned its national tolerance of 1 mg/kg for apples and pears. It was decided to delete the MRL of apples and to maintain the MRL for pome fruits.

#### Barley; Oats

181. According to the JMPR evaluation a pre-harvest interval of 35-40 days should be observed. In the USA and several other countries a pre-harvest interval of 21 days is considered GAP. The delegation of the United States of America could not agree to an MRL of less than 1 mg/kg for all cereals. The delegation of the Netherlands would support an MRL of 0.1 mg/kg but no higher and questioned why similar use patterns in Europe and the United States of America should result in such different limits.

#### Coffee beans

182. The delegation of the United States of America informed the Committee that the manufacturer had proposed an MRL of 0.05 mg/kg which was likely to be established in the USA, but the use was not yet GAP. It was decided to maintain the MRL at 0.1 mg/kg.

#### Cucumbers

183. The delegation of the United States of America proposed that a group limit should be set for cucurbits. The JMPR will be requested to consider the proposal.

#### Melons

184. The delegation of The Netherlands suggested an MRL of 0.2 mg/kg, based on the data included in the 1979 Evaluations, to cover all cucurbits (see para 183). It was decided to ask the JMPR to reconsider the MRL when considering the group limit.

#### Pineapple

185. The delegation of the United States of America mentioned its national tolerance of 3 mg/kg. The delegation of The Netherlands indicated that an MRL of 0.5 mg/kg would cover dip treatment. The United States of America would endeavour to provide data supporting 3 mg/kg to the JMPR. It was decided to return the MRL to Step 3.

#### Poultry meat

186. The delegation of the United States of America mentioned that the JMPR data would support an MRL of 0.04 mg/kg. The Committee noted that the level of determination was 0.005-0.01 mg/kg (JMPR 1981). The delegation of the United Kingdom questioned the practicability of that level and indicated that 0.1 mg/kg was a practical limit for regulatory analysts in many countries. The Committee was informed that the national limit in The Netherlands was 0.1 mg/kg in. It was decided to retain the MRL of 0.1 mg/kg.

#### Pumpkins

187. It was noted that a group MRL for cucurbits (see para 183) would include pumpkins.

#### Raspberries

188. The delegation of The Netherlands indicated that the data did not justify an MRL higher than 0.1 mg/kg. The Committee decided to maintain the proposed MRL of 0.2 mg/kg.

#### Sugar beets; Sugar beet leaves

189. The Committee was informed that the national tolerance of the USA for sugar beets was 0.5 mg/kg. Supporting data would be provided to the 1986 JMPR. The Committee decided to return the proposals to Step 3.

#### Tomatoes

190. The MRL is 0.5 mg/kg. The Committee was informed that the manufacturer's proposal in the USA was for an MRL of 0.2 mg/kg. As yet the use was not GAP in the USA. It was decided to keep the MRL at 0.5 mg/kg.

#### Status of MRLs

Deleted : apples

At Step 3: pineapple, sugar beets, sugar beet leaves.

At Step 5: all other commodities

DELTAMETHRIN (135)

Cereal grains; Wheat bran; Wheat flour (white); Wheat flour (wholemeal)

191. Although application for registration of the post-harvest use of the compound on cereals had been made in some countries, GAP had so far not been documented; nor had the application rates been fully established. It was decided to hold the proposals at Step 7C awaiting further developments and to invite countries to provide information on GAP.

Coffee beans

192. GAP for post-harvest use had not been clearly documented in the past. The Committee was informed that data on GAP had recently been submitted to the JMPR. Additional data on GAP would be appreciated, especially with regard to the kind of application, dust or spray. The proposal was held at Step 7B.

Fruiting vegetables - edible peel

193. The delegation of The Netherlands preferred 0.05 mg/kg on the basis of the data in the Evaluations, with a PHI of 3 days. It was pointed out that residues were fairly stable and that a shorter or longer PHI would not have a major influence on the residue. The proposal was not amended.

Hops (dry)

194. The delegation of the Federal Republic of Germany indicated that the manufacturer would supply data on hops and on carry-over into beer as soon as possible. The proposal was held at Step 7B.

Leafy vegetables

195. Although one delegation preferred a separate and lower MRL for lettuce, other delegations supported the group MRL as proposed.

Status of MRLs

At Step 5 : brassica leafy vegetables

At Step 7B: coffee beans, hops (dry)

At Step 7C: cereal grains, wheat bran, wheat flour (white), wheat flour (wholemeal)

At Step 8 : fruiting vegetables - edible peel, leafy vegetables

BENDIOCARB (137)

196. Status of MRLs

At Step 5/8: rice (de-husked)

METALAXYL (138)

197. The Committee was informed that the compound was scheduled for review by the 1986 JMPR. Data based on a new analytical method had been provided. The new method determined a number of metabolites which had not been included previously. As this might lead to substantial amendments it was decided to return the MRLs to Steps 3 and 6, enabling Governments to comment on any new proposals of the JMPR.

Status of MRLs

At Step 3: apples, Brussels sprouts, cottonseed, pineapples (flesh), soybeans, strawberries

At Step 6: all other commodities

PHOXIM (141)

Carcase meat of cattle

198. Attention was drawn to a discrepancy between the proposed MRL shown in the report of the 1983 JMPR, 0.2 mg/kg, and in the corresponding Evaluations, 0.02 mg/kg. The Committee was informed that the latter was a typographical error.

Carcase meat of sheep

199. The opinion was expressed that more data on residue levels measured after the recommended safety interval were desirable. The delegation of the Federal Republic of Germany undertook to attempt to supply such data to the JMPR.

Lettuce, milk

200. The delegation of The Netherlands said that residue information provided to the 1983 JMPR but not reproduced in the Evaluations indicated that an MRL of 0.05\* mg/kg would be appropriate for lettuce. The Committee agreed to refer the question to the JMPR. With regard to milk, data submitted by The Netherlands indicated the need for an MRL of 0.05 or 0.1 mg/kg. Their national limit had erroneously been reported as 0.01 mg/kg. The proposals were returned to Step 3.

Tomatoes

201. The delegations of the Federal Republic of Germany and of France were not able to support the MRL because of a lack of residue data. The representative of the manufacturer undertook to inform the JMPR whether data could be made available.

Status of MRLs

At Step 3 : lettuce, milk

At Step 5 : carcase meat of cattle, carcase meat of sheep, tomatoes

At Step 5/8: beans, cauliflower, cereal grains, cottonseed, potatoes, sweet corn

PROCHLORAZ (142)

Cereals; Citrus fruit; Papayas; Stone fruit

202. The delegation of the United States of America reminded the Committee that the substantial increase in the proposed MRL for cereals was based on the inclusion of metabolites together with the parent compound.

The Committee was reminded that information on GAP for citrus fruit, papayas and stone fruit was lacking. Countries were asked to supply such information to the JMPR.

Cattle meat; Cattle meat (in the fat)

203. Attention was drawn to the fact that these items (presented according to the new Classification) were covered by the same Classification number. The presentation was thought to be confusing, and to suggest that only a single recommendation had been intended. The Committee was informed that two separate recommendations had been made: the descriptions corresponded to "carcase meat" and "carcase meat (in the carcase fat)" in the old Classification. It was noted that this point would be considered in the course of the change to the new Classification.

Status of MRLs

At Step 5 : avocados, bananas, citrus fruit, mangos, papayas, stone fruit

At Step 5/8: rapeseed

At Step 3 : all other commodities

TRIAZOPHOS (143)

204. The delegation of The Netherlands stated that because of the very low ADI the MRLs should be as low as possible. In view of the fact that a limit of determination of 0.01 mg/kg had been reported for several commodities, it was decided to ask the Working Group on Methods of Analysis to give its opinion on whether this figure was attainable. The Working Group confirmed that the figure of 0.01\* mg/kg was realistic (see Appendix III).

Bananas

205. The delegations of The Netherlands, Sweden and Austria reserved their positions. It was noted that according to the 1983 Evaluations residues did not exceed 0.7 mg/kg even on the day of application. The Committee decided to ask the JMPR to reconsider the available data.

Brussels sprouts

206. The delegation of The Netherlands stated that it preferred an MRL of 0.05 mg/kg on the basis of the data in the 1983 Evaluations and asked for a review by the JMPR.

Citrus fruit

207. The delegations of Austria and Sweden reserved their positions on the proposal for toxicological reasons. The delegation of The Netherlands objected to the proposal, not only for this reason, but also because it doubted that residues higher than 1 mg/kg should occur with GAP. The delegation of Spain confirmed the use of the compound in its country. Countries using the product on citrus were requested to supply information on GAP to the JMPR. The Committee decided to ask the JMPR to reconsider the available data.

Onions

208. The delegation of The Netherlands doubted whether the data included in the 1983 Evaluations reflected GAP and proposed an MRL of 0.05 mg/kg. It was decided to ask the JMPR to reconsider the available data.

Pome fruit

209. The delegation of Sweden reserved its position on this proposal.

Status of MRLs

At Step 5: all commodities

BITERTANOL (144)

210. The Committee noted that very little information on GAP had been available to the JMPR. In response to JMPR requirements, additional information on GAP had been made available for evaluation by the 1986 JMPR.

Apples

211. The delegation of The Netherlands indicated that, although the MRL of 2 mg/kg proposed by the JMPR seemed to be supported by the data, all national MRLs reported to the JMPR were lower than 2 mg/kg. The delegation of The Netherlands questioned this discrepancy.

Fruiting Vegetables

212. The delegation of The Netherlands proposed the establishment of an MRL for fruiting vegetables of 1 mg/kg based on data which had been supplied to the 1984 JMPR and published in the evaluations.

Status of MRLs

At Step 3: all commodities

CARBOSULFAN (145)

Citrus fruit

213. It was noted by the Committee that the MRL for citrus fruit would remain temporary until information on GAP had been supplied to the JMPR.

Status of MRLs

At Step 5: Citrus fruit.

CYHALOTHRIN (146)

Pome fruit

214. The delegation of the Netherlands proposed an MRL of 0.2 mg/kg on the basis of the 1984 Evaluations. As the compound would be evaluated by the 1986 JMPR, it was decided to return the proposal to Step 3.

Status of MRLs

At Step 3: pome fruit.

METHOPRENE (147)

215. In answer to a general question regarding the existence of registered uses of methoprene the delegation of Australia informed the Committee that it was under development in that country as a grain protectant but data could not be expected for several years.

Carcase meat

216. The delegation of the Netherlands reserved its position because it was not sure whether the use of methoprene as an animal feed additive to control flies in manure could be considered GAP. The delegation of the United States of America indicated that in its country there were national tolerances covering foods of animal origin.

Milk

217. The delegation of the United States of America informed the Committee that it did not support the MRL of 0.002 mg/kg. The national tolerance was 0.05 mg/kg and the limit of determination was considered to be 0.01 mg/kg. As the data used to establish these figures in the USA had not been supplied to the JMPR, the delegation of the United States would request the manufacturer to provide them. After discussion of the basis of determination of residues in milk and whether or not it was the JMPR's intention to designate methoprene as fat-soluble, it was decided to refer the question of the limit of determination to the JMPR for clarification and to indicate that the residue was fat-soluble.

Mushrooms

218. The delegations of Canada and The Netherlands considered the proposed MRL of 1 mg/kg too high in view of the data in the 1984 Evaluations, and considered an MRL of 0.1 mg/kg adequate. The delegation of the United States of America noted that it could not accept an MRL below 1 mg/kg. It was decided to ask the JMPR to re-evaluate the available data.

Peanuts

219. The 1984 Evaluations contained data on kernels and hulls separately, which made judgement difficult. The question was referred to the JMPR for clarification.

Status of MRLs

At Step 5: all commodities

PROPAMOCARB (148)

Peppers

220. The delegation of France was of the opinion that an MRL of 0.2 mg/kg was too low and agreed to make GAP data available to the JMPR.

Strawberries; Tomatoes

221. The delegation of France indicated that an MRL of 0.5 mg/kg would be more appropriate for strawberries and agreed to make GAP data available to the JMPR. It was also of the opinion that an MRL of 0.5 mg/kg for tomatoes would be sufficient on the basis of the data available to the JMPR.

Lettuce and other commodities

222. The delegation of The Netherlands indicated that GAP and residue data were given in the 1984 Evaluations which would enable the establishment of an MRL to be proposed. It was decided to request the JMPR to propose MRLs for these commodities.

Status of MRLs

At Step 3: all commodities

CONSIDERATION OF GUIDELINE LEVELS

223. The Committee had before it document CX/PR 86/9 containing Guidelines Levels (GLs) estimated by the JMPR. It proceeded to discuss the GLs in order to ascertain current interest in the compounds, existing uses, the toxicological status of the pesticides and the likelihood of required toxicological data being made available to the JMPR.

CARBON DISULPHIDE (009), CARBON TETRACHLORIDE (010), METHYL BROMIDE (052)

224. As these compounds had been re-evaluated by the 1985 JMPR, it was decided to postpone discussion until the Evaluations could be studied.

COUMAPHOS (018)

225. It was noted that the compound was on the agenda of the 1987 JMPR. The delegation of the Federal Republic of Germany indicated that there were still uses in the veterinary area. Additional toxicological data requested would be provided in time for the 1987 meeting.

1,2-DIBROMOETHANE (023)

226. As a number of countries had withdrawn registrations for uses of this compound, several delegations proposed that all GLs should be lowered to 0.01\* mg/kg. Although the GLs had been based on uses which were no longer GAP, it was noted that some countries required quarantine treatment with EDB for the import of certain fruits and vegetables. Alternatives were not always available. Moreover post-harvest treatment of cereals was known to be continued in at least one country. For these reasons and because the 1985 Evaluations would contain some additional information, decisions were postponed until the next Session.

The Committee decided to retain the GLs at Step 4.

1,2-DICHLOROETHANE (024)

227. The Committee was informed that an Environmental Health Criteria document on this compound would be published soon by WHO. The representative of AOAC said that a method of analysis with a lower limit of determination was now available. Discussion on the compound was postponed until the next Session, as additional information would be available in the 1985 Evaluations.

HEXACHLOROBENZENE (044)

228. As the proposed GLs reflected GAP which was known to have ceased many years ago the Committee decided after some discussion to delete the proposals.

The Committee considered the approach that could be taken to develop limits which could be regarded as appropriate to cover the residues still present in foodstuffs, especially in animal fat, as a result of past uses and environmental contamination. Circular letters inviting Governments to supply relevant monitoring data had not resulted in sufficient information to enable the JMPR to propose different GLs. It was recognised that the situation presented some similarities to that of the PCBs.

229. It was doubted whether another circular letter would result in sufficient data to enable the JMPR to review its previous proposals. The delegation of The Netherlands therefore proposed that the Committee might suggest limits based on its actual knowledge of monitoring data on HCB and circulate these to governments for comment. On the basis of comments received, the Committee could then decide on what steps should be taken.

Limits suggested were 0.2 mg/kg for meats (on a fat basis), 0.008 mg/kg for milk (whole-product basis), 0.01\* mg/kg for eggs (whole) and 0.01\* mg/kg for cereals.

230. After a full discussion, including the type of limit that might be appropriate in this situation, it was decided to send a new Circular Letter urgently requesting Governments to supply relevant data, including the results of monitoring and national maximum limits, to the JMPR. The JMPR was requested to propose limits on the basis of the information made available to it.

AZINPHOS-ETHYL (068)

231. The representative of GIFAP informed the Committee that the situation had not changed since 1985.

It was decided to maintain the existing Guideline Levels.

DINOCAP (087)

232. It was noted that the compound had not been discussed by the 1985 JMPR, although it had been on the agenda, and that it was not on the agenda for the 1986 or 1987 JMPR. The representative of GIFAP informed the Committee that the manufacturer was prepared to provide new data to the JMPR as soon as it was scheduled for re-evaluation. It was noted that the compound had been recommended as a priority for re-evaluation at the earliest opportunity.

It was decided to maintain the Guideline Levels.

DEMETON (092)

233. The delegation of Canada informed the Committee that manufacture would shortly cease, but that a small use still existed. It was decided to maintain the Guideline Levels.

BIORESMETHRIN (093)

234. The delegation of Australia informed the Committee that it was the intention of the manufacturer to provide new toxicological data. These would be available in 1989, so that the compound could be on the agenda of the 1990 JMPR. Residue data on grain and milled cereal products would also be provided to the JMPR by the Australian government. The delegation of The Netherlands remarked that the commodity descriptions required revision. It was decided to maintain the Guideline Levels.



METHOMYL (094)

235. The representative of WHO informed the Committee that new toxicological data had been provided to the JMPR and that the compound was on the agenda of the 1986 JMPR. It was decided to maintain the Guideline Levels.

DIALIFOS (098)

236. It was noted that the compound was registered in the Federal Republic of Germany and that the manufacturer intended to carry out new toxicological investigations which, after completion, would be submitted to the JMPR. It was decided to maintain the Guideline Levels.

DAMINOZIDE (104)

237. The representative of GIFAP informed the Committee that data from chronic toxicity studies would be available in 1988. It was decided to maintain the Guideline Levels.

ETHEPHON (106)

238. The representative of GIFAP informed the Committee that the compound was registered in Japan, the Federal Republic of Germany and several other countries. Full toxicological and residue data had been provided to the governments of these countries, which however would not be submitted to the JMPR for commercial reasons. The Committee expressed its concern on this point, noting that international trade problems should be avoided, and recommended that the manufacturer should submit available data to the JMPR. The delegation of GIFAP assured the Committee that the manufacturer would be informed accordingly.

239. The delegation of The Netherlands noted that in its country a "tentative ADI" had been established and that it had reservations on a number of rather high figures, such as 10 mg/kg for grapes. It was decided to maintain the Guideline Levels.

ETHYLENETHIOUREA (108)

240. It was noted that ETU was a contaminant of Ethylenebisdithiocarbamate pesticides (EBDCs) and was also formed from EBDCs when food containing their residues was cooked. Although requested on several occasions, the JMPR had never clarified its recommendation on ETU made at its 1980 meeting, reading: "ADI for EBDCs 0.05 mg/kg body weight: not more than 0.002 present as ethylenethiourea (ETU)". It was not clear whether the figure for ETU applied to a percentage of EBDC or to an ADI for ETU. After a full discussion, the representative of WHO undertook to request this clarification from the 1986 JMPR. Any additional toxicological information would be welcome.

241. The delegation of the United Kingdom noted that calculating consumer intake of ETU on the basis of the Guideline Levels proposed would give a wrong impression because of the formation of ETU from EBDC residues on cooking foodstuffs. The delegation of Canada questioned whether it would not be more sensible to develop limits for processed foods in this case.

Beans

242. The delegation of the United Kingdom noted that the figure for beans was high in relation to the other figures. It was made clear that the figure was established by the 1974 JMPR and that it then represented the limit of determination. The representative of FAO stated that this would also be considered by this year's JMPR. The Guideline Levels for ETU would be discussed again at the next Session.

PROCYMIDONE (136)

243. The Committee was informed by the representative of GIFAP that toxicological studies would be completed early in 1988. It should therefore be possible for the JMPR to consider procymidone in 1989. It was decided to maintain the Guideline Levels.

BUTOCARBOXIM (139)

244. It was noted that the 1984 and 1985 JMPR had not estimated an ADI for butocarboxim owing to a lack of detailed data. This pesticide was however still used in several countries.

The delegation of The Netherlands stated that the proposed Guideline Level for beans (with pod) was not acceptable and suggested 2 mg/kg on the basis of data in the evaluation.

It was decided to request urgently by Circular Letter further information on toxicology and GAP and also on existing national limits.

The Committee agreed to retain the GLs at Step 4.

NITROFEN (140)

245. It was decided to delete all Guideline Levels for nitrofen.

ETHOPROPHOS (149)

246. The Committee noted that the 1983 JMPR had not established an ADI because the available data were considered inadequate. The representative of GIFAP stated that ethoprophos had registered uses all over the world and he would try to establish whether or not additional GAP data were available. The delegation of New Zealand informed the Committee that according to the report of last years' session of the Working Group on Priorities, new data were available and had been provided to the JMPR. It was decided to check whether these new data had been received by the JMPR and to await a re-evaluation. The Working Group on Methods of Analysis subsequently indicated that a limit of determination of 0.02 mg/kg would be realistic.

It was agreed to retain the GLs at Step 4.

PROPYLENETHIOUREA (PTU) (150)

247. The Committee noted that the 1985 JMPR had withdrawn all Guideline Levels on the basis of the toxicological properties of propineb(see para 123). The delegation of the Federal Republic of Germany opposed this decision. It stated that the WHO Group of Experts had not discussed all the available information. It requested a re-evaluation by the JMPR on the basis of all the data supplied. The representative of WHO would check if all the data had been used in the discussions of the WHO Group of Experts. At a later stage the representative of WHO clarified the position. All data had been considered but the evidence of carcinogenicity overruled other considerations. It was decided not to take any further action at this time.

PYRAZOPHOS (153)

248. It was agreed to consider the Guideline Levels at the next Session in the light of the 1985 Evaluations.

CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON METHODS OF ANALYSIS

249. The Committee considered the report of the ad hoc Working Group on Methods of Analysis (See APPENDIX III to this report) and Room Document 9. It was introduced by the Chairman of the Working Group, Mr. P.A. Greve (The Netherlands).

Recommendations for methods of analysis; simplified methods

250. The Working Group had updated the recommendations for methods of analysis for pesticides in the Codex system. The "simplified methods" were identified both in the list of methods and in the references (see CAC/PR 8-1986). For a number of relatively new compounds, methods of residue analysis were difficult to find in the open literature. GIFAP would discuss the possibility of providing assistance in making such methods available.

Expression of the residues of fentin, etrimfos and chlordimeform

251. After some discussion of the advice provided by the Working Group on the expression of the residues of the above compounds, it was decided to send it to the JMPR for comment. The Committee agreed to discuss the matter again in the light of comments received. The delegation of France questioned the procedure of discussing residue definitions after MRLs had been established. The delegation of France was of the opinion that the residue description for chlordimeform could present problems if any other compounds also had 4-chloro-o-toluidine as a metabolite. It had experienced serious difficulties in similar situations. It was stated that no such compounds were known to exist.

Minimal concentrations of pesticides to be determined

252. A paper by the delegation of GIFAP on minimal concentrations of pesticides to be determined was discussed. The GIFAP residue committee would make the necessary changes to the paper in the light of the comments and present it at the next Session of the Committee.

Room document on decision-making

253. The Committee discussed a room document on "decision-making" prepared by the Chairman of the Working Group. It contained two basic options to take into account inaccuracies in analysis when deciding whether an MRL was exceeded. The first approach was "rounding off" to one significant figure and the second a semi-mathematical one, in which a latitude is calculated and subtracted from the experimental value. In both cases the result was then compared with the MRL. As the result might be different in only a limited number of cases, it was not considered necessary that the Committee should choose one of the options. Countries were however advised to choose between these options at a national level.

254. The delegations of Finland and Denmark had applied the second option for a number of years. They had calculated latitudes which were broader at lower levels and narrower at higher levels, whatever the pesticide.

255. The delegation of the United States of America drew attention to the information on the subject in the document on recommended national regulatory practices (see ALINORM 85/24A-Add 2). It advised caution in order to avoid erroneously taking enforcement action against consignments of food.

Appointment of an ad hoc Working Group on Methods of Analysis

256. The Committee thanked the Working Group and its Chairman for the work done prior to and during the Session. It was decided to set up a new ad hoc Working Group under the Chairmanship of Mr. P.A. Greve (The Netherlands) with the same membership as before.

CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON DEVELOPMENT OF RESIDUES DATA AND SAMPLING

257. The Committee considered the report of the above ad hoc Working Group (see APPENDIX IV to this report) which was introduced by Mr. J.A.R. Bates (United Kingdom), Chairman of the Working Group.

Guidelines on Pesticide Trials for the Registration of Pesticides and the Establishments of MRLs

258. It was stressed that complete reports of trials were essential to an adequate evaluation by the JMPR and national authorities. The Committee was informed that a further publication of the Guidelines was envisaged by FAO. The representative of GIFAP informed the Committee that GIFAP would consider publishing the Guidelines again within its own framework.

Guidelines on Studies to provide data on the nature and amount of Pesticide Residues in human food of animal origin

259. The Committee considered the final draft presented by the Working Group. It was proposed to publish these Guidelines together with the Guidelines on Pesticide Residue Trials. The Committee decided to recommend a combined publication as a part of the Codex Guide. The Secretariat stated that it would find out whether such a publication would be possible. The representative of GIFAP informed the Committee that GIFAP would consider publishing the Guidelines within its own framework.

Guidelines on Sample Sizes for agricultural commodities in Residue Trials

260. It was brought to the attention of the Committee that member countries were requested to send comments to the Chairman of the Working Group by September 1986 so that a final version could be prepared for the next Session of the Committee.

Recommended method of sampling for the determination of Pesticide Residues in meat and poultry products

261. The Committee was informed that the final draft might be prepared for the 1987 Session of the CCPR. The Chairman of the Working Group noted that a request of the Peoples Republic of China had been discussed and it was agreed that there should be a special entry in the Classification for mammalian meat with a low fat content (e.g. rabbits). The proposal to solve this problem, reflected in the report of the Working Group, was endorsed by the Committee.

Further work

262. The Committee was informed that the Working Group had discussed the growing importance of realistic predictions of dietary exposure to pesticide residues and had noted that relatively few data existed on factors affecting the disappearance of residues present at harvest or slaughter. The recommendation of the Working Group that guidelines should be developed for studies on these factors was endorsed by the Committee. Relevant information should be sent to the Chairman of the Working Group by 1st September 1986.

Appointment of an ad hoc Working Group on Development of Pesticides Data and Sampling

263. The Committee thanked the Working Group and its Chairman for their contribution to this Session. A new ad hoc Working Group was appointed under the Chairmanship of Mr. J.A.R. Bates (United Kingdom) with the same membership as the outgoing group.

CONSIDERATION OF THE REPORT OF THE WORKING GROUP ON PESTICIDE PROBLEMS  
IN DEVELOPING COUNTRIES

264. In the absence of Mr. Victoriano Tolosa (Argentina), the above Working Group met under the Chairmanship of Mr. Sakdiprayoon Deema (Thailand) who introduced the report of the Working Group (See APPENDIX V).

International Code of Conduct on the Distribution and use of  
Pesticides

265. The delegation of The Netherlands brought to the attention of the Committee a voluntary scheme which its country had introduced to notify developing nations of chemical exports, including a prior informed consent procedure. The delegation of the United Kingdom commended FAO for its efforts in assisting developing countries to strengthen the existing laboratory facilities and training of personnel for regulating the use of pesticides in those countries. It reminded the Committee that other organizations and countries e.g. the United States of America, the United Kingdom and the Federal Republic of Germany were active in a similar way and expressed the view that the activities of the different organizations needed to be coordinated, possibly through the organization of a workshop. The representative of FAO supported the proposal and agreed to look into this matter.

266. Referring to the several recent cases of fraud involving pesticides to which the Committee's attention had been brought by the delegation of Cameroon, the representative of GIFAP informed the Committee that fraudulent trade practices which involved product adulteration or misrepresentation constituted a contravention of the FAO Code of Conduct on the distribution and use of pesticides. GIFAP had participated actively in drafting the FAO Code of Conduct and strongly supported the provisions of the Code. It had also drawn the attention of industry widely to the Code and had urged compliance with it. Noting that the Code was addressed both to industry and to Governments, GIFAP urged Governments to continue to work with the industry, including national trade associations, in eliminating fraudulent trade practices.

Trade in food containing excessive amounts of pesticide residues

267. The Committee noted the views of the Group of Countries in Asia (1986) that trade in food containing "excessive" amounts of pesticide residues could be interpreted as trade in food not complying with the national or international (Codex) maximum residue limits for pesticides. The Committee asked the Secretariat to continue to seek information on the subject and also to include this matter on the agenda of Regional Coordinating Committees for their consideration.

Need for Pesticide Residue data from GAP in developing countries

268. The Committee agreed that there was an urgent need to identify chemical-crop combinations that were important to developing countries. It held the view that this activity would also fall within the responsibility of the Working Group on Priorities which should study the problem. The Committee noted that information would be required on i) foods of importance in the country, ii) pesticides used and iii) pest infestation problems. Information on aspects i) and iii) should be available from FAO, while information on ii) could be sought from industry. The representative of GIFAP informed the Committee that GIFAP would cooperate in this activity and suggested to companies that they review existing files on developing countries to collect the information required. GIFAP, through its associated companies in developing countries, could also try to collect residue data.

269. The Committee asked the Secretariat to gather any information that might be available from the above sources and from the countries through a Circular Letter with the assistance also of the Regional Chairmen. The delegation of Australia pointed out that it was essential to establish specific contact points on pesticide residue matters in order to facilitate information gathering and participation in Codex work.

Report on Activities in Latin America and the Caribbean in the field of pesticide residues

270. The delegation of Cuba informed the Committee that it would be possible for all the countries in Latin America and the Caribbean to discuss their problems on pesticide residues at the workshop to be organized in February 1987 at the time of the 5th Session of the Regional Coordinating Committee.

Needs of the South West Pacific Region

271. The Committee noted that Australia (Mr. G.N. Hooper) had agreed to ascertain the needs of the South West Pacific Region and report back to the next Session. The Committee expressed the view that this was an important development and that information should be sought from the developing countries in that region on activities relating to the use and control of pesticides and their residues as well as on awareness of the countries in the region of the work of the CCPR.

Other Business

272. The observer from the German Democratic Republic informed the Committee that his country was in a position to offer for developing countries post-graduate research training in application of pesticides, safety of operators and risk to consumers from pesticide residues in food. Among other subjects it could provide information on good laboratory practice in pesticide residue analysis, determination of pesticide residues in plants, soil and water, fate of pesticides in plants and soil and the hygiene and toxicological evaluation of pesticide residues.

Progress Report on action taken on the recommendations of the Working Group on pesticide residue problems in developing countries

273. Introducing the document CX/PR 86/11 containing a summary of action taken by the Secretariat, Governments and various organizations on the recommendations of the Working Group on pesticide problems in developing countries, the Secretariat drew the attention of the Committee to recommendation 18 and informed the Committee that the recommendations had been brought to the attention of the Codex Alimentarius Commission, Governments and interested International Organizations.

274. The Committee noted that Working Group 3 on Developing Countries had gained a certain status and noted with satisfaction that the recommendations of the Working Group were being acted upon. This exercise of the Working Group was bearing fruit and should be continued.

275. The Secretariat also brought to the attention of the Committee the recommendations, contained in the Annex to Room Document 7, of the 2nd Session of the Group of Developing Countries in Asia concerning pesticide residue problems held in Chiang Mai, Thailand, 2-5 April 1986.

276. Referring to Recommendation 6, the Secretariat informed the Committee that the scope of such regional meetings should be broadened to include pesticide problems other than those related to Codex, e.g. Good Agricultural Practice, pesticide registration, integrated pest management, etc. Recommendation 9 was directed to the elaboration of guidelines for the reduction of pesticide residues in food commodities. The view was expressed that Good Agricultural Practice could be considered as a means of keeping the levels of pesticide residues in food commodities at a minimum. The Secretariat pointed out that technical advice was sought which would depend on the pesticide/food combination. The delegation of Argentina supported the development of such technical guidelines.

277. The Committee endorsed the report of the Working Group. It appreciated the work done by the members and the Chairman during the year and decided to set up a new ad hoc Working Group under the Chairmanship of Mr. Sakdiprayoon Deema (Thailand) who also represented the region of Asia. Mr. Victoriano Tolosa (Argentina) and Mr. E.J.B. Tutuwan (Cameroon) were appointed regional Chairmen for the regions of Latin America and the Caribbean and Africa respectively.

#### CONSIDERATION OF THE REPORT OF THE AD HOC WORKING GROUP ON REGULATORY PRINCIPLES

278. The Committee considered the Report of the ad hoc Working Group on Regulatory Principles (see APPENDIX VI to this Report), which was introduced by the Chairman of the Group, Mr. J.R. Wessel (United States of America), and documents CX/PR 86/12 and ALINORM 85/24A-Add 2 and 85/24B, APPENDIX V, ANNEX I.

#### Recommended National Regulatory Practices

279. Regarding the document "Recommended National Regulatory Practices to Facilitate Acceptance and Use of Codex MRLs" (ALINORM 85/24A-Add 2, now also published as Part 9 of the Guide, CAC/PR 9-1985), Governments had been asked for comments on the use of the document and on the effect of its use on national regulatory practices. It was noted that only 3 countries had submitted their comments. Because of the recent inclusion of the document in the Guide, it was recognized that countries might need more time to fully consider its usefulness. Consequently, it was decided by the Committee to request countries again to comment on the use of the document, to allow discussion by the Working Group and the Committee at the next Session of the CCPR. The comments should be submitted to the Chairman of the Working Group not later than February 1, 1987.

280. It was noted that the Working Group had decided to begin the development of a new questionnaire on national regulatory practices (para 219, ALINORM 85/24B), to be issued in 1988, to obtain specific information from countries regarding the effect of their use of the document on recommended national regulatory practices, taking into account comments from countries received previously on this subject.

281. The Committee noted that the Codex Committee on General Principles, which was scheduled to meet in November 1986, would be examining ways to increase countries' acceptance of Codex standards, including pesticide MRLs. It was agreed that the document on regulatory practices should be brought to the attention of the Codex Committee on General Principles by the Secretariat.

Acceptability of Codex MRLs in the light of Possible Dietary Exposure  
282.

The Committee considered the Discussion Paper "Codex Limits for Pesticide Residues in Food and Consumer Safety" (CX/PR 86/12). It was noted that the 1985 JMPR had expressed the view that guidance was needed for assurance that adherence to MRLs is contributing to consumer safety. It was also noted that the Working Group had agreed that the concept described in the discussion paper provided a useful contribution to the development of this guidance, and that the recommendations in para 25 of the discussion paper were affirmed. Several delegations expressed their support for the concept of the estimation of exposure to pesticides elaborated in the discussion paper. The Committee endorsed the recommendations mentioned and especially urged FAO and WHO to proceed towards a timely convening of a special meeting of experts to prepare draft guidelines, based on the concepts developed in the discussion paper, for consideration by the JMPR and then by the CCPR. Countries were advised to send any further written comments regarding this subject to the Secretariat for consideration by the special meeting of experts, which was tentatively scheduled for June 1986.

283. The delegation of Australia expressed concern about possible misuse of the concept of the Theoretical Daily Intake, which might add to the workload of the CCPR and might endanger progress in the acceptance of MRLs. Implementation of the Guidelines expressed in the discussion paper might however improve the situation. The delegation from Finland welcomed the discussion paper as important guidance to countries in order to combine the concepts of good agricultural practice and of consumer health protection. It requested that attention should be given to public health policy considerations such as diets which differ appreciably from the average, and to pesticides with a similar action, e.g. cholinesterase inhibition, which might be present simultaneously in the diet. These matters should be dealt with in future meetings of the CCPR, aiming at optimizing the use of pesticides, while at the same time preventing their adverse effects on health.

284. The Secretariat indicated that on the basis of preliminary calculations using highly exaggerated worst-case assumptions, it could be shown with some pesticides that the ADI was not likely to be exceeded. Using reduction factors such as those envisaged for Estimated Daily Intakes, many more pesticides could be eliminated as not likely to exceed the ADI. In this way a list of pesticides might be established which would need further attention through a more detailed assessment of toxicological properties and of dietary intakes, using e.g. total diet (market basket) studies.

Codex MRLs for Pesticide Metabolites that are also Used as Pesticides  
285.

The Committee agreed that the Working Group should proceed with this topic and recommended member countries to send relevant information about their regulatory practices to the Chairman of the Working Group.

Appointment of an ad hoc Working Group on Regulatory Principles  
286.

The Committee thanked the members and the Chairman of the Working Group for their work. It was decided to set up a new ad hoc Working Group under the Chairmanship of Mr. J.R. Wessel (United States of America) with the same membership as before.



REPORT OF THE AD HOC WORKING GROUP ON PRIORITIES

287. The Committee considered the Report of the ad hoc Working Group (see APPENDIX VII to this report) which was introduced by its Chairman, Mr. B.B. Watts (New Zealand).

Scheduling of compounds for the JMPR

288. The Chairman of the Working Group drew attention to the fact that WHO had altered its policy of scheduling compounds for evaluation (a "two-year cycle") so that any chemical given priority by the CCPR would be considered by the WHO panel of the JMPR only two years later. Five compounds which were on the 1986 priority list were scheduled for evaluation by the FAO panel of the 1986 JMPR whereas only three of them were on the agenda of the WHO panel. In order to maintain the joint identity of the JMPR it was considered essential that the two panels coordinate their evaluations whenever possible.

Consideration of compounds recommended for priority

289. The Working Group had reconfirmed the criteria for establishing priorities. Countries which envisaged proposing pesticides for priority had to consider these criteria. For a number of compounds, requests for re-evaluation had been made on the basis of the use of these compounds on a number of tropical crops. As other mechanisms existed to initiate such re-evaluation, the Chairman of the Working Group undertook to advise the countries concerned on the necessary steps to be taken.

It was noted with concern that for the first time for many years no priority list could be established, because in spite of serious attempts to obtain the necessary information, this was not complete for any of the compounds proposed. Rather than removing the compounds from the list, more attempts would be made to complete the information.

290. The delegation of Australia suggested giving priority to compounds proposed by developing countries also in situations where no information was available on possible problems in trade. As the responsibilities of the Commission clearly included the consumer safety aspects, requests from countries for priority consideration should be taken seriously and consumer safety should not be overruled by the absence of demonstrated trade problems.

291. The delegation of France doubted whether the manufacturer of thiofanox was correctly identified as Rhône Poulenc. No confirmation could be obtained during the Session.

Re-evaluation of pesticides with ADIs established prior to 1976.

292. It was decided to send a Circular Letter to countries on use patterns and other relevant information for 33 pesticides which had been identified by the Working Group as having ADIs estimated before 1976. WHO was requested to examine the toxicological data base of these compounds. On the basis of the information received a future Session would advise on further steps to be taken.

OECD list of compounds for post-harvest use

293. In addition to the information in the report of the Working Group, it was indicated that CXLs had already been established for hydrogen cyanide (045). The compound was still in use in some countries. The compound O,O-dimethyl phosphorodithioate had not been identified as a pesticide; thiram (105) and tecnazene (115) had already been considered by the Committee; chlorosulphamic acid was thought to be a fungicide. It was indicated that additional information should still be sought for some of the compounds on the OECD list.

Re-evaluation of thiram

294. The delegation of The Netherlands suggested that thiram should be re-evaluated on the basis of toxicological data in the open literature, to which some references had been included in that country's written comments. It was indicated that so far studies required by the JMPR had not been received in full detail. The representative of WHO said that he would be pleased to receive the information indicated by The Netherlands and other relevant data for submission to the JMPR.

Appointment of an ad hoc Working Group on Priorities

295. The Committee thanked the Working Group and its Chairman for their contribution to this Session. A new ad hoc Working Group was appointed under the Chairmanship of Mr. B.B. Watts (New Zealand) with the same membership as the outgoing group.

CONSIDERATION OF THE REPORT OF THE WORKING GROUP ON CONTAMINANTS

296. The Report of the Working Group was introduced by Mr. R.B. Maybury (Canada). He drew attention to the various matters discussed by the group (see APPENDIX VIII to this Report).

Gathering and consideration of further toxicological information

297. The Committee was informed that WHO was in the process of preparing an Environmental Health Criteria (EHC) document on PCBs and agreed that it should be distributed to Codex Contact Points, inviting Governments to send comments and information to the IPCS. The Committee agreed with the conclusions of the Working Group regarding the need for and ways of obtaining toxicological information on PCBs. It also agreed that furans and dioxins should not be discussed at this time.

Regulatory approach to recommend to Governments regarding PCBs

298. The Committee noted that the Commission had expressed the view that maximum levels for PCBs should be developed as a matter of urgency. The Committee was in general agreement with the conclusions of the Working Group that it was premature to recommend actual maximum permitted levels for PCBs in foods, but that data should be obtained from Governments using a standardized analytical approach on the basis of which maximum permitted levels could be established at a later stage. The Committee noted the remarks of some delegations that there was insufficient evidence that problems in trade were caused by PCBs in food. The point was made that consideration of the problem of PCBs in food was an activity directed to the protection of the health of the consumer, one of the tasks of the Codex Alimentarius Commission. The delegation of the United Kingdom was of the opinion that the recommendation of the Working Group that countries should establish maximum levels for PCBs in foods would lead to the opposite of harmonization. In reply it was stated that setting limits for PCBs in food at the national level was required urgently in the interest of public health protection in order to limit PCB intake.

Generation of appropriate data and the relation between the CCPR and other bodies

299. The Committee noted and endorsed the views of the Working Group on the question of collecting appropriate data from monitoring through Codex Contact Points in collaboration with the Joint FAO/WHO Food Contamination Monitoring Programme (JFCMP) and the IPCS (see also para 42).

#### Methods of Analysis for PCBs in food

300. The Committee noted that a special joint meeting of the Working Group on Analysis and Contaminants and a small group of experts had discussed the need to standardize methods for the determination of PCBs. As it had appeared to these groups that it would not be practical to expect all countries to use one and the same method, it had been decided that results using both the capillary GLC and the packed column GLC methods (described in some detail in Annex I to Appendix VIII) should be accepted.

301. The delegation of The Netherlands pointed out that results using packed column GLC were unreliable and were not comparable with those from capillary columns. An early change to the more reliable capillary GLC should be recommended in the interests both of public health protection and the generation of more reliable monitoring data. The delegation of Finland was also of the opinion that existing information on PCBs in food from different sources was not comparable and supported the view of the delegation of The Netherlands that countries should change to the capillary technique, measuring individual PCB congeners.

302. The Committee noted that, after the addition of a reference to a standard capillary GLC method proposed by The Netherlands, the methods included in Annex I to Appendix VIII represented the best attempt at standardizing methods for PCB determination.

#### Further action to be taken

303. The Committee agreed that the following procedure should be followed.

(a) Data on PCBs in foods using the procedures indicated in ANNEX I to APPENDIX VIII should be requested from Governments through Codex Contact Points and from other appropriate sources (the description of the portion of fish to be analysed should be specified in greater detail);

(b) Monitoring data should be sent to the Joint FAO/WHO Food Contamination Monitoring Programme (JFCMP) where such data would be processed, evaluated and summarized;

(c) The reports prepared by the JFCMP together with inputs from the IPCS (EHC) should be forwarded to the CCPR which would consider the report through its Working Group on Contaminants, with a view to recommending maximum levels in food.

304. The delegation of Denmark expressed concern about the possible additional heavy workload which could result from these activities.

#### Appointment of an ad hoc Working Group on Contaminants

305. The Committee thanked the Working Group and its Chairman for their work before and during the Session. It noted that it would be necessary to follow developments as indicated above, as well as actions taken at the national level. However, it agreed that it would not be necessary to hold a session of a Working Group unless sufficient data were generated through the mechanism outlined above. Mr. R.B. Maybury (Canada) was appointed as contact person for matters relating to environmental contaminants. Should it prove necessary, Mr. Maybury would decide, in consultation with the Chairman of the CCPR, to hold a session of a Working Group in conjunction with the next Session of the CCPR.

Questionnaire on PCBs

306. Mr. Maybury reported on replies received in response to Circular CL 1985/36-PR, indicating that the number of responses had been reasonable. He invited countries which had not yet replied to send information such as that requested in Circular Letter CL1985/36-PR to him as soon as possible so that the document CX/PR 86/13 could be up-dated for the next Session of the CCPR.

OTHER BUSINESS

Information on intake of residues of organochlorine pesticides

307. The delegation of The Netherlands presented in a Room Document summary results of a duplicate diet study on the intake of residues of organochlorine pesticides. The results of this study showed that intakes of organochlorine pesticides are equal to or lower than the already low levels found in a previous study several years ago.

Establishment of MRLs by JMPR

308. The delegation of Austria presented a Room Document concerning the establishment of MRLs by the JMPR. It requested information on the procedure followed in establishing MRLs, such as the ways in which incidental high residues were taken into account. The request was supported by the delegation of Sweden. The representative of FAO agreed to bring the matter to the attention of the JMPR for additional clarification. It was however noted that the JMPR had to base its decisions on the data base available to it and that therefore the quality of the proposals was very much dependent on the quality of the data provided. A similar situation might apply to national registration procedures.

DATE AND PLACE OF THE NEXT SESSION

309. The Chairman of the Committee indicated that the next (nineteenth) Session of the Codex Committee on Pesticide Residues and its Working Groups would be held in the Hague from 3 to 13 April 1987. The tentative schedule for the start of the plenary session of the Committee and the meetings of the Working Groups is as follows:

Plenary Session of the CCPR

Monday, 6 April 1987, 9.30 hours

Working Group on Regulatory Principles

Friday, 3 April 1987, 9.00 hours

Working Group on Priorities

Friday, 3 April 1987, 14.00 hours

Working Group on Contaminants (if necessary)

Saturday, 4 April 1987, 9.00 hours

Working Group on Methods of Analysis

Saturday, 4 April 1987, 14.00 hours

Working Group on Development of Residue Data and Sampling

Saturday, 4 April 1987, 9.00 hours

Working Group on Pesticide Residue problems in Developing Countries

Tuesday, 7 April 1987, 14.00 hours

CLOSURE OF THE SESSION

310. In closing the Session, the Chairman noted that one of the main problems identified during the Session related to the question of where a cut-off point for the establishment of MRLs should be set. He was of the opinion that, apart from considerations of good agricultural practice, other questions such as those relating to international trade and acceptability of the MRLs from a consumer safety point of view should play a more prominent role in the discussions of the Committee. In this respect the growing interest in the residue actually reaching the consumer should especially be mentioned. Several important initiatives to obtain better information on this point had been taken or suggested during the Session. Efforts would be made to prepare a paper explaining briefly how the Codex system worked in the establishment of MRLs. The Chairman expressed the hope that such a paper would lead to greater participation in the discussions of the Committee. He stressed the need for the CCPR to continue to consider ways of improving its work and increasing its effectiveness. In this context he stressed the importance of FAO and WHO giving attention to the GIFAP declaration and hoped that their representatives would convey the message to their Organizations and stress the dependence of the work of the Committee on the full and loyal cooperation of the industry. In conclusion, the Chairman thanked the participants and paid tribute to the dedication of all who had contributed to the success of the Session.

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OPENING SPEECH BY DR. J. VAN LONDEN, DIRECTOR-GENERAL OF THE MINISTRY  
OF WELFARE, HEALTH AND CULTURAL AFFAIRS

Ladies and Gentlemen,

The week ahead of you will be a week of discussion on pesticides. There are several ways in which pesticides are discussed. The nature of the discussion depends very much of the people involved. On the one side we find the farmers, in today's agricultural production systems very much dependent on pesticides. On the other side the public at large, the consumers of food products especially in the industrialized countries who take for granted that abundant food is available at reasonable prices, in acceptable quality and in great variety. There are striking differences in the way pesticides are considered and discussed in both groups.

Originally discussion on pesticides was almost exclusively limited to the professionals, the farmers, the health workers, taking profit of the unprecedented possibilities pesticides offered in preventing damage to crops and in the protection of public health. Although through the years these professionals have been confronted with the fact that chemicals could not offer the sole and final solution for all pest problems, the broad consensus about their value has not been touched.

Since the early sixties however pesticides have developed as a subject for discussion among the other part of the population, those who themselves do not use the pesticides but make use of the resulting food products, including pesticide residues. Information, often on deleterious effects largely resulted in a negative opinion on pesticides.

Since these early sixties more than twenty years elapsed. It would be expected that this period would have permitted for a balanced view on the subject. Finally the introduction of the steam engine knew its opponents as well, but after some years its use was generally accepted. Comparable situations existed and continue to exist with several other major inventions or developments.

For pesticides however the two sides generally continue their discussions within their groups. Exchange of views takes hardly place, positions stay unchanged.

This situation came to my mind in taking note of two documents that reached my desk recently. The first one is a recent publication in a dutch scientific magazin. It is entitled : "Dutch pesticides poison the third world".

It is written by a cooperator of the PAN, the Pesticides Action Network, an organisation, known to all of you, I suppose. In this article it is stated that pesticides ask for thousands of victims every year, that residues are present in food, sometimes in extremely high concentrations, that use of pesticides results in the development of resistance, that certain pesticides accumulate in fat tissue etcetera. It ends with a plea for the introduction of integrated pest control as farmers in developing countries in most cases are not sufficiently trained for the use of chemicals.

The second publication sent to me by the Netherlands Embassy in Washington, was entitled "An agromedical approach to pesticide management". It has been and is used as a background document in the PEST - Program, which stands for the "Pesticides Evaluation and Safety Testing Program".

This program has been developed by the World Bank in cooperation with the University of Miami. Its goal is the strengthening of the knowledge, possibilities and means of developing countries to control the use of pesticides. A first PEST-centre has been set up in the Caribbean area. It provides for courses in residue analysis, prevention and curing of poisonings and several other subjects, connected with pesticide use. It is impossible, nor is this the place to describe the contents of the earlier mentioned manual entitled "An agromedical approach to pesticide management". It is worthwhile however to dwell a moment on this expression: agromedical pesticide management. The book states that crop losses of 20 to 30% during production and 20% or more during storage of food are not uncommon. Vector borne diseases exert a heavy toll of human suffering and death. WHO estimates that something over 100 million human beings are afflicted by or will contract malaria. Other tens of millions are under treat of vector borne diseases.

"The common interest", I quote from the book, "of medicine and agriculture in pest control stems from the shared basic goal of contributing to the health and welfare of humans. While medicine seeks to prevent and cure diseases, agriculture endeavors to provide the food for an adequate and nutritious diet to maintain that health. One without the other is destined to fail. Thus, unwittingly, until a few years ago each profession pursued its separate interests, particularly with respect to pest control. This is no longer acceptable. The achievement of a healthy productive society is inextricably bound to the simultaneous success of both professions. It is from this fact that the concept of "agro-medicine" came forward". Unquote.

Elsewhere the book pleads for "an integrated approach of the several disciplines to safely produce the required amount of the right food for man, and protection from vector-borne diseases"

As in the PAN-publication there is a plea for an integrated approach. But whereas PAN highlights only the danger of the use of pesticides, the paper used for the PEST-Program stresses also the danger of the non-use.

I think that this way of integrated thinking about pesticides merits the attention of all those that like to arrive at a balanced opinion on these problems.

Public servants, working in pesticide regulation, have to reconcile almost daily the divergent opinions that are so characteristic for pesticides. A broader understanding about the role of pest control with chemical means would certainly facilitate their life. Of even greater importance however is the faith that can be attributed to the data whereon their decisions are based.

The bad reputation pesticides obtained in the mind of the general public is, at least partially, due to the discovery of deleterious effects of certain pesticides, not known in the years of their early use. As our knowledge about chemicals and their risks for humans and the environment has increased enormously it should be expected that data on the pros and contras of pesticides are sufficient now to prevent unjustified registration.

However, recent discoveries of negative toxicological properties, even of long registered and widely used pesticides, proves that such a situation is not yet reached. They may serve to stimulate the development of a system of periodical review of the toxicological and other data by WHO and FAO. I doubt however whether the rather frequent changes in ADI's, as practised by the Joint Meeting, are the right answer to this situation. I am afraid that they tend to undermine trust in this widely respected parameter.

Another undermining of trust is related to the setting of maximum residue limits. Your chairman has repeatedly asked the attention of the manufacturers for the international aspects of this exercise. Many of the differences in mrls between countries develop simply from the fact that the company involved has done nothing to arrive at harmonisation. I know of two recent examples where a company asked for an mrl covering residues in a certain crop in one country and claimed a no-residue situation for that same crop in a neighbouring country. Such situations may result in problems in international trade and are disadvantageous for the clients of the pesticide manufacturers. These experiences too do not contribute to the trust in the data on which the authorities have to base their decisions. Let apart the bad service they deliver to the task of your Committee: the worldwide harmonisation of pesticide residue regulations.

Finally I think that lack of acceptances of Codex mrls undermines trust in the seriousness of these proposals. I think that there exists a great responsibility here, especially for the industrialised countries as the main producers and sellers of pesticides. Codex mrls derive their importance and their trust from the fact that they have been implemented in national and regional legislations. But here too I have observed repeatedly that there is no connection at all between what applicants ask for in national legislations and what has been established in Codex.

Chairman, Ladies and Gentlemen, my critical remarks are not meant to minimize the importance of your endeavours for harmonisation. I hope that they will stimulate you in cooperating in the aims FAO and WHO are pursuing in their Food Program and in finding new ways to reach those goals. The Miami University has given an excellent example in a connected field.

I wish you a successfull meeting.

REPORT OF THE AD-HOC WORKING GROUP ON METHODS OF ANALYSIS

Members of the Group met under Chairmanship of Mr. P.A. Greve.

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1. Agenda

The Working Group discussed the following points:

- recommendations for methods of analysis;
- room document on "decision-making";
- limits of determination for triazophos and ethoprophos;
- expression of residues of fentin, etrimfos and chlordimeform;
- paper by GIFAP on minimal concentrations of pesticides to be determined.

2. Recommendations for methods of analysis

The Working Group undertook the up-dating and reviewing of the recommendations for methods of analysis given at the previous Session. The new list, which supercedes the lists given previously, will be published in the "Guide to Codex Recommendations concerning Pesticide Residues", Part 8 Third Edition (CAC/PR 8-1986)

At the request of the previous meeting of CCPR, "simplified" methods have been indicated with " [S] " not only in par. 3.3., but also in par. 2. The number of "simplified" methods has been increased compared to last year from 26 to 36.

A point of concern was the fact that for several newer compounds under consideration by CCPR it was difficult to find references to residue-analytical methods which are published in the open literature (cf Annex I to this Appendix, par. 1.2., criterion A). Advice on this matter was sought from GIFAP, which will take up the point in its Residue Committee.

3. Room document on "decision-making"

A summary of the discussions in the Working Group during the previous years on decision-making ("When has a Codex MRL been exceeded?") had been prepared by the Chairman as a basis for discussion in plenary. The document was finalized and presented to the plenary Session as Room Document 9.

4. Limits of determination for triazophos and ethoprophos

At the request of the Chairman of the CCPR the Working Group discussed practical limits of determination for triazophos and ethoprophos. Limits of determination of 0.01 mg/kg for triazophos and 0.02 mg/kg for ethoprophos were considered realistic.

5. Expression of residues of fentin, etrimfos and chlordimeform

At the request of the Secretariat of the CCPR, the Working Group considered the residue definition of fentin. The Working Group agreed with the proposal of the last meeting of the CCPR to delete the word "hydroxide".

As regards the residue definition of etrimfos, the Working Group stated its preference for the expression "Residue: etrimfos", or, if the oxygen analogue is toxicologically important: "sum of etrimfos and its oxygen analogue". If also 6-ethoxy-2-ethyl-4-hydroxypyrimidine is a toxicologically important metabolite, the residue definition should run:

"sum of etrimfos, its oxygen analogue and 6-ethoxy-2-ethyl-4-hydroxypyrimidine".

The Working Group expressed the view that, in order to describe more exactly the actual course of the analytical procedure, the residue definition for chlordimeform should be reworded as: "chlordimeform and its metabolites containing the 4-chloro-o-toluidine moiety determined as 4-chloro-o-toluidine and expressed as chlordimeform".

6. Paper by GIFAP on minimal concentrations of pesticides to be determined

The Working Group had before it a paper written by the Residue Committee of GIFAP (no. C.14533/B) entitled "The concept of minimal concentrations to be determined in samples for residue analysis". The Working Group sympathised with the idea brought forward in the document that the minimal concentration of a pesticide to be determined in a sample does not necessarily have to correspond to the lowest possible measurable concentration, but should depend on the MRL for the pesticide-product combination under investigation, or, if such a value does not (yet) exist, on the possible hazards



of the pesticide involved. Agreement on realistic limits of determination can result in a more efficient use of analytical potential, both with the producers of the pesticides and with the regulatory agencies. It is understood that the document will be discussed again by GIFAP in the light of the comments brought forward in the group.

REPORT OF THE AD HOC WORKING GROUP ON DEVELOPMENT OF RESIDUES DATA AND SAMPLING

1. Members of the Group met under the Chairmanship of Mr. J.A.R. Bates.

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Guidelines on Pesticide Residues Trials for the Registration of Pesticides and the Establishment of MRLs

2. The Working Group was informed that a number of countries encourage the use of the guidelines in the generation of data. Comments indicated that although residues trials were generally well performed, the final reports were often disappointing and the Group emphasized that complete reports were essential to an adequate evaluation by JMPR and national authorities. FAO informed the Group that a further publication of the guidelines was envisaged.

Guidelines on Studies to provide data on the nature and amount of Pesticide Residues in human food of animal origin

3. The Working Group considered a final draft of these guidelines, proposed a few minor changes, and recommended that they should be forwarded to the Secretariat for early publication. 1/

Guidelines on Sample Sizes for agricultural commodities in Residues Trials

4. The Working Group studied proposals for a revision of sample sizes for most agricultural commodities sampled during pesticide trials for residues analysis (ANNEX I). Practical experience has indicated that for certain commodities guidance based on numbers of commodity units rather than weight of sample is desirable. The Working Group recommended that the proposals be accepted in principle and that member countries be requested to send comments to the Chairman of the Group by September so that a final version can be prepared for the 1987 Session of the CCPR.

Recommended method of sampling for the determination of Pesticide Residues in meat and poultry products

5. The Working Group expressed its gratitude to Mrs. M. Cordle of the United States delegation for the preparation of a valuable working paper. The group, after detailed discussion, agreed that a further draft, based on the discussion, be prepared for circulation to members of the group so that a final draft may be prepared for the 1987 meeting of CCPR.

6. The Working Group discussed the request of the Peoples Republic of China for a special entry in the Codex Classification for mammalian meat with a low fat content, referred to in document CX/PR 86/5. The group recommended that the following addition to the introduction of Meats (Mammalian) referring to fat-soluble pesticides would clarify the situation. ": for those commodities where the adhering fat is insufficient to provide a suitable sample, the whole commodity (without bone) is analyzed and the MRL applies to the whole commodity".

Further work

7. The Working Group recognized the growing importance of realistic predictions of dietary exposure to pesticide residues. It noted that there were a number of factors affecting the disappearance of any pesticide residue present at harvest or slaughter, including losses on trimming and preparation, cooking and processing. Since there are relatively few data in this area of the development of residues data the Group recommended that guidelines be developed for studies on the factors which resulted in a reduction of these residues. The Working Group requested that any relevant information be sent to the Chairman of the Group by 1st September so that a draft working paper can be prepared for the next meeting.

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1/ The Guidelines may be published in the "Guide to Codex Recommendations concerning Pesticide Residues," Part 10 (CAC/PR 10-1986).

GUIDELINES ON SAMPLE SIZES FOR AGRICULTURAL COMMODITIES FOR RESIDUE ANALYSIS FOR SUPERVISED FIELD TRIALS

(GIFAP RESIDUE COMMITTEE)

INTRODUCTION

In 1981, GIFAP published as Technical Monograph No. 4 the "Guidelines on pesticide residue trials to provide data for the registration of pesticides and the establishment of maximum residue limits", which had been elaborated by the Codex Committee on Pesticide Residues (Codex). The drafting of those guidelines had been done in consultation with the GIFAP Residue Committee. This document includes, *inter alia*, a section entitled "Guide to Sampling" in which minimum sample sizes were recommended for a number of crops which were selected as examples. The document included the statement: "The amounts indicated have been found to be satisfactory and are given as a guide".

Prompted by initiatives from two member national associations, the GIFAP Residue Committee recently considered it timely to reconsider the sample size recommendations, with emphasis on the practicalities of sample collection, shipment and handling at the laboratory.

PRINCIPLES ADOPTED

The proposals in this paper are based on practical experience of residue analysts. Thus, the recommendations recognise the practical problems associated with particularly large samples and represent a compromise. More representative residue data will usually be generated by taking manageable sizes of samples from a larger number of trials than by concentration on more statistically valid samples from fewer sites.

However, it is emphasised that the recommendations for minimum sizes are for mature samples of crops to be taken from supervised trials, which frequently involve relatively small plots. Individual judgements may dictate that larger samples should be taken in particular circumstances, especially if larger plots or fields are being sampled. Larger samples of some crops may also be needed if particularly low limits of determination are involved (thus possibly requiring larger analytical samples) or for multi-residue determinations (requiring larger, or multiple, analytical samples).

Alternative considerations may apply when deciding on the quantities of immature crops required from residue dissipation trials.

As a general principle, and except for very small items such as berries, nuts and grain, it is considered more appropriate to recommend a minimum number of units to be sampled, rather than a minimum weight.

In a number of cases, the recommendation is for 12 units to be sampled (or 20 for smaller items). In this paper, 12 units, rather than 10, are used as this more readily allows for a composite sample to be provided from individual replicated pots, e.g. 3 units from each of 4 replicates (5 units for the smaller items). In general, the recommendation is for a minimum of 12 units in a sample. However, with particularly large or secondary crops, which are not major items of the diet, exceptions are recommended.

The principle of using units rather than weight applies equally to sampling tree fruits, where a minimum of 4 trees is recommended, with 5 fruits from each. It is important to sample from all parts of the tree, as described in the current Codex guidelines (GIFAP Technical Monograph No. 4 - see Introduction).

The principle of a sample comprising a minimum of 12 units also extends to crops such as cereals or grass, where a weight of sample is recommended. In this case, the crop should be cut from a minimum of 12 areas of the plot(s), to give the required weight. This follows the general recommendation in the current Codex guidelines for cutting not less than 10 small areas.

The GIFAP Residue Committee recommended a single figure as the minimum sample size in each case since, in practice, suppliers of samples will generally opt for the lower figure of a range. In general, it was considered that a sample of 0.5 kg, while ample for the residue analysis work, may not be sufficiently representative. However, the proposals do include a few exceptions to this generalisation.

Bulky or heavy items are sometimes sub-sampled before shipment to the residue laboratory. This practice must be considered according to local custom, always bearing in mind the need to maintain a fully representative sub-sample and to avoid any possible contamination or deterioration of the material. It is essential that it should only be done if a clean area is available and if the personnel involved have received specific instruction or training in this respect.

This paper is concerned primarily with minimum recommended quantities to be taken from the field at sampling time. It does not address in detail the procedures for sub-sampling before shipment to the laboratory, with the exception of a recommended procedure for reducing the bulk of large maize plants. Examples of sub-sampling procedures include

- a) division of sample units into representative quarters (e.g. vertical subdivision of beets), with retention of two opposite quarters;
- b) division of 12 tall stems (e.g. maize plants) into 3 equal lengths, with retention of the top portions from stems 1 to 4, middle portions from stems 5 to 8 and bottom portions from stems 9 to 12, which are combined to form the sub-sample.

Recommendations for the sampling of soil and water (frequently required for residue analysis) are outside the scope of this paper, requiring more specialist considerations. The paper considers predominantly raw agricultural commodities, with very few processed products. For processing studies, where required, larger field samples are usually needed for a realistic operation but relatively small samples (0.5 kg or 0.5 litre) of the processed materials (e.g. oil from oilseed crops, flour, bran, apple pomace, sugar) will usually be sufficient and adequately representative for analysis.

The GIFAP Residue Committee proposals are listed below and further information is given in the footnotes which follow the tabulated data.

Sample Type	Codex Code No.	Codex Rec.	RESCO Recommendation	Reference to foot-notes
<u>Fodder and sugar beets (roots)</u>	A01.0100	5 kg (min 5 plants)	12 plants	(a)
<u>Potatoes</u>	A01.0100	5 kg or 5 items	20 tubers, [or 12 if very large]	(b)
<u>Other root crops,</u> e.g. carrots, red beet, Jerusalem artichoke, sweet potato, celeriac, turnip, swede, parsnip, horseradish, salsify, chicory, radish, scorzonera	A01.0100	5 kg (large) 2 kg (small items)	12 roots, or 24 if small (e.g. young carrots, radish) Part of 12 roots of scorzonera	
<u>Leeks</u>	A01.0200	2 kg	12 plants	
<u>Spring onions</u>	A01.0200	2 kg	20 plants (more may be needed if very thin)	
<u>Bulb onions</u>	A01.0200	5 kg or 5 items	12 bulbs	
<u>Garlic, shallots</u>	A01.0200	2 kg	20 bulbs	
<u>Small-leaf salad crops,</u> e.g. cress, dandelion, corn salad	A01.0300	2 kg	0.2 kg	
<u>Fodder and sugar beets (leaves)</u>	A01.0300	5 kg(min. 5 plants)	leaves from 12 plants	
<u>Spinach, chicory leaves</u>	A01.0300	2 kg	1 kg from at least 12 plants	
<u>Lettuce</u>	A01.0300	2 kg	12 plants (or 1 kg if individual leaves are collected)	
<u>Endive</u>	A01.0300	2 kg	12 plants	
<u>Fodder cabbage</u>	A01.0400	5 kg	12 plants	(c)
<u>Green cruciferous,</u> fodder crops, rape, mustard, green oil poppy	A01.0400		2 kg	(d)

Sample Type	Codex Code No.	Codex Rec.	RESCO Recommendation	Reference to foot-notes
<u>Large brassica crops,</u> e.g. cauliflower, cabbage	A01.0400	5 kg or 5 items	12 items	
<u>Brussel sprouts,</u> sprouting broccoli	A01.0400	2 kg	1 kg, from 12 plants	
<u>Curly kale (borecole)</u>	A01.0400	5 kg	2 kg leaves from 12 plants	
<u>Kohlrabi</u>	A01.0400	5 kg or 5 items	12 plants	
<u>Celery</u>	A01.0500	2 kg	12 plants	(e)
<u>Rhubarb, Swiss chard</u>	A01.0500	2 kg	12 sticks, preferably from individual plants	
<u>Asparagus</u>	A01.0500	2 kg	20 sticks	
<u>Globe artichoke</u>	A01.0500	?	12 heads	
<u>Soybeans</u>	A01.0600	1 kg	1 kg	(d)
<u>Peas, Phaseolus beans</u> (French, Kidney, Runner etc), <u>broad beans, field beans</u> (Vicia faba), <u>lentils</u>	A01.0600	2 kg	1 kg	(f)
<u>Tomatoes, green peppers</u>	A01.0700	2 kg	20 fruits, or 12 for large-fruited varieties	(b)
<u>Aubergines (egg plants)</u>	A01.0700	5 kg or 5 items	12 fruits	(b)
<u>Cucumbers</u>	A01.0700	5 kg or 5 items	12 fruits	(b)
<u>Gherkins, courgettes</u>	A01.0700	2 kg	20 fruits or 0.5 kg	(b)
<u>Melons, gourds, pumpkins</u> <u>water melons</u>	A01.0800	5 kg or 5 items	6 fruits	(b)
<u>Sweet corn</u>	A01.0800	2 kg	12 cobs	

Sample Type	Codex Code No.	Codex Rec.	RESCO Recommendation	Reference to foot-notes
<u>Citrus fruits</u> - orange, lemon, clementine, mandarin, pummelo, grapefruit, tangelo, tangerine, etc.	A02.0900	5 kg	20 fruits but may be reduced to 12 for larger fruit, e.g. grapefruit, pummelo	(g)
<u>Pome fruit</u> , e.g. apples, pears, quinces, medlars	A02.1000	5 kg	20 fruits, or 12 for larger individual fruits. Minimum 1 kg	(g)
<u>Large stone fruit</u> , nectarines, plums	A02.1100	5 kg (2 kg plums)	20 fruits. With very small fruits, minimum 1 kg	(g)
<u>Small stone fruit</u> , e.g. cherries	A02.1100	2 kg	1 kg	(g)
<u>Grapes</u>	A02.1200	2 kg	12 bunches, or parts of 12 bunches, to give at least 1 kg	
<u>Currants, raspberries and other small berries</u>	A02.1200	2 kg	0.5 kg	(d)(h)
<u>Strawberries, gooseberries</u>	A02.1200	2 kg	1 kg	(i)
<u>Miscellaneous, small fruits</u> , e.g. olives, dates, dried fruits	A02.1300	2 kg	1 kg	(g)
<u>Bananas</u>	A02.1400	5 kg or 4 fruits from each of 5 bunches	20 fruits, or 12 if large, from a minimum of 4 bunches.	
<u>Miscellaneous fruits</u> , e.g. avocados, guavas, figs, mangos, pawpaws, pomegranates, persimmons, kiwi fruit, litchi	A02.1400	5 kg	12 fruits, or 20 for smaller items, e.g. kiwi fruit, and litchi	(g)



Sample Type	Codex Code No.	Codex Rec.	RESCO Recommendation	Reference to foot-notes
<u>Pineapples</u>	A02.1400	5 kg or 5 items	6 fruits	(j)
<u>Grain of wheat, barley, oats, rye, triticale and other small grain cereals, maize (off the cob), rice, sorghum</u>	A03.1500	1 kg (2 kg maize)	1 kg	(d)(k)
<u>Maize cobs</u>	A03.1500	2 kg	12 cobs	
<u>Straw of the above crops, excluding maize</u>	A03.1600	1 kg	0.5 kg	(d)(1)
<u>Maize, straw/stover/fodder (mature plants excluding cobs)</u>	A03.1600	5 plants	12 plants	(m)
<u>Green or silage maize</u>	A03.1600	5 plants	12 plants	(n)
<u>Green forage/silage crops of alfalfa, clover, fodder peas and beans, vetch, sainfoin, lotus, fodder soybeans, ryegrass, fodder cereals, sorghum</u>	A03.1600	1 kg (smaller leaves) 2 kg (larger leaves)	1 kg	(d)(o)
<u>Dry hay of the above crops</u>	A03.1600	1-2 kg	0.5 kg	(d)(1)
<u>Peanuts</u>	A04.1700	1 kg (2 kg with fibre)	1 kg	(d)(p)
<u>Walnuts, chestnuts, almonds, etc.</u>	A05.1900	1 kg	1 kg	(p)
<u>Coconut</u>	A05.1900	5 kg or 5 items	6 nuts	(j)
<u>Rape, flax and wild mustard</u>	A05.2000	1 kg	0.5 kg	(d)(q)
<u>Sunflower, safflower</u>	A05.2000	1 kg	1 kg	(d)
<u>Cottonseed</u>	A05.2000	1 kg delinted 2 kg with fibre	1 kg (with or without fibre)	
<u>Coffee, cocoa</u>	A05.2100	2 kg	1 kg (fresh or dry)	

Sample Type	Codex Code No.	Codex Rec.	RESCO Recommendation	Reference to foot-notes
<u>Garden herbs and medicinal plants, e.g. parsley, thyme</u>	A06.2200	?	0.5 kg fresh 0.2 kg dry	
<u>Tea (dry leaves)</u>	A06.2400	1 kg	0.2 kg	
<u>Cow, sheep and pig tissues</u>	B07	?	Entire organ(s)(r) or 1 kg	
<u>Milk</u>	B07.2800	?	0.5 litre	(r)
<u>Poultry tissues</u>	B08	?	Entire organs 0.5 kg	(r)
<u>Eggs</u>	B08.3300	?	6 eggs from a supervised trial of 10 hens per group: more from a larger trial	(r)
<u>Mushrooms</u>	C	?	12 items or at least 0.5 kg	
<u>Sugarcane</u>	C	5 kg (20 cm of stem)	12 stems	(m)
<u>Hops (dry cones)</u>	C	?	0.5 kg	
<u>Tobacco</u>		?	1 kg (green) 0.5 kg (dried or cured)	
<u>Beer, wine, cider, juices</u>		?	1 litre	

FOOTNOTES/COMMENTS

- (a) Cut of and retain all tops (including crown of roots where leaves emerge). To reduce bulk of roots (if necessary), cut longitudinally into quarters and retain one quarter of each.
- (b) Samples to be taken from at least 4 plants.
- (c) Take one leaf from each of 2 different levels on each of the 12 plants.
- (d) Sample from at least 12 separate areas of the plot or mechanical harvester etc. to make up the recommended weight.
- (e) May be sub-sampled longitudinally, e.g. by cutting in half, retaining the base of the stem.
- (f) Recommendation applies to green pods or to dry seed, which is considered to be similar to cereal grain.
- (g) Sample from at least 4 individual trees or bushes, taking fruit from different sides of the trees, high and low, exposed and sheltered by foliage.
- (h) Small berries are considered to be similar to cereal grains but, for reasons of practicability in picking and handling, expense and the relatively minor nature of the crops compared with cereals, a smaller sample is considered an acceptable minimum.
- (i) These larger berries require a larger sample than the small berries, in order to be equally representative.
- (j) A minor crop, with large individual items, justifies this recommendation for a less representative sample.
- (k) Recommendation applies to both grain directly from field trials and to grain following post-harvest treatment.
- (l) The bulky nature and light weight of mature straw or hay allows a sufficiently representative sample to be provided in 0.5 kg, while minimising packaging, transport and storage problems.
- (m) Divide each stem into 3 equal lengths (with leaves attached). Take top portion from stems 1 to 4, middle portion from stems 5 to 8 and bottom portion from stems 9 to 12, thus ensuring parts of all 12 stems are included in the sample.
- (n) Divide as in note (f); retain any cobs present on the appropriate portions of stem.
- (o) Crops such as alfalfa, clover, grass, fodder cereals, sorghum etc. are considered to be different from silage maize (which is taller), hence the different recommendations.
- (p) 1 kg of nuts recommended with or without shells which weigh relatively little. It is assumed that, in general, separate analysis of shells alone is unlikely to be required. If shells (hulls) are to be analysed, a larger initial sample may be needed.
- (q) As these seeds are so small, a 0.5 kg sample is considered sufficiently representative.

- (r) Recommendations for items to be sampled may be found in a draft RESCO document "Guidelines on supervised studies to provide data on the nature and amount of pesticide residues in products of animal origin".

REPORT OF THE AD HOC WORKING GROUP ON PESTICIDE RESIDUE PROBLEMS IN DEVELOPING COUNTRIES

1. In the absence of Mr. Victoriano Tolosa (Argentina), the above Working Group met under the Chairmanship of Dr. Sakdiprayoon Deema (Thailand).

The following participated in the deliberations.

Assoumou Leon, M.B.A.	Gabon
Berazay, D.A.	Argentina
Bergman, I.	Sweden
Black, A.	Australia
Cacqueray, M.	France
Canseco Gonzalez, S.	Mexico
Celma, E.	Spain
Chandra, F.A.	United Kingdom
Chitranukroh, S.	Thailand
Cooper, C.W.	United States
Declercq, M.B.	France
Deema, S.	Thailand (Chairman)
Dejonckheere, W.	Belgium
Fertig, S.N.	United States of America
Flanagan, J.F.	GIFAP
Fuller, G.B.	GIFAP
Gardiner, G.R.	GIFAP
Genoni, A.	Switzerland
Gonzalez, R.H.	Chile
Gorchev, H. Galal	WHO
Grillo, M.	Cuba
Guenther, K.O.	Germany, Fed. Rep. of
Halliday, D.	United Kingdom
Hongstrakul, T.	Thailand
Hooper, G.N.	Australia (Rapporteur)
Hotellier, M. 1'	France
Julin, B.G.	GIFAP
Kappeler T.	Switzerland
Kloet, D.	The Netherlands
Kopisch-Obuch, F.-W.	FAO
Lacoste, R.J.	GIFAP
Ladomery, L.G.	FAO (Secretary)
Lahoda, D.S.	GIFAP
Lape, M.	Cameroon
Leber, G.	Germany, Fed. Rep. of
Love, D.A.	United Kingdom
May, J.J.	Costa Rica
McCollister, D.D.	United States of America
Ngoua, J.P.	Gabon
Ngowi, A.V.F.	Tanzania
Nielsson, R.J.	GIFAP
Nollen, H.M.	The Netherlands
Papaconstantinou N.	Greece
Parry, R.M.	United States of America
Rao-Maturu, N.	FAO
Rickard, S.F.	GIFAP
Rimpau, R.	GIFAP
Rowe, R.R.	GIFAP
Steven, N.	Cameroon
Taylor, J.K.	Canada
Thomas, B.	GIFAP
Tincknell, R.C.	CABI
Tuomaala, V	Finland

Tutuwan, E.	Cameroon
Voldum-Clasusen, K.	Denmark
Whitaker, K.E.	GIFAP
Willis, G.A.	United Kingdom
Yagüe, A.	Spain

Appointment of Rapporteurs

2. Mr. G.N. Hooper (Australia) was appointed to act as rapporteur of the session of the Working Group.

Adoption of the Provisional Agenda

3. The Working Group adopted the provisional agenda (WG 3/PR 86/1) without change.

International Code of Conduct on the Distribution and Use of Pesticides (CX/PR 86/2)

(a) Text of the Code adopted by the 23rd Session of the FAO Conference (C 85/25-Rev. 1).

4. Dr. Kopisch-Obuch specifically drew the Working Group's attention to Article 4 of the Code which recommended that international organisations and other interested bodies should assist with the establishment of pesticide residue laboratories in developing countries. He indicated that FAO would try to assist in developing new laboratory facilities, improving those already in existence and helping in training of laboratory personnel in analytical procedures and the safe and efficient use of pesticides.

(b) Resolution adopted by the 23rd Session of the FAO Conference (CX/PR 85/2- Add 1).

5. The Working Group noted aspects relating to the implementation of the Code. The meeting was informed that FAO would assist in strengthening registration schemes and supporting consultancies to assist developing countries. FAO activity in this area would depend upon the results of the third questionnaire of the Working Group which had been circulated to developing countries in January, 1986.

The Working Group was also informed that the Code would be published in several languages including Chinese, Arabic, French and Spanish. The Code would be supported by several FAO Guidelines, including some CCPR Guidelines, which had also been endorsed by FAO and would soon be available.

(c) Extract from the Report of the 23rd FAO Conference (CX/PR 85/2-Add.1)

6. The Working Group noted that although the issue of prior informed consent had been deleted from the Code prior to FAO endorsement, it was FAO's intention that in view of the necessity to identify toxic chemicals being exported to developing countries, this aspect should be reconsidered at the first revision in two years. The delegation of The Netherlands informed the meeting that a voluntary scheme to notify developing nations of chemical exports from The Netherlands had been introduced and countries seeking information should direct their enquiries to the Ministry of Housing, Physical Planning and Environment, Chemicals Division, P.O. Box 450, 2260 MB Leidschendam, The Netherlands.

7. The delegation of Chile stressed the need for information on toxicology, degradation and fate of residues in food and the environment to accompany pesticide exports and expressed a strong desire that chemical companies follow the provisions of the Code. Information on suitable analytical methodology for relevant food commodities was also required.

8. The delegation of Cameroon noted several recent cases of pesticide fraud where irresponsible brokers had provided chemicals of substandard quality under the guise of reputable products. The implications of such practices included pesticide resistance, loss of confidence in pesticide use, loss of agrochemical industry credibility and crop losses resulting in food shortages and severe economic difficulties. The delegation of Cameroon appealed to the Group to take the necessary steps through the Codex Alimentarius Commission to ensure that the Code of Conduct was adhered to, especially the distribution provisions. The delegation of Cameroon also stressed the need for simplified methods of analyses, the training of laboratory staff and the creation of laboratories in developing countries, all of which could help in overcoming fraudulent practices.

9. The representative of FAO advised that the Codex Coordinating Committee for Asia had unanimously supported the Code and that the International Union of Consumer Organisations would monitor its implementation.

10. The Working Group was also informed that the Second Session of the Group of Developing Countries in Asia Concerning Pesticide Residue Problems had given strong support for the Code although suggesting that in order to gain practical experience, a period longer than two years was required before revision.

11. The delegation of the United States of America emphasized that the Code was voluntary and that its emphasis applied equally to governments and industry. Governments therefore had an obligation to assume a degree of responsibility for its implementation. The delegation of the United States of America also stressed the undesirability of amending the Code so soon after its endorsement by FAO as such could adversely affect its acceptance.

(d) Recommendations of WG 3 Concerning the Code

12. The Working Group addressed this item under agenda item 7(d). (Reported in paragraph 33 of this report).

Activities in the various Codex Regions of interest to the CCPR

13. The Group received verbal or written reports by the Regional Chairman for Asia, Africa and Latin America and the Caribbean or by their representatives.

Report of the Second Session of the Group of Developing Countries in Asia concerning Pesticide Residue Problems

14. The Regional Chairman for Asia informed the Group briefly of the second Session held in Chiang Mai (Thailand) of the Group of Developing Countries. He regretted that only two countries had participated at the session, which had proved to be a success taking into consideration the technical content of the discussions. The Regional Chairman stressed that the report of the Chiang Mai meeting, while not necessarily representing the view of Asian countries, should be regarded as the collective views of persons expert in the field of pesticides.

15. The Secretariat introduced a paper (Room Document 7) giving a summary of the conclusions of the meeting in Chiang Mai on those points which were of interest to the CCPR. The following items were discussed by the Working Group; other questions were discussed in plenary session.

Trade in food containing excessive amounts of pesticide residues

16. The Working Group was informed that the Group in Asia had considered a claim coming from the Coordinating Committee for Africa that foods containing "excessive" residues were being marketed in developing countries. The matter had been considered by the CCPR and the Secretariat had been requested to obtain information concerning the claim. The Group in Asia had agreed that "excessive" residues should be taken to mean that food containing residues in excess of the legal limit of the importing country or if no such limit exists of the exporting country or of the Codex MRL is being marketed. It had also agreed that it would be a difficult task to try to obtain information on the extent of the marketing of such foods and that that lack of harmonization of legal limits made it difficult to define "excessive" residue.

Need for pesticide residues data from GAP in developing countries

17. The Working Group was informed that the Group in Asia had discussed the need for developing countries in Asia to generate their own residues data under GAP using supervised field trials and similar studies. The Group in Asia had agreed that the availability of such a residues data would make participation in the work of the CCPR more meaningful. The Group in Asia had been made aware of a number of possible ways in which technical and financial assistance in carrying out trials to generate residues data could be obtained. It had agreed that a Circular Letter should be distributed to ascertain the pesticide/crop combinations of interest to the region for which residue data should be generated.

18. Following discussion, the Working Group agreed that such a circular letter should be sent out seeking information on pesticides of interest to developing countries not yet covered by Codex recommendations, foods of interest to them (e.g. in export trade or staple food) which should be covered by MRLs and information on existing pest problems. The circular should be developed by the Secretariat together with interested divisions in FAO and WHO.

Establishment of a Regional Pesticide Training Centre and services laboratory

19. The Working Group was informed that FAO, acting on the recommendation of the First Session of the Group of Countries in Asia had formulated a project proposal for the establishment of a Regional Pesticide Training Centre and Services Laboratory in Chiang Mai, Thailand. The immediate and long term objectives of the project were aimed at improving control over the use of pesticides leading to better food production, improvement in the quality of food products as well as health protection. Using the regional centre, countries in Asia could cooperate more closely in activities relating to the safe and effective use of pesticides and in generating the much required pesticide residue information referred to above.

20. The Working Group noted with satisfaction these developments which were in line with its own recommendations concerning the need to strengthen the capabilities of developing countries to control the use of pesticides and their residues in food.



Recommendations of the Group of Countries in Asia

21. It was decided to consider these together with other recommendations under a later agenda item.

Report on Activities in Africa in the Field of Pesticide Residues

22. In the absence of the Regional Chairman for Africa (Dr. F. Macklad, Egypt) the Secretariat informed the Working Group that the special meeting envisaged to be held in conjunction with the Eight Session of the Coordinating Committee for Africa would, in all likelihood, be postponed. This would have the result that discussions on pesticide residue questions in Africa would not take place until 1987.

23. The Working Group concurred that all efforts should be made to make arrangements in Africa so that all the questions raised relating to the proper use of pesticides and all other questions such as those relating to the work of CCPR would be discussed in that Region during the Eighth Session of the Coordinating Committee for Africa.

Report on Activities in Latin America and the Caribbean in the Field of Pesticide Residues

24. The Working Group received a written report from the Regional Chairman for Latin America and the Caribbean, Mr. V.C. Tolosa (Argentina), who for pressing reasons, could not attend the session.

25. The Working Group noted that during 1985 there had been three international meetings which had discussed topics of interest to the Working Group, such as lack of infrastructures for the control of residues, trained personnel and funds for the maintenance of laboratories, deficiencies in laws and regulations, need for support in order to organise regional meetings to define actions, i.e. the 4th Session of the Codex Coordinating Committee for Latin America and the Caribbean, the Interamerican Conference on Food Safety and an International Workshop on Food Protection. These meetings supported the strengthening of laboratory facilities, the establishment of regional laboratories and the promotion of regional meetings to discuss questions relating to pesticide residues.

26. The delegation of Cuba indicated that the 5th Session of the Coordinating Committee for Latin America and the Caribbean would be held in February 1987 in Havana which would be preceded by a workshop at which questions relating to pesticides would be discussed. It was considered essential that FAO and PAHO should find ways to provide financial support for this workshop in order to facilitate attendance. The delegation of Chile indicated that industry had provided assistance in strengthening laboratory facilities in that country. The delegation of Mexico was of the opinion that it would be desirable to define the activities of the workshop in 1987 and that there was a need to focus on problems relating to pesticide residues in food.

Third Questionnaire of Working Group 3 (CL 1986/111-PR)

27. The Working Group noted that in response to a circular letter containing a questionnaire on man power development and providing facilities for pesticide residue control in developing countries, replies were received only from 2 countries by the representative of GIFAP, Mr. Richard Nielsson, who is coordinating the work. The Working Group was informed by the Secretariat that it had in addition received replies from Iran and Argentina.

The Working Group noted that additional questions as contained in the document WG 3/PR 86/2 were suggested by Mr. Tolosa (Argentina) for inclusion in the questionnaire.

Since the third questionnaire did not receive much response the Secretariat agreed to send out a reminder and also to work out a text for a fourth questionnaire that would contain the additional questions suggested by Mr. Tolosa.

The Working Group expressed the view that a careful analysis of the replies to the questionnaire received from the different countries may lead to technical cooperation among developing countries.

Recommendations of Working Group 3 (Annex I, APPENDIX II, ALINORM 85/24B, CL 1986/14-PR)

28. The Working Group noted that its recommendations which covered various aspects relating to the needs of developing countries aimed at improving pesticide residue control were endorsed by the Commission and brought to the attention of governments.

Progress report on action taken by international organizations on the recommendation

29. The Working Group noted that the secretariat had prepared a paper CX/PR 86/11 on the Subject and agreed to defer discussion of the subject to the plenary under Agenda Item 13.

Action taken by Governments to implement the recommendations:

Argentina

30. As regards recommendation 3 for establishment of central and satellite laboratories, Argentina expressed the view that FAO would need to investigate conditions prevailing in the country before it could provide any assistance. In response to recommendations 5 and 6, a workshop is being organized in Cuba to provide a platform for discussions by countries in the Latin American Region on regional pesticide problems. In response to recommendation 11, the required information had been sent to Sweden, which was coordinating the communications. As regards recommendation 17, Argentina had urged international organizations to provide appropriate information to facilitate developing countries to obtain funding to support participation of its experts in meetings.

Cuba

31. Cuban norms for registration of pesticides were adopted at the end of 1955. The ministries of public health and agriculture had set up expert groups to deal with public health and agricultural aspects and also to provide advice on pesticides. A Government publication on pesticides lists all the pesticides that are being used in the country and contains information on national tolerance levels (MRLS) for pesticides. Many national tolerance levels for pesticides are identical with the Codex MRLs.

Thailand

32. Thailand is in the process of establishing a Regional Pesticide Training Centre and Service Laboratory.

New recommendations of the Working Group

33. The Working Group considered the recommendations of the Second Session of the Group of Developing Countries in Asia Concerning Pesticide problems held in Chiang Mai, Thailand from 2-5 April 1986 as contained in APPENDIX 1 of Room Document 7. The Working Group noted that, of the many recommendations made by the Group, a few were new and would need discussion.

Upon the initiative of the delegation of Australia, the group expressed the view that the scope of the regional meeting should be broadened to include other related matters so as to diversify and to facilitate financing while focussing on pesticide problems in the region. Advance notice should be given to the countries in the region when such meetings are organized so that it would be possible for the countries in the region to explore all likely possibilities to secure funding for their delegations to attend.

The Working Group noted that Recommendation 9 is directed to elaboration of guidelines for the reduction of pesticide residue contents in food commodities. The delegation of the United States of America expressed the view that Good Agriculture Practice could be considered as a measure for keeping the levels of pesticide residues in food commodities at a minimum.

34. The Working Group held the view that it would be advisable to hold the Regional Meetings along with the meetings of the Regional Coordinating Committees. This would result in increased participation by the Countries in the Region at these Meetings.

Proposals for items to be discussed at the next Session:

35. The Working Group noted that (i) Reports from Regional Chairmen (ii) Action taken on Recommendations (iii) Results of Questionnaires (iv) Matters arising from Regional Codex Coordinating Committees would be on the agenda for its consideration at its next session.

Nomination of Regional Chairmen

36. The group elected the following officers from among the delegates. Chairman, Mr. Sakdiprayoon Deema (Thailand).  
Regional Chairman (Africa), Mr. E.J.B. Tutuwan (Cameroon)  
Regional Chairman (Latin America and the Caribbean), Mr. Victoriano Tolosa (Argentina)  
Regional Chairman (Asia), Mr. Sakdiprayoon Deema (Thailand)

Other business

37. The representative of the Commonwealth Agricultural Bureaux International (CABI) informed the Working Group of the decision of his organisation to expand its activity, in the provision of information on pesticides that would prove useful to the developing countries. He made available to the Working Group a Room Document on the information services that could be provided by CABI and invited comments on the specific data needs of the members of the group. The Secretariat informed the Working Group that the South West Pacific Region is presently left out of regional activities on pesticide residues and that it is essential that its needs and activities with regard to pesticide use are considered in future meetings of the Working Group. The delegate of Australia (Mr. G.N. Hooper) was requested to ascertain the needs of the Pacific region and report back to the next session.

REPORT OF THE AD HOC WORKING GROUP ON REGULATORY PRINCIPLES

1. The Group met under the Chairmanship of Mr. J. Wessel.

Andersson, A.	Sweden
Bates, J.A.R.	United Kingdom
Bennett, P.R.	Canada
Bergman, I.	Sweden
Bernson, V.	Sweden
Black, A.L.	Australia
Bonthrone, W.	GIFAP
Cacqueray, M. de	France
Celma, E.	Spain
Chandra, F.	United Kingdom
Cooper, C.W.	United States of America
Declercq, M.B.	France
Deema, S.	Thailand
Fertig, S.	United States of America
Genoni, A.	Switzerland
Gonzalez, R.H.	Chile
Gorchev, H. Galal	WHO
Halliday, D.	United Kingdom
Hooper, G.N.	Australia
Hotellier, M.H. 1'	France
Ives, N.F.	United States of America
Jager, K.W.	WHO/IPCS
Kloet, D.G.	The Netherlands
Kolk, J. van der	The Netherlands
Lacoste, R.J.	GIFAP
Ladomery, L.G.	FAO (Secretary)
Lee, D.F.	United Kingdom
Lindsay, D.G.	United Kingdom
Ling, W.	Germany, Fed. Rep. of
Love, D.A.	United Kingdom
Lynch, M.R.	Ireland
McEwan, T.	Australia
Morley A.W.	Australia
Murray, W.J.	Australia
Nollen, H.M.	The Netherlands
Paakkanen, J.	Finland
Parry, R.	United States of America
Petzold, R.	Germany, Fed. Rep. of
Rao Maturu, N.	FAO
Roberts, T.R.	GIFAP
Seiler, J.P.	Switzerland
Smith, T.H.	Norway
Strom, A.	Sweden
Timme, G.	Germany, Fed. Rep. of
Tuomaala, V.	Finland
Walsh, M.	EEC
Watts, B.B.	New Zealand
Wessel, J.	United States of America (Chairman)
Whitaker, K.E.	GIFAP
Yagüe, A.	Spain

Agenda:

2. The following topics were discussed by the Working Group:
- Recommended National Regulatory Practices.
  - Guidelines for assessing Codex MRLs and consumer safety.
  - Codex MRLs for pesticide metabolites that are also pesticides.

### Recommended National Regulatory Practices

3. The Working Group noted that both the document "Recommended National Regulatory Practices to Facilitate Acceptance and Use of Codex MRLs" (ALINORM 85/24A-Add. 2) and its related resolution, which were adopted by the Committee at its past Session, were endorsed by the Codex Alimentarius Commission at its 16th Session and have since been published as Part 9 of the Guide (CAC/PR 9-1985). It was further noted that the FAO Code of Conduct on the Distribution and Use of Pesticides, which was recently adopted by the FAO Conference cites the Codex document on national regulatory practices as a reference.

4. Following the 17th Session of the CCPR, countries were requested to comment on their use of the document and the effect it may have on their national regulatory practices (CL 1985/41-PR). To date only three countries have responded to this request indicating that they were either already following the recommendations in the document or would be guided by the recommendations in the future. It was recognized, however, that because the document was only recently included in the Guide, countries would need more time to fully consider its usefulness. For this reason, the Working Group recommended that the Committee again request that countries comment on their use of the document and the effect it has had or might have on their regulatory practices in relationship to acceptance of Codex MRLs.

5. The Working Group considered the discussion at the 17th Session regarding a new questionnaire on national regulatory practices (para. 219, ALINORM 85/24B). The Working Group agreed that preliminary development of the questionnaire, which is currently planned for issuance in 1988, should begin during the coming year for discussion at the next session and should take into account comments from countries on the document on national regulatory practices.

6. The Working Group was informed that the Codex Committee on General Principles would be examining ways to increase countries acceptance of Codex standards, including pesticide MRLs. Because this appeared to be complementary to the efforts of the Working Group, it was agreed that the document on regulatory practices, which in part, is intended to assist countries in their acceptance of Codex MRLs, should be brought to the attention of the Codex Committee on General Principles.

### Guidelines for Assessing Codex MRLs and Consumer Safety

7. The Working Group reviewed the discussion paper "Codex Limits for Pesticide Residues in Food and Consumer Safety" (CX/PR 86/12). It was noted that some members continued to have reservations and concerns about the practicality and ability of some countries to use calculations to link Codex MRLs to dietary exposures for comparison to the pesticide's ADI. Some members also expressed concerns about several of the concepts in the paper for making these calculations, e.g., the use of averages in estimating residue exposures, the availability and use of food consumption data and the variability of food consumption habits within a country and between countries, the use of an ADI as a "fixed standard", and the exact meaning of an ADI, including its relationship to exposures to pesticides of the same chemical class.

8. The Working Group acknowledged that there are numerous problems and difficulties involved in the calculations proposed in the discussion paper. It agreed, however, that countries, as well as FAO and WHO, need to have some indication of possible dietary exposures to pesticide residues that could occur from acceptance of Codex MRLs also taking into account residues arising from uses for which no Codex MRLs had been proposed. The Working Group noted that the 1985 JMPR also expressed the view that guidance was needed for assuring that adherence to MRLs is contributing to consumer safety. It was further agreed by the Working Group that the concepts described in the discussion paper provide a useful contribution to the development of this guidance.

9. The WHO representative informed the Working Group that a joint FAO/WHO initiative was already underway for convening a consultation in June 1986 for drafting guidelines. The guidelines would be subsequently subject to comment by the JMPR and the CCPR. The Working Group expressed its appreciation for this joint FAO/WHO initiative and agreed with the need for this consultation and considered the proposed date to be appropriate. The Group also concluded that rather than trying to deal with the various issues that arose during the review of the discussion paper, these matters should be presented to the experts invited to the consultation together with the written comments that had been received.

10. The Working Group was also informed that GIFAP intends to encourage manufacturers to expand their data bases on the fate of residues during storage of treated commodities, and more especially during processing and cooking. The Working Group acknowledged the importance of having such residue data and as indicated in the discussion paper (para 19, CX/PR 86/12), data on fate of residues are critical for making realistic estimates of daily intakes of pesticides.

11. After considering various aspects of this topic, the Working Group affirmed the recommendations in para 25 of the discussion paper and requested that they be approved by the Committee.

Codex MRLs for Pesticide Metabolites that are also Used as Pesticides

12. The Codex Secretariat introduced this topic and the Working Group agreed that certain regulatory questions surrounding the establishment of Codex MRLs for metabolites of pesticides that are used as pesticides in their right would fall within its area of responsibility. After a brief discussion of this topic, the Working Group concluded that further study should be conducted in the coming year. As part of this study, members agreed to provide the Working Group Chairman by 1 September 1986, relevant information on the practices in their countries for setting limits for these pesticides. Additionally, the Secretariats for the JMPR will be requested to seek the views of the 1986 JMPR on this matter. On the basis of this study, the Working Group plans to have a discussion paper to present to the Committee at the next session.

REPORT OF THE AD HOC WORKING GROUP OF PRIORITIES  
The Group met under the Chairmanship of Mr. B.B. Watts.

List of Participants

Aerts, J.	Belgium
Bates, J.A.R.	United Kingdom
Bellisai, M.G.	Italy
Bernson, V.	Sweden
Besemer, A.F.H.	The Netherlands
Black, A.L.	Australia
Blomquist, H.	Finland
Canseco, S.	Mexico
Celma, E.	Spain
Deema, S.	Thailand
Dupuis, G.	Switzerland
Eichler, D.C.A.	Germany, Fed. Rep. of
Frehse, H.	IUPAC
Genoni, A.	Switzerland
Graham, W.	GIFAP
Hongtrakul, T.	Thailand
Hooper, G.N.	Australia
Hosoda, H.	GIFAP
Hotellier, M. 1'	France
Houins, G.	Belgium
Jager, K.W.	WHO-IPCS
Julin, B.	GIFAP
Kolk, J. van der	The Netherlands
Kopisch-Obuch, F.-W.	FAO
Lacoste, R.J.	GIFAP
Lahoda, D.S.	GIFAP
Leber, G.	Germany, Fed. Rep. of
Lindsay, D.G.	United Kingdom
Love, D.A.	United Kingdom
McEwan, T.	Australia
Morley, A.	Australia
Murray, W.	Australia
Okumura, A.	Japan
Pakkala, P.	Finland
Parry, R.M.	United States of America
Regenstein, H.	GIFAP
Rimpau, R.	GIFAP
Rowe, R.R.	GIFAP
Saito, N.	JAPAN
Seiler, J.P.	Switzerland
Ström, A.	Sweden
Taylor, J.	Canada
Timme, G.	Germany, Fed. Rep. of
Tincknell, R.C.	CABI
Tonkelaar, E.M. den	The Netherlands
Watts, B.B.	New Zealand
Whitaker, K.E.	GIFAP
Willis, G.A.	United Kingdom
Yagüe, A.	Spain

1. The Group noted that benalaxyl, cyfluthrin, glyphosate, vinclozolin and clofentezine would be evaluated by the 1986 FAO panel of experts. The 1986 WHO panel will evaluate glyphosate, vinclozolin and clofentezine. The Group noted that WHO has altered its policy of scheduling of compounds for evaluation so that chemicals given priority by CCPR will be considered by the WHO expert panel two years later. The Group recommended that the FAO and WHO expert panels should coordinate evaluations wherever possible to preserve the identity of the Joint Meeting.

2. The Group reviewed again the criteria for establishing priorities and reaffirmed that the use of the pesticide must give rise to residues in or on a food or feed commodity moving in international trade and that such residues are or may be a matter of public health concern and thus create or have the potential to create significant problems in international trade. Governments which are considering recommending a pesticide for evaluation or re-evaluation need to be certain that these criteria are met. The Group also recommended that sponsoring countries contact the manufacturer or other interested organizations to solicit information concerning current use patterns and the availability of relevant data needed for JMPR review.

3. The Group reviewed the new pesticides submitted by countries for 1986 as well as compounds remaining on the 1985 priority list (ALINORM 85/24B). It was agreed that the compounds should be listed in the following order of priority:

Number	ISO Common Name	Country	Data Available	Manufacturer
85-04	BPMC	Korea/ Thailand	unknown	Kuamiai Sumitomo Mitsubishi Bayer
85-02	tolyfluanid	Netherlands	unknown	Bayer
85-03	dalapon	Thailand	unknown	Dow
86-01	isoprothiolane	Korea	unknown	Nihon Nohyaku
86-03	IBP	Korea	unknown	Kumiai
86-06	isoproc carb	Nigeria	unknown	Mitsubishi
77-	thiofanox	-----	unknown	Rhone Poulenc

The Group noted that ISO common names did not exist for BPMC and IBP. The Group requested that more information on current use patterns and the nature of the problem in trade be provided by the sponsoring country and manufacturers.

4. The Group recommended the re-evaluation of dinocap at the earliest opportunity of the JMPR. The manufacturer has indicated that new data are now available for toxicological evaluation.



5. The Group reviewed a list of 33 pesticides which were last evaluated toxicologically by the JMPR prior to 1976 and for which ADIs are still estimated. It suggested that WHO should be asked to examine the toxicological data base to determine the scope and validity of the information. At the same time a questionnaire should be distributed to countries requesting information on current use patterns of the pesticides listed and the potential for residues to occur on commodities in international trade. The Group agreed that matching the information on toxicology and current use would enable the recommendation of priorities for re-evaluation at a future meeting.

6. The Group considered a discussion paper on the identification of pesticide/commodity combinations for priority MRL evaluation. It was noted that several criteria could be considered in establishing combination priorities, which include that

- a) the commodity forms a significant component in international trade;
- b) the commodity forms a significant proportion of a diet;
- c) pesticide monitoring programs identify residues on commodities moving in world trade.

The Group noted that a special FAO/WHO meeting is planned to be held in mid-1986 to study the dietary intake of pesticides and a report of this meeting would be valuable in further discussion on this topic. A discussion paper will be prepared by the delegation of the USA for the next Session of the Working Group.

7. As requested by the CCPR the Group examined the list of chemicals prepared by the OECD and mentioned in ALINORM 85/11. The Group commended as follows:

- a) Chlorpropham and propham used post harvest are potential priority pesticides and information about residues occurring on commodities in international trade will be assembled for the 1987 CCPR;
- b) Aluminium and magnesium phosphides have been considered by CCPR and MRLs were established for various commodities under the chemical hydrogen phosphide no. 046;
- c) Allethrin was examined by the JMPR in 1965, but no recommendation was made due to lack of essential data and unknown use pattern;
- d) The chemical 2-amino-benzimidazole is a minor degradation product of benomyl and also carbendazim. The Group had no knowledge of 2-amino-benzimidazole being used as a fungicide in its own right. It was noted that the Working Group on Regulatory Principles is currently considering the issue of degradation products which are pesticides in their own right and may be able to give further guidance on this chemical;
- e) the representative from a manufacturer of 1,1,1-trichloroethane indicated that no pesticide uses have been registered for this compound.

There is limited information on present pesticide usage of the remaining seven chemicals. Countries and manufacturers will be requested to submit information on registered uses and the potential for residues to occur on internationally traded commodities.

REPORT OF THE AD HOC WORKING GROUP ON CONTAMINANTS

1. The Group met under the Chairmanship of Mr. R.B. Maybury (Canada) with Dr. D.C. Abbott acting as Rapporteur. The following persons participated in the Working Group.

* Abbott, D.C.	AOAC (Rapporteur)
Bergman, I.	Sweden
Black, A.	Australia
Chandra, F.A.	United Kingdom
Cooper, C.W.	United States of America
* Eades, J.F.	Ireland
Fertig, S.N.	United States of America
Genoni, A.	Switzerland
Gorchev, H. Galal	WHO
Guenther, K.O.	Germany, Fed. Rep. of
Hascoët, M..B.	France
* Himberg, K.	Finland
Hooper, G.N.	Australia
Jager, K.W.	WHO - IPCS
* Kolk, J. van der	The Netherlands
Ladomery, L.G.	FAO (Secretary)
Lindsay, D.G.	United Kingdom
* Maybury R.B.	Canada (Chairman)
Quattrucci, E.	Italy
Rao Maturu, N.	FAO
Smith, T.H.	Norway
Stijve, T.	Switzerland
Ström, A.	Sweden
* Telling G.M.	United Kingdom
Tuinstra, L.G.M.Th.	The Netherlands
Wessel, J.R.	United States of America
Wüthrich, C.	Switzerland

\* Members of expert group on method standardization (see ANNEX 1)

2. The Working Group had before it a paper, prepared by the Chairman, which summarized the responses from countries to the Questionnaire on matters related to the contamination of foodstuffs with PCBs. Responses have now been received from 24 countries and these demonstrated that:

- a) 20 of the responding countries are conducting regular monitoring programmes for PCBs.
- b) Because of the variety of ways in which monitoring data has been presented, it is difficult to make a meaningful comparison of PCB levels.
- c) The majority of countries used packed column gas chromatography and pattern comparison with standards of PCB formulations for quantitation. Two countries, the Netherlands and the Federal Republic of Germany, nowadays employ only capillary gas chromatography using specific PCB congeners as regulatory and analytical standards.
- d) 9 countries have established national limits for PCBs in various foods.
- e) 3 countries reported some specific effects of national limits upon importation or exportation of foods.

Gathering and consideration of further toxicological information

2. The representative of WHO informed the Group that IPCS (WHO) was in the process of reviewing PCB data and that a new EHC document on PCBs would be available in due course. The toxicological evaluation was based mainly on mixtures of PCBs, but single congeners would also be evaluated where possible.

The group explored the ways of assisting the IPCS in gathering toxicological information on PCBs, but noted that WHO had a mechanism in place for this purpose involving 150 focal points. Countries were encouraged to send toxicological information on PCBs directly to the IPCS (EHC-Programme), especially data on single congeners where available.

The representative of WHO also informed the Group that WHO's Regional Office for Europe (EURO), in collaboration with IPCS, is in the process of preparing "Guidelines to control and prevent exposure to PCBs, dioxins and related compounds". These are expected to be issued before the end of 1986.

The question was raised whether polychlorinated furans and dioxins should also be discussed, as these could also occur in food from PCBs as well as from other sources. It was agreed that these contaminants should not be considered at this time, noting that WHO was in the progress of preparing an EHC document on dibenzofurans and dioxins.

#### Regulatory Approach to recommend to Governments regarding PCBs

3. The Group briefly discussed the question of how PCBs in food should be regulated. In this respect the Group noted that the CCFA had considered whether legal mandatory maximum levels or Guideline Levels should be set for contaminants, such as mercury, in food. This issue had not yet been resolved by CCFA, although some preference for Guideline Levels had been expressed.

In the light of existing concern in a number of countries with regard to the intake of PCBs and their presence at relatively high levels in mothers milk, it had been proposed to consider the desirability of provisional international limits for PCBs in relevant foodstuffs. This would be of assistance both as a guidance to those governments which are in the process of developing national limits and to provide a basis for the control of PCB residues in foodstuffs in international trade.

The point was made in connection with setting maximum levels for PCBs, whether mandatory or advisory, that there was currently insufficient evidence that problems existed in trade due to the presence of PCBs. However it was pointed out that some trading problems did appear to exist and that these were likely to increase with time since an increasing number of countries was engaged in setting legal mandatory limits for PCBs in food. In addition, there was evidence that shipments of food were refused entry from countries which did not perform regular monitoring for contaminants, such as PCBs. Work on PCBs within the Codex would be appropriate in relation to consumer protection.

The Group, after a full discussion, agreed that it was not yet feasible to recommend any maximum levels for PCBs, even provisionally, since any Codex maximum levels should be based on adequate data from monitoring studies, using acceptable methodology. It was also agreed to recommend to the CCPR that:

- (a) Ultimately, mandatory maximum levels for PCBs should be aimed at, based on practical considerations involving the generation of data on PCB levels in food following monitoring of the food commodities concerned using acceptable methodology;
- (b) The foods to be covered by any Codex maximum levels were those mentioned in paper CX/PR 86/13 (Appendix IV(3)) i.e. primary foods of animal origin in the Codex Food and Animal Feed Classification;
- (c) Governments be urged to take steps in order to reduce the PCB levels in food and thus minimise PCB intake;
- (d) Governments be encouraged to consider the need for introducing maximum levels for PCBs in food; and
- (e) Governments be requested to communicate to the CCPR evidence of problems in international trade due to the presence of PCBs in food, noting that PCBs could represent a public health problem.

Generation of appropriate Data and the Relation between the CCPR and other Bodies, as regards Risk Assessment

4. The Group agreed that data on levels of PCBs in primary foods of animal origin should be requested through Codex Contact Points, specifying the methods of analysis to be used and other parameters (see report of the Joint Session of the Working Groups on Contaminants and Analysis and the report of the Working Group of Experts on methodology). Information generated this way would be directed to WHO (JFCMP), where it would be processed for presentation to the CCPR. The Group welcomed such a collaboration with the JFCMP. As regards risk assessment, it was agreed that the IPCS, through its EHC programme, would undertake this task rather than the JMPR.

Standardization of Analytical Methodology

5. The Group proceeded to consider this matter in a Joint Session with the Working Group on Analysis (see paras 6-10).

REPORT OF THE COMBINED SESSION OF THE AD HOC WORKING GROUPS ON CONTAMINANTS AND ON METHODS OF ANALYSIS

Additional attendees at combined session:

Andersson A.	Sweden
Celma, E.	Spain
Friestad, H.O.	Norway
Greenwaeredse, M.	Denmark
Ives, N.F.	United States of America
Julin, B.G.	GIFAP
Lee, D.F.	United Kingdom
Lynch, M.R.	Ireland
McEwan, T.	Australia
Morley, A.	Australia
Mutter, M.	The Netherlands
Parry, R.M.	United States of America
Tournayre, V.C.	France
Yagüe, A.	Spain

6. The Group discussed the responses to the Questionnaire on PCBs, referring to the methods of analysis used in the various countries and summarized in Appendix 3 to document CX/PR 86/13. This summary highlights the variety in GLC techniques, in methods of quantitation and in the limits of determination obtained, in different laboratories and different countries. The limits of determination reported varied from 0.5 to 400 µg/kg.

7. Packed column gas chromatography is still the most widely used method in PCB analysis of foodstuffs but differences in the PCB standards used and in the methods of quantitation make results from different sources difficult to compare. A limited but increasing number of countries is making use of capillary chromatography, routinely measuring a selected number of PCB congeners, generally 6 or 7.

8. The Group recognized that capillary chromatography, measuring a number of individual PCB congeners, might give more reliable and accurate data for the purpose of a monitoring programme aiming at possible future regulatory action and therefore should be used where possible. On practical grounds, however, given the actual situation, the Group recommended that data be collected, using either method, with a maximum of standardization.

9. It was decided that a small expert working group would develop proposals for this standardization, including the choice of the commodities to be analyzed, PCB standards to be used and methods of quantitation, and would submit these for consideration to the plenary session.

10. Once elaborated, the JFCMP would undertake to send a specific request for data collection, in accordance with the outcome of the discussion, to the Codex Contact Points, specifying the various requirements of the methods of analysis and quantitation. Once received, these data would be computer-processed, summarized and presented both to IPCS and to the CCPR.

Method standardization for the monitoring of PCBs in food commodities

An expert group of six delegates (see list of participants on page 1) agreed upon the following proposals:

- a) Commodities for which data are requested are primary food products of animal origin, comprising:
- meat (in the carcass fat)
  - milk and milk products (on a fat basis; fat content to be stated)
  - eggs (on a shell-free basis)
  - fish (on a whole product basis, species to be stated).

For the portion of products to be analysed the Codex Guidelines on this subject should be consulted. Information should be given regarding the origin of samples, especially where they are taken from areas known to be contaminated by PCBs. Wherever possible, results should be obtained by both packed column and capillary methods.

- b) Extraction and clean-up: A number of validated methods are available for various commodities; the Codex recommended methods of analysis should be consulted. A saponification step is considered essential if PCBs are to be quantified as individual congeners using capillary GLC. (See Tuinstra et al (1980) JAOAC 63, 5, 952-958). Information should be given on the method used, including references and limit of determination.

- c) PCB standards and quantitation:

(i) Packed Column GLC analysis: Quantify PCB residues by comparing either the total area or height of peaks, both with Aroclor 1254 and also with the closest matching Aroclor reference material (method 29.018 p 538, AOAC Official Methods of Analysis, 1984).

(ii) Capillary column GLC analysis: Report individually the PCB congeners 28, 52, 101, 118, 138, 153, 180.

(For system of numbering, refer to Ballschmitter, K. and Zell, M., Fresenius Z. Anal. Chem. 302, 20-31 (1980)). (For method of analysis: see Tuinstra, L.G.M.Th. et al. (1983), Quantitative Determination of Specified Chlorobiphenyls in Fish with capillary Chromatography and its use for Monitoring and Tolerance Purposes. Intern.J.Environ.Anal.Chem., 14, pp. 147-157).

Experience has shown that, in samples of mammalian origin, congeners 28 and 52 will not normally be found and, if observed, verification should be undertaken.

- d) Good Analytical Practice

The laboratory supplying data should be following recognized quality assurance guidelines including active participation in a check sample programme for PCB analysis.

STATEMENT BY GIFAP

(See para 32 of this Report)

GIFAP would like to make a statement concerning the operation of the Joint Meeting on Pesticide Residues. From the inception of the CCPR GIFAP has cooperated with both the JMPR and CCPR. Industry recognises it can make improvements in its interaction with these two bodies and is making determined attempts to do so. In this context, however, we would like to draw the attention of the CCPR to the recommendations of a meeting held in Ottawa in April, 1985 and to the crucial importance which industry attaches to the recommendations arising.

The subject meeting, entitled "The Evaluation of Pesticide Residues in Food - The Need to Accelerate International Action" was co-sponsored by the governments of Canada and the United States of America. The primary objectives were to evaluate current operations of the WHO panel of the JMPR and to make recommendations to WHO, governments and industry of improvements in operating efficiency, including the more timely publication of the Evaluations. Invited participants included experts and temporary advisors who have served on the WHO panels of JMPR and JECFA, and representatives of the WHO administration from Geneva.

Overall, one of the main themes of the Ottawa meeting was directed toward a fuller and more open relationship between the WHO side of the JMPR and industry.

The industry as a whole greeted the report of the meeting with enthusiasm. However, a full year has elapsed since the consultation. While acknowledging with gratitude the efforts which have been made to improve the timeliness of the reporting of the JMPR Meetings, we are very disappointed by the lack of implementation of certain of the remaining recommendations which are particularly relevant to industry.

GIFAP therefore requests the CCPR to take note of the gravity with which industry views this situation and to use its considerable prestige and influence to promote the rapid implementation of all of the recommendations of the Ottawa Meeting. We look forward to substantial improvements at the 1986 JMPR as a means of encouraging continued effective industry cooperation and participation in what will inevitably be a more efficient and fruitful exercise for all parties.

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